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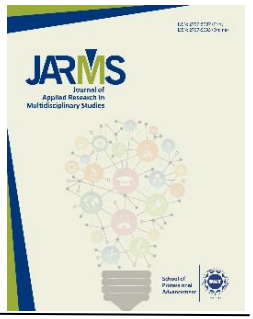

Title: **Effect of Corporate Governance (CG) Practices on Financial Reporting Quality (FRQ); A Context of CEO Dismissal History**

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Effect of Corporate Governance (CG) Practices on Financial Reporting Quality (FRQ): A Context of CEO Dismissal History

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Abstract

The current study aimed to scrutinize the consequences of corporate-governance (CG) factors on the financial reporting quality (FRQ) for firms listed on Karachi-Stock-Exchange (KSE), Pakistan from the time period (2004-2021). The study only focused on non-financial firms of Pakistan. Moreover, 980 financial reports of 70 companies were investigated to determine the relationship between CG and FRQ. Moreover, the reasons behind increased incidences and considerable attention in the history of Chief Executive Officer (CEO) dismissals of different well-known companies were also investigated. McNichols's model was used to determine the quality of financial reporting. However, few proxies were taken to measure the governance effect, board size, institutional shareholding, board independence, and board meeting frequencies. The current study used two-panel modelling methodology in which the first panel was constructed on a CG index with FRQ. Whereas, the second panel was constructed on individual proxies of CG. The study concluded that CG had a positive and significant impact on FRQ in which board size and board independence had an essential rule to present a better quality of FR.

***Keywords*:** board size, board independence, corporate governance (CG), financial reporting quality (FRQ), McNichols model

Introduction

"In the Business Roundtable's view, the paramount duty of management and boards of directors is to the corporation's stockholders; the interests of other stake- holders are relevant as a derivative of the duty to stockholders" (Bainbridge, 2023, p. 6).

Post-Enron era propagated the bookkeeping trend, encouraging the establishment of financial reporting standards through an active governance

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mechanism. The reason behind these changes comes from the events that took place in big companies wiping them off the corporate guard (Shin et al., 2022). Companies, such as WorldCom, Enron, BCCI, Adelphia Communications, Waste Management, and Mirror Group of Newspaper were involved in misstatements, inadequate financial information, and other governance-related offense in US and UK (Otakefe et al., 2023). Such issues have made reporting standards establishment need of the time. Most of the companies have bolstered significant concentration in corporate governance (CG) (Sarwar & Hassan, 2021). However, in the market, investors' behavior decreases the confidence level on the firm's financial reporting quality (FRQ) due to the inappropriate publishing level (Butt, 2012).

The matter of governance commenced with the commencement of corporations, flashback to the Hudson's Bay Company, the Levant Company, the East India Company, and other chartered companies during the 16th and 17th centuries. From the mid of the 1970s, the concept of CG turned into reality when there was a split-up between ownership and power in the business (Srivastava et al., 2019) and according to the theory a separation between ownership and governor led to the eruption of an agency problem (Jensen & Meckling, 1976).

The connotation between CG and FRQ varies in diverse scenarios, such as developing and developed markets, financial and non-financial markets. Additionally, different CG frameworks were employed in these areas due to different social, cultural, and economic situations in cross-countries. Financial reporting is also defined as delivering accurate accounting information and a commitment to present the true and fair financial reporting to all the stakeholders (Kothari, 2000). FRQ is defined as the truthful and fair financial information that delivers operational information and especially cash flow information which presents the real picture of firms that inform equity investors.

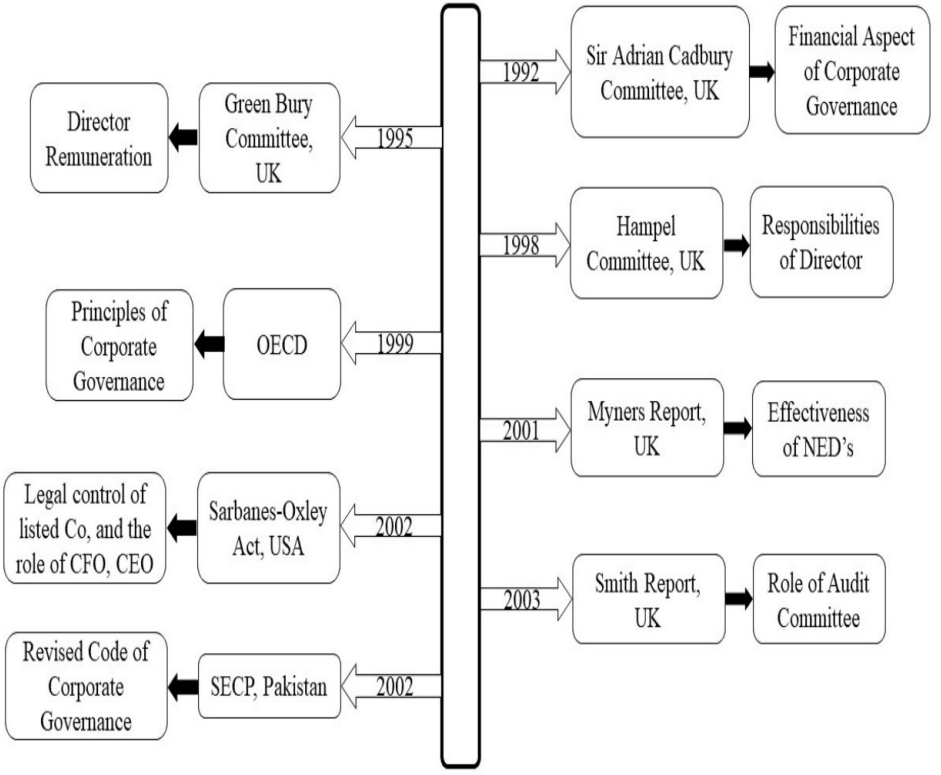
Financial reporting has been getting considerable importance and attention due to many agency conflicts over the last few years. Counterparties' agents try to influence the organization by achieving information through inappropriate ways which makes the patterns unbalanced by creating a conflict of interest. In this prospect, reporting quality reduces the ruthlessness of information irregularity between managers and other stakeholders. The quality of financial reporting can

increase the possibility to mitigate the issues of irregularity in information through improvement in financial information. In light of the above scenario, several researchers discussed the issue of financial reporting and reported that CG affects the FRQ and disclosure (Ernstberger & Grüning, 2013; Kim & Lim, 2010).

CG is a process of coordinating the activities of a company for the betterment of all stakeholders including shareholders that finally tracks to an excellent performance of corporation. It is the bundle of process, policies, laws, and institutions which affect the corporation or a company in a way in which they are directed, administered, or controlled. Over the last two decades, many rules and regulations have been developed in the mechanism of CG. Therefore, the current study reported the CG mechanism from the time period (1992-2002).

Figure 1

Corporate Governance Mechanism Over the Last Two Decades



Sarbanes-Oxley act was passed to resolve these issues in order to enhance the authority of professionals and viewers. Many countries have started contributing to the betterment of information and reporting quality. Pakistan has also been working since 2002 through the Security Exchange Commission of Pakistan (SECP) and the Chartered Accountants of Pakistan (ICAP). SECP made rules and regulations in 2004 and later modified them in 2012 with the enforcement to improve the reporting standards of financial positions for the corporate sectors.

SECP has implemented many new requirements, rules, and regulations as instruments in order to improve the FR standards. This code was released in 2002 by SECP in order to introduce comprehensibility, power, control, and to protect the stakeholders' concerns by enlightening the disclosure in the financial-reporting of companies. Improving the standards of CG is the everyday struggle and results of SECP and ICAP, in affiliation with the Institute of Cost and Management Accountants of Pakistan (ICMAP) and all Stock-Exchanges of Pakistan.

The purpose of the current study was to collect experiential support regarding the association among the facets of company supremacy and gain excellence in listed corporation. Expectantly, the results of the current study would help the stakeholders in captivating essential safety measures to interpret information from annual reports. Thus, the study attempted to collect evidence on the relationship between the aspects of CG and FRQ in companies listed on the Karachi Stock Exchange (KSE) Pakistan.

Literature Review

FRQ is a less studied area with correspondence to CG mechanisms. Financial statement analysis incorporates a systematic way of using information related to financial decisions. However, FRQ is about the correct measures through which companies report financial statements to their investors that replicate its operating performance and their estimating future cash-flows. FRQ and CG have a bilateral relationship between each other and the former can be improved through implementing International Financial Reporting Standards (IFRS), enriching transparency, and reducing information-asymmetry amongst managers, boards, and external shareholders (Wang et al., 2019). Several other researchers reported a significant impact on FRQ through CG in different aspects (Abdel-Meguid et al., 2013; Arieftiara & Utama, 2018; Ewert & Wagenhofer, 2019).

Corporate Governance (CG) and Financial Reporting Quality (FRQ)

In the current era, the management of companies uses new and modern methods and follows the policies and strategies which allow them to perform very carefully. To check and evaluate this kind of work, usually, the audit committees and auditors find the biased work in most organizations which provides an open challenge to governing bodies in order to establish some standards to minimize it. Thus, external or independent auditors and audit committees significantly perform to enhance or improve the quality of reporting (Wolnizer, 1995). Several studies have been conducted on Chinese companies which investigated the impact of ownership and CG fraud evidence. A significant relationship was concluded with each other and it was also reported that the consequences related to the firm's behavior with fraud or inappropriate work come through the ownership and board structure.

Smaili et al. (2009) conducted a study at CG and financial reporting irregularities. The data from the time period (2001-2005) was used for Canadian firms by applying Ordinal Logit Regression (ODLR) model. The results suggested that CG acts as an effective means of defending the investors with respect to making inappropriate manipulation due to reporting irregularity. They found the influence of the board, the audit committee, and the examiner as an individual corporate mechanism and as a part of an integrated governance system, as suggested in the 2010 COSO study conducted by Beasley et al. (2000) on the severity of financial reporting irregularities. Different methods and techniques were employed by different researchers to investigate the impact of CG on FRQ.

McNichols Model and Collins and Kothari Model

Klai and Omri (2011) also investigated the Tunis Stock-Exchange (TSE) from the time period (1997-2007). The outcomes were based upon the McNichols (2002) model and the model of Collins and Kothari (1989) was also used. They reported in their study that the governance system influences the financial presentation-quality structure of the Tunisian corporations. The study also revealed that the families and block-holders of their economy factor try to reduce the implication of standards for improving the systematic process in information presentation. On the other hand, the foreigners, and their associated governmental institutions exposed the quality of financial information. However, the Iranian companies with

the same models, determined the impact of CG and FRQ from the time period (2003- 2011). They reported contradictory and opposing results that there is no substantial association between FRQ and CG. The reasons behind this abnormal outcome were that the economy has some inherent or hindered aspects, such as congested families, not properly applying the international standards.

Jones (1991) Model and DD (2002) Model

Góis (2009) investigated the non-financial companies of Portuguese-Stock-Exchange (PSE) from the time period (1996-2001). The researcher explored the association between the quality of FR and governance. For the quality of reporting, the author used accruals as proxy by the model of Dechow and Dichev (2002). It was concluded that the board structure changes and its level of freedom did not have any significant impact on the improvement of accounting information in the companies of that specific context. Only one variable showed roughly significant, however, a weak relationship with accounting tact, that is, board size somewhat related to an improvement in the presentation of financial reporting. Therefore, the study concluded that in formal terms, the institutions of the country accepted major international rules and regulations towards CG, however, those rules were not executed actually.

M-Score Model and Z-Score Model

Moreover, another study was also conducted on the disclosure of corporate authority and application of structure to misrepresentation regarding financial aspects to report for Malaysian companies. The current study attempted to investigate the chances of inappropriate presentation of financial reports. M-score and Z-score test models were used for this purpose. They concluded that proper regulation and their implementation of governing power of the corporate body could affect the sequence or flow of appropriate reporting culture, which would be helpful to reduce the asymmetry information for all the related stakeholders and improve reporting standards (Razali & Arshad, 2014).

Board and FRQ

John and Senbet (1998) explored CG and the effectiveness of the board as an internal mechanism within firms, concentrating on directors and addressing agency issues and director relationships. They concluded that better governance could resolve the agency issues in management, both

externally and internally, including government, debtors, and other external stakeholders, ultimately leading to enhanced transparency. Previously, Beasley et al. (2000) reported a significant number of outside directors lead to a decreases in the chances of FR related fraud. They also found that the firms have significant independent directors, have no or less evidence of fraud as compared to other firms which have fewer independent directors. The paraphernalia formed by board size are not definite as it could be positive or negative. Normally, larger-board has the probable edge to make an enlarged syndicate of expertise available due to their extensive variety of experiences and may signify more expert skills.

However, Yermack (1996) reported the opposite theory and found an inverse relationship between the board of directors and firms' performance. He wrote that when board size increases from 6 to 12 members or 24, different issues arise, such as incremental cost, communication, and coordination. He also wrote that the firms with the troubled condition added more directors for increasing monitoring capacity, however, firms kept following the poor performance.

Board Independence and FRQ

Johnson et al. (2013) focused on the functional parts of directors, that is, demographics, human capital, and social capital. They reported that demographic factors affect the directors' decisions, such as age, education, gender, and race. Many studies show that demographic factors are also influential in determining the directors' thinking and decision-making abilities. However, these studies have not provided a comprehensive view to support this research. Studies have shown several implications and issues related to directors' human capital and demographics literature. Directors are considered to fulfill the roles of both, information monitors and disseminators within the firm, which is based on social capital and the flow of resources. However, social capital research has found interconnected results, demonstrating that all these factors are linked and their impacts are not independent of one another.

Coles et al. (2008) attempted to investigate the conventional wisdom that smaller and single size boards are more effective than larger boards. Through their analysis they found that more firms have benefited from the large boards with a more internal representation of effectiveness. In their studies, they originated that the multifaceted firms, which have superior

legal and functional advice requirements, have larger panels with additional outside members as executive directors. In this context, large or small boards perform well, however, according to the level of companies.

Institutional, Board Independence, and Financial Reporting Quality (FRQ)

An institutional stockholder has a remarkably powerful effect on the enhancement of the financial reporting standards of the organizations. Institutional investors possess two main qualities that are absent in other external shareholders: the primary thing is their proficient capability to realize what is done or intended to do by the panel's members of a company, and the subsequent is their influence due to the size of their shareholding.

Nguyen and Nielsen (2010) deliberated on the value of sovereign directors and their sudden deaths. In the study, they worked on 229 number of unexpected deaths of independent directors and its consequences on a company's market value. They stated that the abrupt death of independent executives is considered as a powerful tool for monitoring news spread throughout the market which creates negative aspects. It is due to the fact that they usually have the power to fire even the CEO of companies for their poor performance. They suggested that non-executive directors perform well and report to shareholders, they also emphasized that the worth of their work contributions can be contingent.

Kim and Lim (2010) testified the affiliation between the assortment of outside directors and their consequences on firm's performance. For this determination, they used the data range from the time period (1999-2006) of 593 Korean firms. They used the Tobin Q test for the measurement of objects. Since, the independent or outside director has more enthusiasm for monitoring the significant goals or targets of their work is to investigate quality and diversity of the director's monitoring upon firm's performance. They also determined regular positive associations among organizations' assessment and the degree of independence of external executives by the government knowledge. However, they also found undesirable associations among firm value and the percentage of sovereign external executives, which are especially accountants. This study significantly proposed the independence of directors' panel, not only in number, however, also in qualitative form.

Kim et al. (2014) expounded a study related to the external executives and advisory board and analyzed their performance. In their study, they focused on two vital facets, first tenure, and other skills. Furthermore, the firm's probable retained directors with advanced knowledge, skills, and functionally proficient, the connotation between "outside tenure" and panel performance could imitate such proficiency and expertise. Researchers also focused on the concept of dual benefits for the company through monitoring and advising by the same directors (Faleye et al., 2011).

Frequency of Panel Meetings and Financial Reporting Quality (FRQ)

Board of directors' meetings play a crucial role in enhancing the reporting quality since significant factors are involved in board meetings to manage the board operations effectively. Board meetings also provide opportunities for board members to have more discussion on formulating strategies for improving firm performance or efficiency of resources, published by the Cadbury Committee in the UK in 1992. Dahya et al., (2002) specified the characteristics of board meetings. They suggested that the board should frequently meet to attain adequate control over the reporting standards. Through this, they may screen the performance of administrative management with a comprehensive system of reporting and analysis that should be put in place.

Vafeas (1999) explored the controlling strategies of corporate boards in local public community corporations which is a dominant issue in both, the financial and the academic. Significantly, the period by unusually large number of meeting frequency is followed by enhancements in operating performance.

According to the above literature, the current study focused on FR quality due to the influence of CG, the board size, institutional shareholding, board meetings, and board individuality are the sub-proxies to calculate the index of CG. Section 3 elucidates the data sampling and methodology, whereas section 4 explicates the data analysis and section 5 explains the conclusion and recommendations.

Data Sampling and Methodology

The population for the current study comprised of all the non-financial sectors of Pakistani market. Almost seventy companies from Karachi Stock Exchange (KSE), over a span of 17 years from the time period (2004-2021), were included to investigate this study. The sample of this study

encompassed both, manufacturing and servicing sectors. The selected sample was taken from Karachi Stock Exchange (KSE) and firms' websites comprising of 980 companies' financial reports by accessing the information. Financial sector companies were excluded from the sample due to different capital structures. The companies for which statistics could not be accessible were also excluded from the sample. The source of information gathering mostly comprised of firms' annual reports and web-portal of the companies. The final sample was composed of companies which had the data for a specified period. The selection of companies was from different sectors as shown in Table 1.

All the selected companies were chosen on convenient sampling techniques as there is no full access to the company's shareholder's database. Furthermore, this study investigated Pakistani firms among which Textile & Fabrics firms are more prevalent in Pakistan.

Research Prototype

Figure 2

Research Prototype

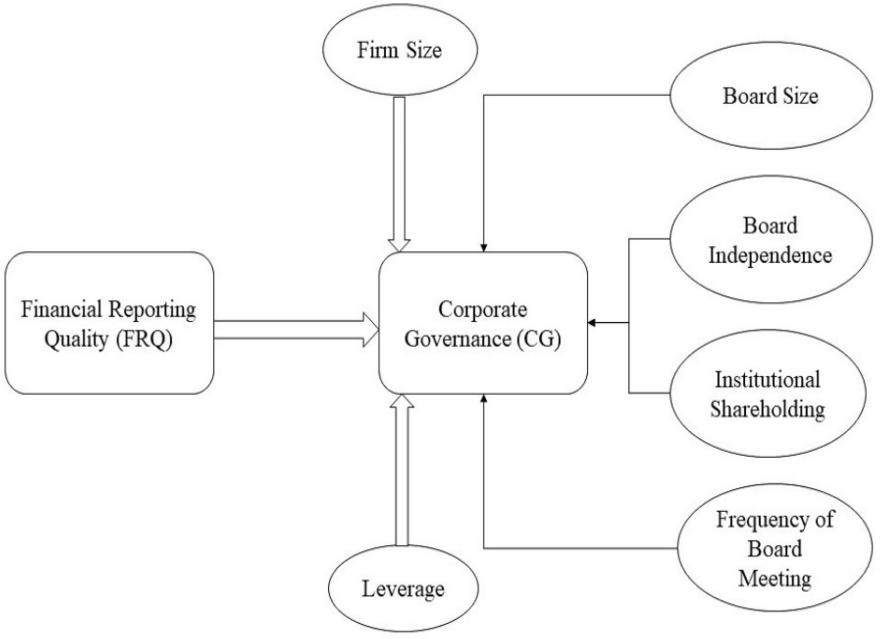


Table 1
Data Selections from Different Sectors

Sr. No	Industries	No. of Companies
1.	Textile & Fabrics	19
2.	Construction & Material	12
3.	Auto-Mobile and Parts	08
4.	Chemical	07
5.	Electricity	05
6.	Oil & Gas	04
7.	Personal Goods	04
8.	Glass and Bottle	03
9.	Pharmaceutical	03
10.	Forestry & Paper	02
11.	Sugar Mills	02
12.	Tobacco	01

Variables Explanation

According to the research model (figure 2), the current study comprises of one dependent and one independent variable along with two control variables. FRQ is an experimental variable denoted as DV and CG is an explanatory variable denoted as IV. CG was calculated through the index of further different variables, such as number of board members dented as board-size (BS), panel sovereign denoted as board-independence (BI), institutional shareholding, and frequency of board meetings. However, FRQ was measured through the McNichols (2002) model.

Board Size (BS)

It is a typical assumption that larger-boards have more and better opinions and expertise according to their skills. In the current study, BS was measured by the number of directors on the board with the expected significant and positive relations. Yusuf and Sulung (2019), and several other authors used the same proxy to calculate BS.

Board-Independence (BI)

Directors in the board, who maintain independent relationships, hold a pivotal role in business governance. For the effective functioning of the firm, a balanced board's composition is considered as an important aspect. Independent directors should efficiently monitor the management activities

and enhance the quality of reporting in the organization. In this study, board independence was incorporated by taking autonomous directors on a board divided by a total number of directors.

Institutional Shareholding

An institutional investor has a remarkable influential upshot on the improvement of FR standards of the firms. Institutional investors possess two primary qualities that distinguish them from other external shareholders. Firstly, their professional acumen in comprehending the capabilities and intentions of a company's Board of Directors (BOD), and secondly, their influential position due to the magnitude of their shareholdings. Pertaining to this study, the institutional shareholding was measured by the percentage of shareholding taken by the institute as compared to the total shareholding of the firm. Alda (2019) also used the same proxy for the IS.

Rate of Recurrence of Board-Meetings

Recurrence of board meetings of directors regarding the quality of FR considered as an essential factor because directors of the board can conduct its affairs through board meetings. Board meetings also provide opportunities for board members to have more discussion on formulating strategies for improving firm performance or efficiency of resources. So, the meetings of the board play a positive and significant relation to improvements in reporting. As for the concern of this research, rate of recurrence of board-meetings is calculating through the total number of board-meetings held in a financial year of the firms. Barros and Sarmento (2022) also calculated the FBM with the same proxy.

Firm Size (FS)

FS is calculating by taking the natural-log of total-assets (D'Amato & Falivena, 2019)

Leverage

Leverage is taken as a control variable that has a direct impact on governance-mechanisms. The debt-to-equity ratio is used to find out the financial-leverage of the firms.

Financial-Reporting Quality (FRQ)

Accruals quality (AQ) used to measure the FRQ, resulting from previous work by McNichols (2002) and Dechow and Dichev (2002). This measurement grounded on the idea of these models, which stated that future cash-flows (FCF) could estimate through accruals, and it could be found through earnings as it is hinting indication of FCF. This study observed that discretionary-accruals could measure through the Dechow and Dichev (2002) model intensified by the key variables in the Jones' model, as proposed by McNichols (2002). The proposed model is a regression of lagged working-capital accruals, present and forthcoming CF plus the change-in-revenue and property-plant & equipment (PPE). In light of previous work, this study used to McNichols (2002) model, which suggests that the standard deviation of the residual or the error terms as a scale of RQ of the firms. Large values of the residuals refer to the level of discretionary accruals and signals that the FRQ is poor.

Research Prototype Description

The prototype of this study shows the influence of CG on FRQ. There are several models to calculate the FRQ as discussed in the literature such as Collin and Kothari Model, McNichols Model, Z-Score, and M-Score Model, and Jones Model but this study uses the McNichols (2002) model, consisting standard deviation of the residuals as a proxy-measure of FRQ. The high value of residuals represents the low quality of financial reporting, which derived through cash flows and operational information of the companies. The research model has divided into three different sections. The first section is to check Unit root test, second id to calculate the FRQ variable and third section is for the regression model by using panel data modeling.

Unit-Root (UR) Tests

Before testifying the research model, this study adopted the several UR tests to examine the stationarity of data. Following unit-roots test has applied on the data to check the pattern of data.

$$Y_{it} = p_i Y_{it-1} + d_{it} \delta_{it} + \epsilon_{it} \quad (1)$$

Equation 1 is for common unit-root test. Where;

Y is the specific variable to be testified, in which i = periods t = time.

d_{it} exogenous variables (with fixed or individual effects).

p_i regression equation to predict the future value.

ϵ_{it} error term.

$$\Delta Y_{it} = \alpha Y_{it-1} + \sum_{k=1}^{pi} \Upsilon_{ik} \Delta Y_{it-k} + \mathrm{d'}_{it}\, \delta + \epsilon_{it} \quad (2)$$

Equation 2 represents the ADF-UR test Maddala and Wu (1999). Where;

α donates p-1, and p_i vary according to cross-sections.

Hypothesis results can be described as follows:

H_0: α = 0 (unit-root problem)

H_1: α < 0 (no unit-root).

$$\Delta \bar{Y}_{it-1} = \Delta Y_{it} - \sum_{k=1}^{pi} \hat{\gamma}_{ik} \Delta Y_{it-k} + \mathrm{d'}_{it}\, \hat{\delta} \quad (3)$$

Equation 3 is denoted as Levin et al. (2002) UR-test.

$$\Delta Y_{it} = \alpha_i Y_{it-1} + \sum_{k=1}^{pi} \Upsilon_{ik} \Delta Y_{it-k} + \mathrm{d'}_{it}\, \delta + \epsilon_{it} \quad (4)$$

Equation 4 represents the Im-Pesaran-Shin UR-test (2003).

McNichols Model

FRQ model Equation for this study is as follows.

$$\frac{ACCR_{it}}{TA_{it-1}} = \frac{\alpha_0}{TA_{it-1}} + \frac{\alpha_1 CF_{it-1}}{TA_{it-1}} + \frac{\alpha_2 CF_{it}}{TA_{it-1}} + \frac{\alpha_3 CF_{it+1}}{TA_{it-1}} + \frac{\alpha_4 \Delta REV_{it}}{TA_{it-1}} + \frac{\alpha_0 PPE_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (5)$$

Where;

ACCR: Total current accruals

CF: Current cash flow

CF_{it-1}: Lagged cash flow

CF_{it+1}: Future cash flow

ΔREV: Changes in revenue

PPE: Property, plant, and equipment

All variables deflated by lagged total assets (TA_{it-1})

Regression Model

$$FRQ = McNichols\ Model \quad (6)$$

To check to the cumulative effect of CG on FRQ:

$$FRQ_{it} = \alpha_0 + \alpha_1 CGI_{it} + \alpha_2 FSIZE_{it} + \alpha_3 LEV_{it} + \epsilon_{it} \quad (7)$$

While the index consists of:

$$CGI_{it} = \alpha_0 + \alpha_1 BSIZE_{it} + \alpha_2 BODIND_{it} + \alpha_3 INST_{it} + \alpha_4 FBM_{it} + \epsilon_{it} \quad (8)$$

To investigate the individual effects of CG to FRQ:

$$FRQ_{it} = \alpha_0 + \alpha_1 BSIZE_{it} + \alpha_2 BODIND_{it} + \alpha_3 INST_{it} + \alpha_4 FBM_{it} + \alpha_5 FSIZE_{it} + \alpha_6 LEV_{it} + \epsilon_{it} \quad (9)$$

Where;

FRQ_{it} = Financial-Reporting Quality

CGI_{it} = Corporate-Governance Index

$BSIZE_{it}$ = Board Size

$BODIND_{it}$ = Board of Independent Directors

$INST_{it}$ = Institutional Shareholding

FBM_{it} = Firm's Board Meetings

$FSIZE_{it}$ = Firm Size

LEV_{it} = Leverage

Panel Data Modeling

The econometric equations 1,2,3 and 4 have examined through the panel data modeling technique, which encompasses different steps; descriptive statistical, correlation matrix, common-coefficient model (CCM), fixed-effect redundant likelihood model, fixed-effect method (FEM), random-effect method (REM), and Hausman test.

CCM assumes that the data is homogenous and the function of CCM can be written as below;

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it} + \mu_{it} \quad \textit{(CCM-10)}$$

FEM assumes that all the intercepts of all the cross-sections are not the same and assumes that the slope-of-coefficient is perpetual across the firms. The equation of this model is as follows.

$$Y_{it} = \beta_{it} + \beta_1 X_{it} + \beta_2 X_{it} + \mu_{it} \quad \textit{(FEM-11)}$$

However, the assumption of REM is the same as FEM, and the intercept is different for all the cross-section variables and time-period. This model is used to check the systematic pattern of intercept (β), and also not suppose the expressive function of β due to the random-pattern. The function of the random effect model is as follow;

$$Y_{it} = (\beta_0 + \mu) + \beta_1 X_{it} \quad \textit{(REM-12)}$$

Results

Descriptive Analysis

This study explores the result in two different aspects; first, by calculating the index of CG with the combination of four related proxies, and second is by taking all variables in the panel and get the results. Descriptive statistics of primary variables in the form of the index along with control variables reported. Table 3 describes some significant features, likewise mean-value, median-value, standard-deviation, a minimum and maximum fact of data dispersion based on 70 selected sample firms registered on KSE Pakistan from 2004 to 2017. Table 3 reports the mean value of FRQ (0.017634), which shows the median quality of the financial-reporting recorded in KSE. The standard deviation value (0.006573) shows the dispersion of the dataset related to mean, in which the maximum value is 0.028158, and the minimum level is 0.009897. The cumulative average impact of governance factors in the form of the index is 3.964705, which confirms the positive sign for shareholders and other stakeholders of the firms as they considered the governance-factor is the key to quality financial information by quality reporting. The average volatility in the Governance Index is 0.621613, which shows the significant influence of governance on FRQ. The upper-case and lower-case values of CGI is 5.098862 and 2.554038, respectively, indicating that most firms have a powerful effect due to the board-governance.

Unit-Root (UR) Test

Table 2
Multi-Unit-Root Analysis

Variables	Levin, Lin & Chu t*		Im, Pesaran and Shin W-stat		ADF - Fisher Chi-square		PP - Fisher Chi-square	
	Statistic	Prob.**	Statistic	Prob.**	Statistic	Prob.**	Statistic	Prob.**
BS	-6.38549	0.0000			55.3252	0.0000	108.653	0.0000
BI	-4.78377	0.0000			40.3648	0.0002	79.6387	0.0000
IS	-17.5124	0.0000			415.040	0.0000	607.906	0.0000
FBM	-27.4482	0.0000			605.034	0.0000	833.690	0.0000
Accruals	-12.5370	0.0000			363.069	0.0000	532.457	0.0000
CF	-9.17409	0.0000	-3.13891	0.0008	198.619	0.0008	321.382	0.0000
CF^{-1}	-7.60588	0.0000	-4.39357	0.0000	231.009	0.0000	349.942	0.0000
CF^{+1}	-7.24765	0.0000	-2.35061	0.0094	198.730	0.0008	325.318	0.0000
FS	-21.3831	0.0000	-6.95781	0.0000	272.286	0.0000	394.171	0.0000
PPE	-18.1293	0.0000	-3.63015	0.0001	215.067	0.0000	198.790	0.0008
REV	-8.67292	0.0000	-4.06874	0.0000	228.408	0.0000	400.879	0.0000
LEV	-18.4241	0.0000	-3.58103	0.0002	282.663	0.0000	595.973	0.0000

Table 3
Descriptive Analysis

Descriptive Statistics Analysis with an index value of CG					
Variables	Mean	Median	Max	Min	Std. Dev.
FRQ	0.017634	0.018566	0.028158	0.009897	0.006573
CGI	3.964705	3.916405	5.098862	2.554038	0.621613
LEV	1.333667	1.420000	1.810000	0.183000	0.442678
FS	-0.00115	-0.00322	0.033813	-0.03998	0.019734
Descriptive Statistics of Individual Variables					
FRQ	0.017634	0.018566	0.028158	0.009897	0.006573
BS	7.666667	7.485623	10.972134	7.019472	0.943558
BI	0.605952	0.6252482	0.714286	0.414523	0.112323
IS	55.08889	56.226741	59.715246	51.212495	2.778472
FBM	5.111111	5.485769	7.487956	4.721235	0.875585
FS	14.491331	14.580734	14.94722	13.843134	0.390588
LEV	1.4700337	1.492768	1.725447	1.242345	0.143434

In individual perspectives, the contribution of board size is in an average of 7.666667, while the volatility is taking place at 0.943558 with minimum and maximum value of board size contribution as 7.019472, 10.972134, respectively. The average value of BS confirms the mechanism of governance, which stated that a higher number of board governance influence corporate decisions. The mean value of BI also indicates the significant influence as it shows the value 0.605952. Meanwhile, the maximum value of BI 0.714286 indicates the trend of directors having authorities to make the decisions. However, the mean value of IS 55.08889 signifies a good portion of ownership, which results in a performing overviewing function to the company. The maximum value of IS 59.715246, which confirms the presence of IS in governance as well. Rate of recurrence of board-meetings (FBM) confirms that the pattern of board-meeting is on average, held five times annually.

Analysis reveals debt-ratio for non-financial firms of Pakistan as it shows the mean value of 1.33, which indicates the excessive pattern of liabilities as to the maximum value shows 1.81 that also indicate the upper-case limit for the firms. The minimum debt value is 18%; the mean volatility is 44% signifying uncertainty. The variance volatility of firm size in Pakistani market 2%, - 3% median is 3% median of the firm's size is -0.0%, and finally average of the firm's size is -0.0%; these results indicating that

the firms in Pakistan have partially big and small. If we go to an in-depth check through the individual effect of CG to the betterment of FRQ facts comes as: at average quality of reporting through corporate governance 0.0176.

Correlation Matrix

Table 4

Correlation Matrix

	FRQ	CGI	LEV	FS
FRQ	1.00			
CGI	0.47	1.00		
LEV	-0.17	0.05	1.00	
FS	0.04	0.16	-0.13	1.00

Individual Correlation with CG & FRQ							
	FRQ	BS	BI	IS	FBM	FS	LEV
FRQ	1						
BS	0.07047	1					
BI	-0.0796	0.85129	1				
IS	0.34043	0.13725	0.29682	1			
FBM	0.51877	-0.2245	0.22362	0.412213	1		
FS	0.12437	0.72766	0.83679	0.473946	-0.11757	1	
LEV	-0.5412	0.48778	0.47246	0.34312	0.259134	-0.47398	1

Note. The correlation among the variables is reported in this table. The first half of the correlation matrix results based on the CGI (corporate governance index) with control and dependent variable FRQ. The second half correlation matrix is based on proxies of CG which is used in this study to explore every aspect.

Table 4 reports the correlation results showing that CGI in positively correlated with financial reporting quality (FRQ). However, leverage (LEV) and firm size (FS) are taken as control variables in this study, leverage (LEV) has an adverse correlation, and FS has a positive correlation with FRQ. Through this, the overview, objects of the CG enhance make transparency.

The correlation coefficient value is less than the threshold value r <0.9, which shows the problem of multicollinearity does not exist. As discussed earlier, in correlation, we cannot see the impact or effect and influence of variables. While using the correlation matrix, we can only check the one

variable relationship with another. However, correlation analysis does not check the collective result of all explanatory variables with the dependent variable and also does not report the cause-and-effect relationship.

Regression Analysis

Panel Data Regression Model (PDRM) has been conducted through CCM, REM, and FEM. This study reported these models in two aspects, first with the CG index, and second with the individual variables.

Table 5

Common Coefficient Model (CCM)

CCM with CG Index-FRQ (P-1)			CCM Individual Results CG-FRQ (P-2)		
Variables	Coefficient	Prob.	Variables	Coefficient	Prob.
C	0.01068	0.6634	C	0.025102	0.2865
CGI	0.02534	0.0000	BS	0.004835	0.0000
LEV	-0.00321	0.0000	BI	0.024737	0.0000
FS	0.05034	0.0031	FBM	0.00214	0.0000
			IS	0.000415	0.0003
Cross Sections		70	LEV	-0.021274	0.0000
Observations		980	FS	0.002902	0.0117
Adj *R*-Square		0.276089	Adj R-Square		0.558637
F-statistic		80.9639	F-statistic		133.6884
Prob (F-statistic)		0.0000	Prob (F-statistic)		0.0000
Durbin-Watson Stat		2.27	Durbin-Watson Stat		2.33

Note. CCM is used to show the directions of the variables. The left side of the table reports the results with FRQ and CG index, whereas the right side of the tables reports the results of CG proxies individually and FRQ relation. However, the results are quite different from both ways that are explained in detail.

Table 5 reports the relationship between CG and FRQ in two different ways. The panel consists of 70 cross-sections and 980 observations. The first panel is to use the corporate governance index and FRQ to check the relationship with each other. The second panel is calculated with all supporting proxies of corporate governance. P-1 consists of an index of CG and two control variables. It reports that the positive and significant changes in FR quality are due to the corporate governance index that is around 27.6%. However, leverage reports a negative and significant relationship

with FRQ that is -0.00321, whereas firm size reports the positive and significant relationship with FRQ that is 0.0534. P-1 also reports the Durbin-Watson Stat (DWS), which is 2.27, which shows that there is no autocorrelation in the residuals. DW statistics always have values between 0 to 4. The value 2.0 means there is no correlation, 0<2 means that there is a positive autocorrelation that is common in time-series-data, and >2 to 4 means that there is a negative-autocorrelation (less common in time-series-data). P-2 consists of four proxies of CG and two control variables. Panel 2 also reports that there is a constructive and significant relationship between CG and FRQ. However, the adjusted R-square reported that there are 55.8% changes in FRQ due to the CG.

Table 6

Likelihood Ratio Model

Effect Tests	Statistics	*df*	Prob.
Cross-sections *F*	0.0000	(89,557)	1.0000
Cross-sections Chi-Square	0.0000	89	1.0000

Panel data modeling has several steps to be accounted for to get the final results. After CC Panel 1 & 2, this study checks the model fit test to report this model is the best fit to describe the results. This study applies the LR (likelihood ratio) test to check which model is the best fit for this study to report the results for this study. Table 6 reports that the null hypothesis of this study is accepted. So, the CC model is the best fit for this study to report the final result. P-3 & 4 also reported in the appendix of this study.

Table 5 reports the results that corporate governance index and individual factors have a positive and significant relationship with FRQ, contributory factors in the index and individually, the board size, board independence, institutional ownership, and frequency of board meeting which indicates that governance factors have an impact on FRQ improvements. The results of this study consistently demonstrated that corporate governance acts as an efficient means of protecting investors against making erroneous inferences due to financial reporting irregularities. These findings are similar to Ben-Amar and André (2006), who stated that the external directors and the board-size of the firms are the measures of company governance. Our results are also in the same direction with the results of Razali and Arshad (2014) work, in which they reported that effective enforcements of corporate governance factors could reduce

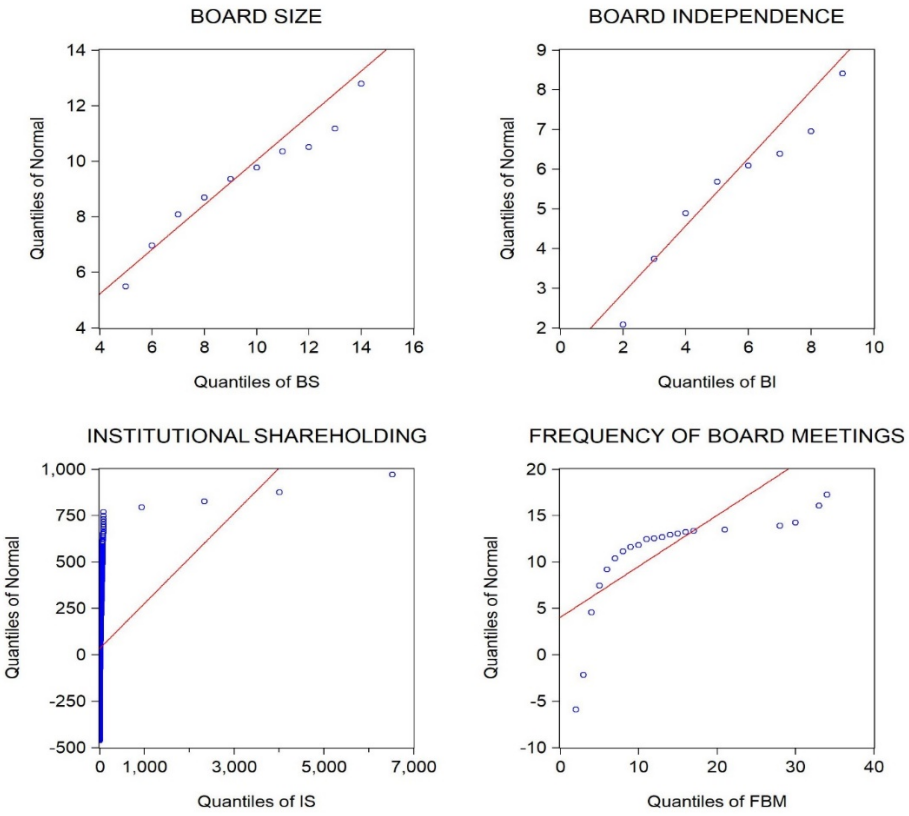
the chance of fraudulent in financial reporting. With this prospect, it is clear that the worth of reported statements can increase with CG factors, which are considered dominant factors for this purpose. Furthermore, reported that the quality of financial-reporting is influenced by board governance. The effectiveness of corporate-governance structure ensures the worth enhancing for both FR quality and audit-quality (Goodwin & Seow, 2002)

This study uses two control variables in it as they have a direct impact on the FRQ and CG. This study observed in the literature that debt ratio improves the quality of reporting by improvements and intelligibility of financial information. This is because that the creditors need the appropriate and good quality of FR with the purpose of granting credits to the firms and with the guarantee of the repayments of debt. However, sometimes, raising more debts by the firm will result in lower quality reporting because through this their accruals go to disturb and that is why management manipulates the statements. Therefore, according to the P-1 & 2 results, there is a negative relation with FRQ and Leverage as there is a problem of negative signaling in the market by getting more debts. So, by this, to overcome this issue managers can do manipulate the financial statements. Furthermore, the firm's size has a strong and positive association with the payout ratio of the firm. The size of coefficient (0.051) means that as there is one percent (1%) rise in the firm size, it results in a 5.1% increase in the taking improvements in standards of reporting the company. It shows that firms with higher assets and reputation companies follow more rules and regulations and monitor by the authorities, which become a compulsory element for the progress. This study also reveals that larger firms disclose their reports in a short time, whereas the small firms take a long time to disclosure and usually in inappropriate manners. So, firms' size has a more significant impact on the improvement of the quality of reporting with respect to timeliness and disclosing manners to provide transparent financial information to their stakeholders.

Figure 3 shows the CG mechanism with BS, BI, IS & FBM. These quantiles show the better explanation of governance attributes towards the FRQ, as BS, BI & FBM shows the systemic pattern towards the linear line. However, IS has irregular pattern and according to the regression model, this attribute has a very low impact on the FR quality.

Figure 3

Corporate Governance Proxies Mechanism



Conclusion and Recommendations

This study is based on the firms that are listed in the Karachi Stock Exchange (KSE) to analyze the impact of CG on FRQ within the time frame of 2004 to 2021. The model of this study is drive from McNichols (2002), which is used to calculate FR quality and company governance attributes those are grounded on board members, board independence, institutional ownership, and regularity of board meetings. The outcomes of this research show that there is a significant association between company governance traits and FR quality. In addition, this research originates evidence to provide a noteworthy association among control variables (firm size and leverage) and FR. From these results, this research accomplishes that governance does have significant insinuations for the reporting standards

by essentially applying. By this, directors of the companies can conclude and send opinions and recommendations to the governing body like SECP for better future implementation.

The outcome of this symposium proposes that corporate governance have a significant effect on the FR quality, especially board size, independent directors, and panel meetings have a powerful influence on the board verdicts to monitoring and making strategies to the reporting aspect of the company. This symposium also suggests that listed companies must increase the size of the board in a proper and balanced manner. The latest version of the Code of Corporate Governance issued by SECP in 2012 is a good step but still needs to make more need of improvement because still now in Pakistani market governance is adopted 37%, and annually improvement is near to 23%.

This study comes up with influencing role of BS, BI & FBM, as there is a lack of IS role (figure-3). Study also reveals the association between BS & BI as bigger BS, the more independent directors, so that better decisions can take place which also reduce the agency-problems between stakeholders and administration. However, there is an insignificant pattern of investment shareholding companies; mostly larger firms have the portion of investment companies due to the market goodwill, whereas smaller firms have capital shareholding. Similarly, institutional shareholders like financial institutions, mutual funds are the active shareholders that monitor the activities of a firm, and they are also considered as watchdogs over the management of the firm.

The present study is based on only those corporations which are registered at KSE. There is no uncertainty that KSE is the major and the largest stock exchange which is the representative of the Pakistani market; however, additional corporations can be comprised in future research so that the consequence would be more generalizable in Pakistan.

To study the FRQ, scholars can use diverse countries like SAARC to educate the importance of CG. The Country-governance index is also another tool to observe the FR quality of the corporations. In short, forthcoming scholars are given the sureness to study and research the CG & FRQ with economic growth. Furthermore, this research does not use the statistical information of financial companies, and comparative research can be conducted with a sample of financial companies and non-financial

companies. Additionally, this study uses only a sample of seventy companies which is not too much and the part of SECP and CG codes can be indispensable variable to research that could be considered for the future study.

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Appendix

Table 7

Descriptive Analysis for FRQ

	ACCR	CF	CF_{it-1}	CF_{it+1}	REV	PPE
Mean	0.263	0.191	0.182	0.161	-4.524	0.194
Median	0.132	0.199	0.211	0.157	-4.474	0.187
Maximum	0.911	0.336	0.276	0.342	-3.992	0.251
Minimum	-0.243	0.065	0.074	0.051	-5.278	0.144
Std. Dev.	0.386	0.100	0.075	0.091	0.383	0.035
Skewness	0.628	0.039	-0.324	0.533	-0.469	0.411
Kurtosis	2.115	1.539	1.577	2.424	2.354	2.547

Table 8

Correlation Matrix for FRQ

	ACCR	CF	CF_{it-1}	CF_{it+1}	REV	PPE
ACCR	1.000000					
CF	0.218664	1.00000				
CF_{it-1}	0.400613	0.249961	1.000000			
CF_{it+1}	0.385128	0.369470	0.100080	1.000000		
REV	0.499514	0.459815	0.221291	0.691418	1.00000	
PPE	-0.198177	-0.160505	-0.739372	-0.243073	-0.082626	1.00000

Table 9

Common Effect Model (CCM)

Dependent Variable: ACCR				
Variable	Coefficient	Std. Error	*t*-Statistic	Prob.
C	0.355428	0.375588	0.946325	0.3443
CF	0.339040	0.140486	-2.413344	0.0161
CFit-1	2.684264	0.274804	9.767918	0.0000
CFit+1	0.980874	0.214734	4.567862	0.0000
REV	0.289007	0.051471	5.614963	0.0000
PPE	3.249589	0.685359	4.741441	0.0000
R-squared	0.371819	Mean dependent var		0.263122
Adjusted R-squared	0.366785	*S.D.* dependent var		0.386592
S.E. of regression	0.307630	Akaike info criterion		0.489637
Sum squared resid	59.05284	Schwarz criterion		0.531978
Log likelihood	-148.2358	Hannan-Quinn criteria.		0.506083
F-statistic	73.86883	Durbin-Watson stat		2.358412
Prob(*F*-statistic)	0.000000			

Table 10
Fixed Effect Model (FEM)

FEM with CG Index-FRQ (P-3)			FEM Individual Results CG-FRQ (P-4)		
Variables	Coefficient	Prob.	Variables	Coefficient	Prob.
C	0.010683	0.6814	C	0.025102	0.3149
CGI	0.025341	0.0000	BS	0.004835	0.0000
LEV	-0.003212	0.0001	BI	0.024737	0.0000
FS	0.050345	0.0031	FBM	0.00214	0.0000
			IS	0.000415	0.0007
Cross Sections		70	LEV	-0.021274	0.0000
Observations		980	FS	0.002902	0.0175
Adjusted R-Square		0.186413	Adjusted R-Square		0.588625
F-statistic		3.00166	*F*-statistic		9.510544
Prob (*F*-statistic)		0.0000	Prob (*F*-statistic)		0.0000
Durbin-Watson Stat		2.43	Durbin-Watson Stat		2