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THE INFLUENCE OF CORPORATE GOVERNANCE ON ACCOUNTING CONSERVATISM IN TOP NON-FINANCIAL FIRMS OF PSX: THE MODERATING ROLE OF AUDIT QUALITY

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ABSTRACT

This paper is based on agency theory which describes the separation of shareholders and managers and generates asymmetrical information that flows towards unfavorable consequences. In this regard, corporate governance executes its role as a forensic tool to monitor and control the behavior of opportunistic managers and consequently develops the trust of shareholders regarding financial reports. This study explores the direct and moderating influence of corporate governance on accounting conservatism. The sample non-financial firms are 70 out of 100 largest firms of PSX for the period 2010-2019. Regression is perused to test the formulated hypotheses. The findings of the first model indicate that CG attributes including BI, BGD, BActi, ISO and InsidSO have a positive while BCR has a negative influence on accounting conservatism. However, BS, FSO and SOC have shown no influence. The findings of the second model indicate that audit quality is positively moderating the nexus between CGI and conservatism. The findings of the study are significant for a policy think tank in the corporate sector of Pakistan.

***Keywords*:** CG Index, accounting conservatism, audit quality, Big4 Auditor, agency theory.

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INTRODUCTION:

Corporate scandals are termed as accounting scandals and irregularities committed by the management of the company with the intention of manipulation and dishonest representation of financial reports to mislead the investors and distort their decisions which have serious consequences for the firm's earnings and reputation (Li, 2011; van der Stelt, 2017). Intentional

manipulation of accounting reports or malpractices of corporate governance is the prime reason for corporate accounting scandals which may cause the collapse of businesses (Khalil, 2010). In general, such intentional scandals include mismanagement of funds, manipulation of stock price, loans masked as sales, deceptively overstatement of revenue, keeping huge debts off the balance sheet, superficially showing loans as revenue, understatement of expenditures, overstating the cost of assets and under-reporting the liabilities of the related firms. Corporate governance mechanisms align the interest of managers and shareholders (Desrousseaux, 2017). One of the prime principles of corporate governance is to ensure transparent financial information required for decision making (Adebiyi, 2017). Poroy Arsoy and Crowther (2008) define that corporate governance is in fact a link between a corporate and its all relevant stakeholders. Several researchers have suggested different corporate governance attributes which may result in solving agency problems and reducing agency costs of firms. For exploring the aggregate influence on ACC, the CG index has been constructed by using the nine characteristics of CG. These components are BI, the board size, BCR, BGD, Bacti, InsidSO, ISO, FSO and SOC.

Accounting conservatism is an important principle of accounting (Dechow, Ge, & Schrand, 2010) which help to recognize losses more immediately than revenue in financial reporting of firms (Hajawiyah, Wahyudin, Kiswanto, Sakinah, & Pahala, 2020). Accounting conservatism helps to keep away the opportunistic behavior of concerned managers of firms resulting in increasing the value of firms (Khalifa & Ben Othman, 2015).

The unpinning theory of this research is the agency theory that defines the relationship between two parties (principal versus manager) of a corporation. Agency conflict (information asymmetry) occurs between both parties of the company due to their separation and both parties think about their own benefit. This conflict could be eradicated by corporate governance system (Shleifer & Vishny, 1997). Investors have no access or limited access to accounting information or have no forensic knowledge about the accounting & finance to know about the consequences of their business, therefore, they blindly trust management financial information (Eliwa, 2015).

This open hand dependency encourages opportunistic behavior of managers towards manipulation of accounting information and consequently upset the investors' trust in accounting information (Li, 2011). Johnson, Boone, Breach, and Friedman (2000) state in this regard that the reason for the Asian financial crisis (AFC) as started at beginning of July 1997 was due to an abortive CG system resulting in losing the trust of financiers. Different countries in view of some well-known scandals and to the protection of their investors' trust have most urgently considered corporate codes to improve financial transparency and accountability (Hoang, Abeysekera, & Ma, 2017). SEC of Pakistan also introduced code of corporate governance and imposed it on the listed companies for its compliance and implementation. Due to the futile corporate system, many distinguished organizations including WorldCom (the US, 2002), Enron (the US, 2001), Satyam (Asia, 2009) and Parmalat (Italy), confronted corporate scandals and failure related to low quality of accounting reporting information and auditing (Oyedokun & Salisu, 2018).

In Pakistan, some renowned scandals including Taj Co, Mehran Bank, and Islamic Investment Bank confronted failure due to avoidance of a dynamic governance system. Obliviously, the demise of these well-known firms was mostly due to a lack of an inefficacious governance system. Several researchers have conducted research in the same field but none of them have paid attention to this topic. Since the gap exists to be filled in the existing literature and evidently contributes to an empirical understanding of the (i) direct influence of CG individual attributes on accounting conservatism and (ii) moderating influence of audit quality on the relationship of CGI and accounting conservatism over the period of ten years (2010-2019) in order to restate the confidence financiers in the capital market of Pakistan for the boosted economy.

RELEVANT LITERATURE

THEORETICAL LITERATURE

Agency Theory (AT)

This theory was framed by Alchian and Demsetz in 1972 and furthermore established by J. and Meckling (1976) (Panda & Leepsa, 2017). Generally, it explores the relationship between shareholders and top management. The former delegates power to the latter for decision-making to serve on their behalf. However, the latter fails to serve the principal's interest except for his own which may result in agency conflict and asymmetrical information (Glinkowska & Kaczmarek, 2015).

Stakeholders Theory (SHT)

Stakeholder theory is established to cover the gap overlooked in Agency theory because in prior theory only shareholders are focused as the interested party but in Stakeholder theory, several stakeholders are being considered as the interested party affecting by agency problems (Ezelibe, Nwosu, & Orazulike, 2017).

Positive accounting theory (PAT)

It describes the prediction of accounting methods followed in firms for their records of accounting but does not specify the method that should be employed. According to this theory, accounting conservatism is the best accounting concept that might be applied to achieve advantages while managers are involved in contracts. Thus this theory detains the management's opportunistic behavior for the advantage of relevant firms (Yunos, Ahmad, & Sulaiman, 2014).

Stewardship Theory

This theory states that the principal-agent relationship is in alignment as both of them think about the interest of the company rather than their own interest (Subramanian, 2018).

EMPERICAL LITERATURE

Board independence and ACC

Yunos et al. (2014) examined the relationship between governance attributes and conservatism. They applied panel data analysis on 300 firms' data taken

from the MSX for a period 2001-2007 and found a positive relation between independent directorship and conservatism. El-habashy (2019) reported a positive correlation between independent directorship and conservatism. It was concluded that more directors have the influence in recognizing bad news (losses) more quickly than firm's good news. Amran and Manaf (2014) have found negative nexus between BI and conservatism. Van der Stelt (2017), Nasr and Ntim (2018) and Ren (2014) reported positive association between the director on independent position and conservatism. Aifuwa and Embele (2019) have reported negative nexus between the said variables. Thus the following first hypothesis (H1) is reported in view of the aforementioned arguments:

H_1: The higher proportion of the board as an independent has a significant positive influence on A/c conservative in non-financial firms of PSX.

Board Size and ACC

Oyedokun and Salisu (2018) have conducted a research study in Nigeria to explore the influence of board attributes (board size) on conservatism. They found that BS is negatively significant with accounting conservatism. Elshandidy and Hassanein (2014) conducted a research study in the UK and found that overall board size has no influence on the prevalence of conservatism due to strong investor protection. Nasr and Ntim (2018) found a negative association between board size and conservatism with the justification that a large board commutes fraud in the financial statements. Thus the following second hypothesis (H2) is reported in light of the above empirical estimations:

H_2: Board size with a large number of directors has a significant positive influence on A/c conservatism in non-financial firms of PSX**.**

Gender diversity and ACC

Boussaid, Hamza, and Sougne (2015) investigate the relationship between gender diversity and conditional conservatism in French firms by using a pooled regression model. They found a positive relationship between the BGD and accounting conservatism. Huang and Wang (2015) have found empirically that gender diversity is positively associated with conservatism. They have justified that female director improve the level of conservatism. Boussaid et al. (2015) have interleaved that a female director on a firm's board compels the management to consider conservatism on priority. So, the following third hypothesis (H3) is reported in light of the exceeding arguments:

H_3: Diversity in terms of gender inboard has a significant positive influence on A/c conservatism in non-financial firms of PSX.

Board remuneration and ACC

Jaafar, Wahab, and James (2012) have studied the empirical impact of BOD's remuneration on financial consequences in the country of Malaysian firms over the 3-years (200-2209). They reported a positively significant relationship between the said dependent and independent variables. They have urged that remuneration is the main source that captures the directors toward better financial consequences. Prior studies regarding directors' remuneration and other dependent variables reported mixed results (Jaafar et al., 2012). Hossain (2020) has shown a negative relationship between the dependent and

independent variables of the study. For instance, Dogan and Smyth (2002) have found no relationship, Croci et al. (2012) have found a negative and Khalid and Rehman (2014) have found positive relationship between the said variables. Thus the following fourth hypothesis (H4) is reported:

H_4: Board with a higher proportion of cash remuneration has a significant negative influence on A/c conservatism in non-financial firms of PSX.

Board activity and ACC

Boussaid et al. (2015) studied the relationship between CG attributes and conservatism in French listed firms (SBF120) from 2009 to 2012. They have reported a positive nexus between the variables. They have justified that frequency of board activities are carried out to discuss the important issues for the direction of management in turn improving the conservatism. Alves (2021) has found positive relation between board activities and conservatism. He urged it compels management to report the financial statements more conservatively. Thus the following fifth hypothesis (H5) is reported in light of the above arguments:

H_5: Board activity with higher frequency has a significant positive influence onA/c conservatism in non-financial firms of PSX.

Inside share ownership and ACC

Melgarejo (2019) examines the relation between good CG and accounting conservatism with the effect of moderating variable (leverage). It was concluded that managerial ownership has negative significant effect of on conservatism. Khan (2016) concluded that inside directors have negative while outside directors have positive impact on conservatism. Utomo, Pamungkas, and Machmuddah (2018) have reported positive relationship. Sholikhah and Baroroh (2021) has found no relationship between the said variables. Thus the following sixth hypothesis (H_6) is reported in light of the above arguments:

H_6: Insider equity share ownership with a higher proportion has a significant positive influence on A/c conservatism in non-financial firms of PSX.

Institutional equity share ownership and ACC

Melgarejo (2019) carried out research by examining direct and indirect relationship between CG and conservatism. They concluded that CG (InsidSO) has significant positive effect on accounting conservatism. El-habashy (2019) has found a negative relationship between institutional investors and conservatism. Liu (2019) found no nexus in the pertinent variables. Thus the following seventh hypothesis (H7) is assumed as per prior research:

H_7: Institutional equity share ownership with a higher proportion has a significant positive influence on A/c conservatism in non-financial firms of PSX.

Foreign equity share ownership and ACC

Alkordi, Munther, and Dabaghia (2017) have conducted the study in Jordan firms for the period 2005-2013. They have found a positive relationship between foreign shareholding and conservatism. Liu (2019) concluded that

Foreign investors are negatively correlated with accounting conservatism. They have justified that the reason of negative relationship is due to political, social and cultural issues. Since the following is reported:

H_8: Foreign equity share ownership with a higher proportion has a significant positive influence on A/c conservatism in non-financial firms of PSX.

Share ownership concentration and ACC

Alkordi et al. (2017) have documented that concentrated shareholding has no influence on conservatism in Jordan firms' data. El-habashy (2019) has found a negative relationship between concentrated ownership and conservatism. Yu (2013) explored significant relationship. Accordingly, the following ninth hypothesis (H9) is reported:

H_9: A higher proportion of Share ownership concentration has a significant positive influence on A/c conservatism in non-financial firms of PSX.

CG Index, conservatism and Audit quality

Corporate governance has been considered a forensic tool for controlling accounting conservatism (recognizing bad news on priority) and minimizing the agency conflicts. It specifies that influential governance in firms encourages monitoring the management and thus demands for conservative accounting. Audit quality thoroughly ensures transparency and reliability of financial reporting (Ahmad & Ilyas, 2019). The weak service of Big4 results in agency conflict and asymmetrical information consequences in low accounting conservatism. Adversely, quality audit discourages agency disputes due to symmetrical information ultimately encourages accounting conservatism (Alzoubi, 2016; Masmoudi, 2021). Thus the following hypothesis (H_{10}) is narrated:

H_{10}: Audit quality positively moderates the association between the CG index and accounting conservatism in non-financial firms of PSX.

CONCEPTUAL FRAMWORK

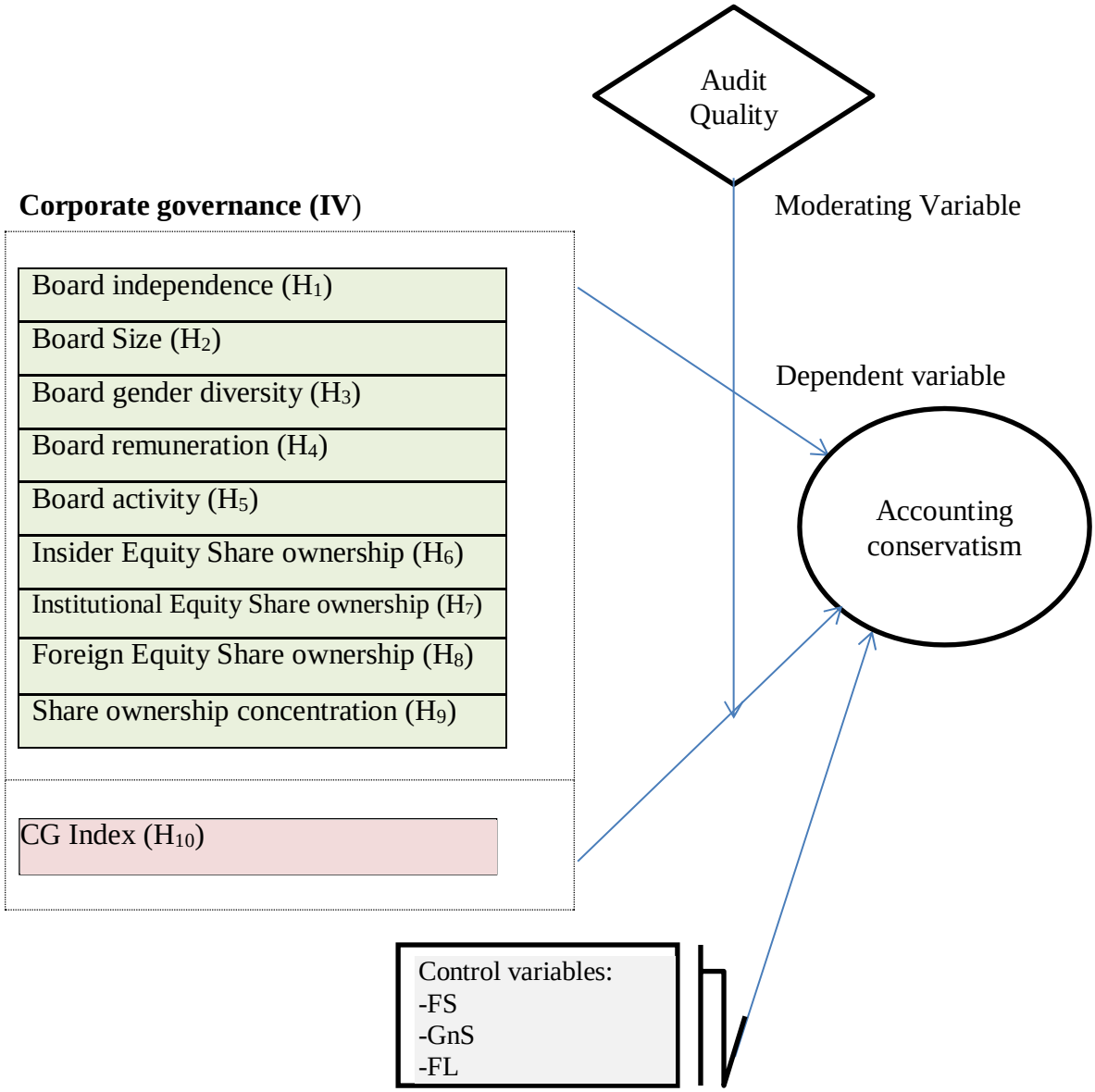

Figure 2.1: Conceptual Framework

METHODOLOGY

Sample Size and Data Collection

The population of this research study is 100 firms listed on PSX for the period from 2010 to 2019. The main reason for consideration of 100 firms as a population is because these firms contain the top active and largest firms on the basis of market capitalization (Saeed, 2020; Sarun, 2016). Secondary data of non-financial firms are obtained for purpose of analysis from the site o PSX, State Bank and open door for all. Financial and other missing data are excluded and thus sample firms in hand are 70 firms over the 10 years. The reason for the exclusion of financial firms is that there are differences in the nature of reporting and practices.

Definition and Measurement of the Variables

Measurement of Accounting Conservatism

There are different models used by researchers in their previous literature for the measurement of conservatism. Apart from these, the latest model is G-Score and C-Score method which is developed by khan and watts (2009) (Haque, Fatima, Abid, & Qamar, 2019). The said G-Score and -Score are measured as below:

$E_{i,t} = \beta_0 + \beta_1 D_{i,t} + \beta_2 R_{i,t} + \beta_3 D_{i,t} * R_{i,t} + \varepsilon_{i,t}$ ----------Eq (1) (Basu Model-1997)

Where,

$E_{i,t}$ = earnings of the firm over the year$_t$

$D_{i,t}$ = dummy variable (equals to 1 if R < 0 & 0 otherwise)

β_2 = good news timeliness

β_3 = incremental timeliness for b/news over g/news (accounting conservatism)

G-Score = $\beta_2 = \mu_0 + \mu_1 Size_{i,t} + \mu_2 MTB_{i,t} + \mu_3 Lev_{i,t} + \varepsilon_{i,t}$ ---------- Eq (2)

C-Score = $\beta_3 = \lambda_0 + \lambda_1 Size + \lambda_2 MTB_{i,t} + \lambda_3 Lev + \varepsilon_i$ ---------- Eq (3)

Where,

Size = size value of firm$_{it}$;

MTB = market to book value

FL = Total debt / total assets

Replacing β_2 (G-Score) and β_3 (C-Score) from equation (2) and (3) in Reg. Eq (1).

Thus the following equation is obtained:

$$E_{i,t} = \beta_0 + \beta_1 D_{i,t} + R_{i,t} * (\mu_0 + \mu_1 Size_{i,t} + \mu_2 MTB_{i,t} + \mu_3 Lev_{i,t}) + D*R_{i,t} (\lambda_0 + \lambda_1 Size_{i,t} + \lambda_2 MTB_i + \lambda_3 Lev_{i,t}) + (\sigma_0 Size_{i,t} + \sigma_1 MTB_i + \sigma_2 Lev_{i,t} + \sigma_3 Di*Size_{i,t} + \sigma_4 Di*MTB_{i,t} + \sigma_5 D*Lev_{i,t}) + \varepsilon_{i,t}$$ --------Eq4

Equation (4) is used for annual cross-sectional regressions. The values and estimates from Eq 4 are applied to equation Eq 3 to obtain the firms-specific level of accounting conservatism. The greater value of C-Score represents the greater level of accounting conservatism of the firm.

Measurement of CG attributes

BI (independent directors) has been measured by dividing the total independent directors over the board size (total directors onboard).

$$\text{BI} = \frac{\text{Independent directors}}{\text{Total numbers of directors}}$$

BS (board Size) has been measured as the strength or number of all Directors on the firm's board.

$$\text{BS} = \text{Total directors of Directors}$$

BGD (Board diversity) has been measured as the percentage of female directors on the board of a firm.

$$\text{BGD} = \frac{\text{owmen (Female)}\ Directors}{\text{Total board Directors}} X100$$

BCRit (Director Remuneration) has been measured as all benefits being paid to the directors of the firm board.

$$\text{BCR} = Directors' \text{ all cash benefits}$$

BActi (board activity) has been captured as the %age of directors' attendance in the firm's annual general meetings in the overall annual meetings of directors in respective firms.

$$\text{BActi} = \frac{Directors' attendance}{\text{Annual G. meeting}} \ X100$$

InsdSO (Insider investors) is the percentage of equity shares in hands of insider directors out of the total number of firm equity shares.

$$\text{InsdSO} = \frac{\text{Shares held by insider (management)}}{\text{Total Shares of firm}} \ X100$$

ISO (Investors of institutions) has been calculated as the percentage of equity-shares in hands of investors of institutions out of the equity-shares of firms.

$$\text{ISO} = \frac{\text{Shares held by Institutions (Bank)}}{\text{Total Shares of firm}} \ X100$$

FSO (Investors do not belong to Pakistan) has been calculated as the percentage of equity shares possessed by the investors who belong to foreign countries.

$$\text{FSO} = \frac{\text{Shares held by Foreigners}}{\text{Total Shares of firm}} \ X100$$

SOC (concentrated ownership) has been measured as the percentage of total shares in hands of the top-five-shareholders out of the total firm's shares.

$$\text{SOC} = \text{Shares held by Top five firm's shareholders}$$

Measurement of CG Index

Following Shahwan (2015) and Saeed (2020), this study has also constructed CG Index. CG index has been developed from nine indicators of corporate governance. These variables are used as individuals to check their relationship with conservatism. For examining the aggregate effect on ACC, the CG index has been constructed by using the nine characteristics of CG (as described above).

CGI = Σ [w1BI + w2BS + w3BR + w4BGD + w5BActi + w6InsidSO + w7 InSO + w8 FSO + w9SOC]

CG index has been constructed by computing the WAVG of all the above CG dimensions. PCA has been carried out for assigning weight thereto. The larger the calculated score of components, the higher the degree of CG. The greater index score for each CG mechanism indicates better construction that could move toward influential CG.

Measurement of Audit Quality

Audit quality is employed as a moderator and measured through binary variable. Coded 1 is assigned if firm is audited by big4 (KPMG, DT, EY & PWC) or otherwise code0 (Rajgopal, Srinivasan, & Zheng, 2021).

Measurement of Control Variables

Three control variables are firm size (FS), sale (GnS) and leverage (FL). The first variable is measured by taking the log of total assets of respective firms (Vuong, 2021).

$$\text{FS} = \log(Firm's\ TA)$$

The second is calculated by taking the percentage growth of firms' total sales for the specific firms (Ahmed & Duellman, 2007).

$$\text{GnS} = \frac{\text{Current year sale} - \text{Past year sale}}{\text{past year sale}}\ X100$$

The 3rd variable is calculated by using the following formula (Hernawati, 2021; Ren, 2014) .

$$\text{Firm's Leverage} = \frac{\text{Firm's liability}}{\text{Firm's Assets}}$$

ECONOMETRIC MODELS

Following two research models are used for testing the formulated hypotheses and reporting the objectives of the study.

Model 1:

Relationship between CG attributes and conservatism

$ACC_{it} = \beta_o+\beta_1(BI_{it}) + \beta_2(BS_{it}) +\beta_3(BGD_{it}) +\beta_4(BCR_{it})+\beta_5(BActi_{it})+ \beta_6(InsdSO)+\beta_7(InSO_{it}) +\beta_8(FSO_{it})+ \beta_9(SOC_{it}) + \beta_{10} LTA_{it} +\beta_{11}FL_{it} + \beta_{12}GnS_{it} +\varepsilon_{it}$

Model 2:

Moderation effect of audit quality on the relationship of CG Index and ACC

$ACC_{it} = \beta_o+\beta_1 CGI_{it} + \beta_2\ AudQ_{it} + \beta_3\ (CGI_{it}*AudQ_{it}) + +\beta_4\ LTA_{it} +\beta_5 FL_{it} + \beta_6 GnS_{it} +\varepsilon_{it}$

Empirical results

Descriptive statistics

This table of descriptive statistics shows the mean and standard deviation, minimum & maximum values of the selective variables of the current study. The average accounting conservatism (C-score) is .0860 which is close to the average as reported by Nasr and Ntim (2018), Sakawa and Watanabel (2020) and Liu (2019). The positive value of accounting conservatism shows that relevant firms have considerably employed the principle of conservatism during financial reporting.

Table 1: Descriptive detail (Statistics)

Variable	Mean	Std. Dev.	Min	Max
Dependent Variables				
ACC (Cscore)	0.0860	0.123	-0.943	0.259
Independent Variables				
BI	0.2560	0.174	0.122	0.927
BS	7.3630	1.677	0005	0014
BGD	0000.1	0.101	.0000	.5710
Log BCR	45.752	30.10	.5000	0100
BActi	5.8030	2.953	0004	0015
InsidSO	27.696	16.05	.0000	99.20
ISO	12.934	11.46	.0000	85.86
FSO	7.0830	14.87	.0000	093.2
SOC	14.720	19.44	.0000	96.45
Index of CG				
CGI	0.1410	0.116	.0000	0.990
Moderating variable				
AudQ	0.390	0.293	.0000	0001
Interaction terms				
CGI*AudQ	0.0990	0.095	-0.290	00.99
Control variables				
LTA	10.443	0.588	7.175	12.04
FL w	0.4770	0.246	0.120	.8640
GnS w	0.5030	0.789	-0.636	2.559

Correlation matrix

Correlation matrix in research is carried out so as to expose the relationship among the sample variables before regression analysis and checking the problem of multicollenearity (Wang, Li, & Liu, 2021). According to Gujarati and Porter (2009) multicollenearity exists in the sample data if its VIF has higher value than 10. The results demonstrate that BI has positive correlation with conservatism in Pakistani non-financial firms, implying that increasing the number of independent directors on board in Pakistani firms could be helpful in enhancing the level of conservatism. The footprints of similar relationship have previously been proved in research study of El-habashy (2019). The outcomes of the table 4 also show a positive correlation between BS and conservatism. It determines that increasing the number of board members would have significant impact on the accounting conservatism as greater boards have variety of expertise (Nasr & Ntim, 2018). The positive association between ISO and conservatism shows that ISO is beneficial in improving the level of conservatism (Jarboui, 2013). Board activity is positively correlated with accounting conservatism indicating that conservatism is in align with the formulated hypothesis of (Boussaid et al., 2015). Positive sign of InsidSO reports that this leads to stronger accounting conservatism and gave more consideration to conservatism in financial reporting of relevant firms of PSX. The same positive findings are found in study of Saeed (2020). Board diversity is positively correlated with conservatism indicating that participation of gender result in greater level of conservatism. It consists with findings reported byMakhlouf, Al-Sufy, and Almubaideen (2018). Remarkably, negative value of FSO

reports that this leads to poor conservatism and have no consideration thereabout in financial reports. These results argue that FSO cause agency conflict due to their strong adverse and negative nexus with the dependent variable in described firms. Thus management is more probably to execute more aggressive principles of accounting (Hajawiyah et al., 2020). SOC has negative correlation with accounting conservatism communicating that increasing the number of ownership concentration would have negative impact on the conservatism in financial reporting of firms. The negative sign between ACC and SOC confirms the claim that corporate governance with more ownership concentration influences the conservatism in financial reports (Alkordi et al., 2017). The negative relation between board remuneration and conservatism indicates poorer conservative reporting in respective firms. The relevant literatures have shown sundry findings concerning BCR and ACC of the samples firms (Gaio & Raposo, 2014). The findings of this study about audit quality and conservatism indicating that Big4 audit in Pakistani firms could be useful in enlightening the level of conservatism in financial reporting of particular firms. Correlation coefficient in ACC and CG Index (Javid & Iqbal, 2010) is also positive. It is clear that ACC (Khan & Watts Model-2009) CG index are positively correlated. This positive correlation advocates that CGI demands the conservatism required in recognition of bad than good news in financial reporting.

Table 1: Analysis of Pearson Correlation

Variables	ACC	BI	BS	BGD	BCR	BActi	InsidSO	ISO	FSO	SOC	CGI	AQ	LTA	FL	GnS
ACC	1														
BI	0.037	1													
BS	0.086	0.054	1												
BGD	0.138**	-0.155***	-0.057	1											
BCR	-0.542***	0.051	-0.037	0.084	1										
BActi	0.105*	-0.035	-0.096*	.116**	-0.159***	1									
InsidSO	0.032	0.034	0.143**	-0.054	0.117**	-0.036	1								
ISO	0.074	-0.089*	0.062	0.015	-0.129**	-0.039	0.110*	1							
FSO	-0.136**	0.027	0.062	-0.046	0.037	-0.023	0.075	0.041	1						
SOC	-0.434***	-0.066	-0.036	0.215***	0.291***	-0.142**	-0.105*	-0.131**	0.025	1					
CGI	0.0860	-0.063	-0.039	0.143**	-0.024	-0.013	0.018	0.240***	-0.058	-0.027	1				
AQ	0.016	-0.119**	-0.021	0.148***	0.013	0.053	-0.032	-0.042	-0.019	0.034	0.065	1			
LTA	0.145**	0.062	0.227***	-0.081	-0.080	-0.202***	0.090	0.027	-0.064	-0.064	-0.074	-0.060	1		
FL	0.580***	-0.198***	0.077	0.061	-0.249***	-0.042	-0.048	0.024	-0.135**	0.012	0.056	-0.034	0.238***	1	
GnS	0.023	0.017	0.073	-0.087	-0.014	0.075	-0.015	-0.051	-0.055	0.058	-0.064	0.038	0.169***	0.012	1

* p<0.05, ** p<0.01, *** p<0.001

Regression Analysis

Model 1: Accounting conservatism and CG mechanisms

Relevant tests have been conducted and found that the sample data of non-financial firms are suffered from hetroscedasity and autocorrelation. Following Makhlouf et al. (2018), White (1980) and Hoang et al. (2017), this research study employed Robust Fixed effect models to cope with heteroskedasticity and autocorrelation issues as found in relevant models during diagnostic tests. VIF has been checked for the purpose of regression analysis. The higher value of VIF is 1.29 which is definitely below 10 which indicate that there is no issue of multicollinearity (Gujarati & Porter, 2009).

Table 2: Robust Fixed-Fixed Regression results (Std. Err. adjusted)

ACC	Coef.	Robust St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
BI	.015292	.0067696	2.26	0.028	.0017362	.0288478	**
BS	.0018720	.0009423	0.20	0.843	-.0020741	.0016997	
BGD	.0417447	.0578822	1.72	0.047	-.0741623	.1576517	**
BCR	-.0003898	.0001259	-3.10	0.003	-.0006420	-.0001377	***
Bacti	.0017337	.0009880	1.75	0.085	-.0002448	.0037122	*
InsidSO	.0002112	.0001143	1.85	0.070	-.0000176	.0004401	*
ISO	.0020460	.0013500	2.52	0.035	-.0000658	.0004750	**
FSO	-.0001765	.0002113	-0.84	0.407	-.0005995	.0002466	
SOC	-.0002232	.0001378	-1.62	0.111	-.0004991	.0000527	
LTA (FS)	-.0194111	.0090159	-2.15	0.036	-.0374652	-.0013571	**
FL_w	.1825580	.0071439	25.55	0.000	.1682527	.1968634	***
GnS_w	-.0035706	.0020678	-1.73	0.090	-.0077112	.0005700	*
Constant	.2098502	.0917768	2.29	0.026	.0260704	.3936301	**

Mean dependent Var	0.092	SD dependent Var	0.081
R-squared within	0.4661	Number of obs	700
F-test	122.075	Prob > F	0.000
Overall R-squared	0.4487	R-squared between	0.3198

**** p<1%, ** p< 5%, * p < 10%*

Board Independence (BI) and conservatism are significantly positive associated at the 5% level as per above table 3. The independent director (BI) has positive and significant impact on accounting conservatism. It indicates that boards containing a relatively higher percentage of independent directors are more probably to effectively keep watch on the team of management and direct them to realize bad news than good news in a timelier sequence in financial reporting. Board size has no effect on conservatism in sample companies. The findings of this study as shown in above table agree with the findings of Elshandidy and Hassanein (2014). Board diversity is significantly positive associated with conservative accounting relatively similar to Boussaid et al. (2015); Makhlouf et al. (2018) representing that corporate boards with female directorships develop monitoring of the board to identify bad news quickly than good news in earnings with timelier fashion.

Directors' remuneration shows the significantly negative influence on conservatism signaling that fewer remunerations of directorship reveal a better result of conservatism (Gaio & Raposo, 2014). Board activity and conservatism are significantly positive correlated signifying that a higher proportion of directors' attendance & meetings results in speedy recognition of firms' bad news than good in sample firms' earnings. Results are similar to Yunos et al. (2014) and Boussaid et al. (2015). InsidSO is positively significant with accounting conservatism. Its coefficient symbol of relation is aligning with expectation of study and supports the reported results in prior study Boussaid et al. (2015). Institutional shareholdings are positively significant correlation with conservatism. These findings are in accordance with the described hypothesis and results reported by Hajawiyah et al. (2020). It was found that foreign investors have no significant relation with a conservative account in sample firms of PSX. Foreign share ownership with less percentage ownership in firms' probability will not have significant motivations to

control the management since no effect on the quality of financial reporting (ACC) (Le, Pavelkova, Do, & Ngo, 2017). Concentrated ownership has no significant influence onconservatism declaring that a higher percentage of equity shares possessed in a few handsof shareholders have no significant influence on accounting quality (Alkordi et al., 2017). Control variables such as firm size and sale growth have negative significant relationship with conservatism (Wang et al., 2021) while leverage is positively significant (Nasr &Ntim, 2018).

Model 2: Moderation effect of audit quality on the nexus between CGI and ACC

Higher VIF is 1.29 which is below 10 values (Gujarati & Porter, 2009), since this is no issue of multicollenearity. A robust fixed-effect model has been carried out in order to remove errors and problems of hetroscedasity in the fixed-effect model of this study (Wooldridge, 2015).

Table 3: Robust Fixed-effect model (Std. Err. adjusted)

ACC	Coef.	Robust St. Err.	t-value	p-value	[95% Conf	Interval]	Sig
CGI	.0529664	.0221010	2.40	0.019	.0088760	.0970567	**
AudQ	.0123127	.0047575	2.59	0.012	.0028217	.0218037	**
CGI*AudQ	.1915695	.0873546	2.19	0.032	.0173019	.3658371	**
LTA	-.0360051	.0182475	-1.97	0.052	-.0724078	.0003976	*
FL_w	.1427800	.0195454	7.31	0.000	.1037880	.1817721	***
GnS_w	-.0046660	.0017857	-2.61	0.011	-.0082283	-.0011037	**
Constant	.3689634	.1924520	1.92	0.059	-.0149678	.7528946	*

Mean dependent Var	0.086	SD dependent Var	.123
R-squared between	0.278	Number of obs	700
F-test	112.8	Prob > F	.000
Overall R-squared	0.247	R-squared within	.191

****** p<.01, ** p<.05, * p<.1***

The findings of the study indicate that the CG index has a significantly positive influence on conservatism. It shows that Big4 audited firms are more conservative because they focally observed the behavior of opportunistic management (El-habashy, 2019). Findings show that audit quality positively moderates the relationship between CG Index and conservatism in sample firms of PSX. It implies that the presence of Big4 firms has the capacity to strengthen the relationship between CGI and level of conservatism (Ahmad & Ilyas, 2019). Big4 audit firms also reduce the level of information asymmetry (Al-Matari, Al-Matari, & Saif, 2017). Out of Control variables, leverage is positively significant while the remaining two are negatively significant with conservatism.

FINDINGS

Discussions of results of hypotheses testing

The first hypothesis (H_1) of this study aims to examine the significant positive impact of an independent board on conservatism in non-financial firms of PSX. The empirical regression analysis (for testing the hypothesis H1) provides findings in support of the first

Hypothesis (H_1). The second hypothesis (H_2) of this study has examined by using empirical analysis and found that board size has no significant effect on conservatism because probability value of 0.843 is higher than significant p-value (0.843 > P-value), thus second hypothesis (H_2) has been rejected. The findings of this study are line with the result of Elshandidy and Hassa nein (2014). H_3 of this study predicts that diversity on board affects conservatism. It was found CG (gender diversity) does affect conservatism because their probability value is less than threshold value. Thus H3 is accepted confidently in view of findings of this study and in line with findings reported by Boussaid et al. (2015); Makhlouf et al. (2018). The hypothesis (H_4) has been tested and found exactly that heavy remuneration affects the conservatism negatively because the p-values is less than the cutoff value but the beta value is negative, so H_4 has been supported. It discloses that minimal remunerations of directorship reveal a superior result of conservatism (Gaio & Raposo, 2014). The pertinent hypothesis (H_5) was tested empirically and found that Bacti is significantly affects conservatism. The empirical results are supporting the formulated hypothesis and the studies of Yunos et al. (2014). H_6 of this study predicted that insider equity shareholdings affect conservatism. The data of sample companies were tested for the said hypotheses and found significant results. It supports the relevant hypothesis and the results reported by Boussaid et al. (2015). The hypothesis (H_7) was tested in STATA and found that ISO exactly affects the conservatism. Results support the framed hypothesis and the results reported by Hajawiyah et al. (2020). H_8 (hypothesis 8) claims that foreign investors shareholdings affect the outcomes of firms regarding the conservatism of sample firms. It was found that foreign shareholdings have no significant effect on conservatism. The resultant outputs are not in support of formulated hypothesis and Le et al. (2017), thus the pertinent hypothesis (H8) has been rejected. The hypothesis (H9) has been rejected in light of empirical findings. The findings of this study support the results in prior study conducted by (Alkordi et al., 2017). Hypothesis H_{10} of the study claims that external audit quality (big4) moderates the relation between CGI and ACC in respective sample firms. Likewise, the coefficient (β) of the interaction term is .192 and p-value is 0.03 at higher level of significance. These results are consistent with the formulated hypothesis and consequences reported by Masmoudi (2021) and Memon, Fei, Shaique, Usman, and Nazir (2020).

CONCLUSION AND RECOMMENDATION

Implications

Financial reports (almost required by all stakeholders) are the ultimate concerns of any financial system. The financial system of the firms generates financial reports which contain all relevant financial information being circulated to firms' stakeholders for the purpose of their valuable decision-making inside and outside the firms. There are different users and practitioners of firms' financial reports who need insight thereabout for their multi purposes. As evidenced by the literature (Cohen, 2004; Hapsoro & Suryanto, 2017), the accounting consequences regarding the financial statements and Cash flow are the major aspects reported in financial reports. However, some issues including manipulation, irregularities, misrepresentation, and all type of accounting errors may deteriorate the financial consequences. In this regard CG system is a pivotal tool to cope with such

poisonous actions in the accounting system. Therefore, the findings of this study help in providing insight for the concerned users that could be helpful for them. The findings of that study will have importance to accounting practitioners, financial policy makers, finance researchers, professional auditors, and stakeholders of the firms in worldwide relevant economy.

Limitations along with flow for future research

This research study has some limitations in spite of its different contributions to the relevant fields. First, this study is concerned only with listed firms of PSX for the specific period of 10 years for the period 2010-to 2019. Thus it is suggested to have researchers more periods (years) so as to complete a set of data collection for the purpose of research. Thus it is hereby recommended for the future researchers of the same field to have a period of study from 2020 onwards. Second, the current research study has explored the impact of CG attributes and CGI on accounting conservatism in presence of audit quality used as moderator. Since future studies are advised to explore the moderating influence of investment efficiency, GAAP, government and business policy on the association of CG (CGI) and accounting conservatism. Third, this current study has the consideration of top-listed non-financial firms in terms of market capitalization. Future studies have the consideration of financial firms, SMEs, and private and public listed firms so as to explore the effect of CG (CGI) on conservatism by using Big4 as a moderator for best insight, comparison, and understanding. Last but not the least, there are a lot of techniques and models used for the purpose of data analysis and testing hypotheses. This research study adopts multiple regressions for the purpose of analysis. Thus future studies may use two-step GMM for the purpose of analysis regarding respective variables.

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