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An Interplay of Audit Quality and Default Risk on Earnings Management: A Comprehensive Analysis from the non-financial sector of Pakistan

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Abstract

The purpose of this study is to investigate the relationship between audit quality and default risk in earnings management. The auditors have a key role in mitigating earnings management and improving the quality of financial statements. It is also necessary for the regulatory authorities to increase transparency through reliable financial information disclosures. The data employed in this study is based on 200 non-financial firms listed on the Pakistan Stock Exchange (PSX) from 2011 to 2020. The modified Jones model is used to determine discretionary accruals and detect earnings management. Audit procedures executed by the Big Four audit firms are analyzed and operationalized as a measure of audit quality. The results of this study highlight the requirement for appropriate accounting and auditing procedures to mitigate the risk of earnings management. Based on the key findings of this study, authorities should foster a regulatory environment that should be transparent as well as accommodating to monitoring institutions, as audits executed by Big Four firms not only reduce the default risk but also mitigate the detrimental effects of counterfeit financial disclosures by increasing the transparency of information and reducing information asymmetry to protect the right of shareholders.

Introduction

Earning management (EM) is the act of management of obtaining some of the private gain with the help of purposeful intervention in financial statements (Yasser & Soliman, 2018; Ghani et al., 2019; Agha & Rashid, 2023). The management utilizes bookkeeping procedures in order to make financial reports that portray excessively good perspectives of firms (Ahmed & Ahmed, 2018; Yusran, 2023). The financial statement of the firm is a set of information that is available to investors for decision-making and contributes to the provision of information symmetry to firms and stakeholders equally. The firm hides real financial information from the shareholders and discloses the wrong information in the financial reports (Al-Begali & Phua, 2023); thus, misleading statements create difficulty for the shareholders. They do not recognize the actual worth of the firm.

Earning management practices prevail, especially in Pakistan's non-financial sectors. Asim and Ismail (2019) brought attention to the association between leverage and earnings management in Pakistan's manufacturing sector and revealed a positive association between

firm's leverage and earning management. The study of Ahmed et al. (2018) investigated the relationship of earning management with dividend payout in four manufacturing sectors of Pakistan. The study of Hunjra et al. (2023) highlighted that real earnings management has a significant positive impact on corporate credit risk, while this impact is negative and significant in sales manipulation. Earning management become an area of investigation in the last few years for both academics and practitioners (Chi et al., 2015; Le & Nguyen, 2023). The earning management differs in terms of investor protection. Under inefficient and weak judicial system and regulations in developing nations, the right of shareholders may not be secured in the revenue of firms (Ilmas et al., 2018). There is a weak mechanism for investor protection in Pakistan (Abid et al., 2018; Ahmed et al., 2023).

Pakistan is a developing nation, and its economy is facing social and political crises since the beginning of the first century. These crises impact the financial sector directly and the non-financial sector indirectly. Recent studies investigating earning management with different factors in Pakistan increased the significance of further exploring the area (Ilyas et al., 2019; Kamran et al., 2018; Ahmed & Ahmed, 2018; Naz & Sheikh, 2023). Consequently, audit quality is important for firms in the reduction of earning management practices, and firms can provide quality-based statements to shareholders. From the agency theory perspective, having a conflict between management's and shareholders' interests prevents management from acting in the shareholders' best interests (Nguyen & Soobaroyen, 2019). The extant literature found a strong relationship between the audit quality and earning management. The studies revealed that earning smoothing activities can be mitigated by appointing high-quality auditors and providing true information in financial statements (Eilifsen & Knivsfla, 2016; Yasser & Soliman, 2018; Liu et al., 2018; Bratten et al., 2019).

It has also been observed that risk is always present in firms' operations. Risk affects prediction accuracy and influences activities relevant to planning, strategy formulation, and decision-making because the external and internal environment potentially influences a business and its operations (Huang et al., 2015). The influence of audit quality and debt financing on earnings management widely exists in big markets, like the United States and the United Kingdom, and is factually embraced in small markets. Likely in Jordan and less developed countries where this relationship is studied and found high audit quality and low default risk lead to lower earning management. On the contrary, the management practices of corporations in Pakistan do not comply with their actual essence, and managers earn for their benefit (Hunjra et al.,2023; Hussain et al., 2024).

According to Ilmas et al. (2018) and Naz et al. (2024), the non-financial firms in Pakistan are more rely on debt relative to firms' assets due to high market uncertainty and engaged more in earning manipulations; thus, the main research objective of this study is to investigate the influence of audit quality and default risk on earning management. This study provides a better understanding to regulators, auditors, and researchers about the relationship between audit quality and default risk with earning management. The study is fruitful for regulators in ensuring that accounting procedures help reduce earning management practices. In this way, they may increase the transparency of accounting information to shareholders and the public so they can make good decisions about their investments. This study also contributes to the body of knowledge for academics and researchers regarding earning management by analyzing the effect of earning management with new factors, i.e., audit quality and default risk. The study is also contributing to theoretical importance. This study supports both theories, including agency theory and accounting theory. By hiring quality auditors, the implementation of the accounting process may improve, which supports accounting theory. Moreover, a big audit firm with the best services may mitigate earnings management practices. In this way, the rights of the shareholders may be protected, and agency conflicts may be overcome, as elaborated in agency theory.

Literature Review

Agency Theory:

According to Jensen and Meckling (1976), agency theory is the contractual joining where more than one person performing as principals (or shareholders) hired many workers as agents (or managers) who can work well for the sake of principals. It also includes entrusting authority to make decisions for the agents. According to Greenwood and Zhan (2019), conflict arises in agency relationships if the agent tries to increase the personal utility and sacrifice the interest of the principals. Due to a lack of accordance with the interest of the principal, the agent tries to make decisions that have more influence on his benefits (Susanto & Widyaswati, 2019). According to Watts and Zimmerman (1986), the objective role of accounting theory is to demonstrate and estimate the accounting application. Accountability is arguably something that is followed, especially in the organizational context, through which accounting practices can be improved. The literature expresses that the quality audit process is one of the important factors in accountability (Tan & Kao, 1999) in terms of fairly applying accounting procedures. Also, it is said that auditing activities are considered a direct result of the demands for accountability. Barghathi et al. (2018) investigated the fact that a low-valued audit system is a way to keep the door unlocked for the casual behavior of finance, like manipulation of financial statements. The accountability is enhanced with professional audit practices and quality reporting to find the audit as well. In this regard, quality auditors may improve the implementation of fair accounting processes. The literature reported that audit quality can improve accountability, which is directly associated with the embracement of accounting practices.

Earnings Management:

Lopes (2018) defined earning management; managers select the judgment used in financial reporting as well as in structuring transactions to make certain changes in financial reports. Hasan and Rahman (2019) stated that the management mostly presents financial reporting for their interest, which is why they engaged in earning manipulation activities. The study of Thu et al., (2018) described the two methods used in earning management: accruals-based earning management and real earning management. According to Khunkaew and Qingxiang (2019), the relationship between accruals and real earnings management (REM) is explored. The measurement was based on Thai firms with a sample size of 1,471 observations from 2014 to 2017. The Roychowdhury model and the modified Jones model were followed by the study to measure accruals-based earnings management and real earnings manipulation. The study of Nguyen and Soobaroyen (2019) established whether UK charities (non-profit organizations) are a part of earnings manipulation activities. The sample of 1414 charities from the period of 2008 to 2012 is targeted to find that UK charities use discretionary accruals to deliver their financial results. The supportable results indicated a significant relationship between leverage and earning management behavior by non-profit organizations (charities).

Audit Quality and Earnings Management:

Audit quality reduced earning management practices from the company by rendering high-class service in representing financial reports (Leung et al., 2019). The study of Alhadab and Clacher (2018) investigated the association between audit quality and earnings management of initial public offering (IPO) firms. The IPO of 498 UK firms from 1998 to 2008 is used to find evidence about audit quality and EM. The results revealed that audit quality is constrained in the manipulation of discretionary accruals. Audit quality must be a part of the firm to cope with EM practices, and most of the IPOs failed due to earning management. According to the study by Lopes (2018), the relationship between the quality of audit and manipulation of income is examined. For this purpose, the behavior of discretionary accruals

is studied by taking non-listed Portuguese firms. The sample range of the study is extended to 4723 firms from 2013 to 2015, and multiple regressions are run as the empirical model of the study. Moreover, the effect on discretionary accruals is also focused on the Jones model. Finally, it is stated that the relationship between audit quality and earning management exists. The researcher pointed out that the level of earning management is lower in firms that appointed Big Four audit firms (audit quality) compared to non-Big Four audit firms.

Tepalagul and Lin (2015) investigated the relationship between auditor independence and audit quality. For this purpose, the audit tenure and client affiliation are measured. In contrast, Bratten et al. (2019) explored the relationship of audit tenure on reporting of financial quality and the incremental complexion effect. The findings indicated a positive relationship between financial reporting quality and the tenure of the audit firm in the banking sector. Cameran et al. (2016) set off research regarding the mandatory rotation of audit firms, which has been effective for more than 20 years (i.e., Italy). The analysis is based on rotation in auditing during the auditor's engagement period. According to the study by Nadhir and Wardhani (2019), the impact of Audit Quality on a firm's accrual earnings management (AEM) is analyzed. Also, the study established the moderation role of the degree of convergence of International Financial Reporting Standards (IFRS) on the relationship between audit quality and the company's AEM. The findings inferred that Big-4 auditors or specialized accounting firms do not ensure lower discretionary accruals (earning quality). This study by Alzoubi (2018) presented evidence regarding the relationship between audit quality, debt financing, and earnings management in Jordan. The study conducted by Thu et al. (2018) investigated the effect of perceived audit quality and accrual-based earnings management (AEM) on the cost of debt capital. The findings confirmed that accrual-based earnings management and the cost of debt have no significant statistical association.

In a follow-up study, Leung et al. (2019) found that large audit firms serve better audit quality than other auditors. Most studies indicated that the Big Four auditor proxy is used for audit quality and that it helps reduce earning management practices. The audit literature reported that the hiring of large audit firms like the Big Four positively affected audit quality (Eilifsen & Knivsfla, 2016). The study by Bratten et al. (2019) found a significant and positive relationship between audit quality and the quality of financial reporting. The observed relationship suggests that the economy may benefit from audit quality to cope with earning manipulation. Eilifsen and Knivsfla (2016) documented that audit quality is associated with lower accruals quality. The earning manipulation activities can be mitigated by appointing high-quality auditors and providing true information in financial statements. The firms audited by the Big Four are less likely to engage in earnings management practices. These big audit firms offer greater reliabilities of financial statements to firms (Alvarado et al., 2019). According to the study of Lopes (2018), the relationship between the quality of audit and earning management is studied. The behavior of discretionary accruals is studied by taking non-listed Portuguese firms. The study stated that there is a relationship between audit quality and earnings management, and it was pointed out that the level of earning manipulation is lower in firms that have Big Four auditors. Regarding specific relevance to this study, firms audited by large audit firms (Big Four) are less likely to be involved in earning management. Based on significant shreds of evidence that the Big Four provided a high level of audit services to their clients, the study predicted the following:

H1: The audit quality is inversely related to the earnings management of non-financial firms.

Default Risk and Earnings Management:

Default risk is defined as the risk associated with an instrument (bond) holder's failure to pay back the amount (Siregar et al., 2018). The firms that used debt as capital faced a high risk in their operation. This risk faced due to debt often leads the firms towards default risk. Also, to hide the effect of default risk and maintain a good picture of the firm, most firms try

to manipulate income and expenditure transactions (Januarti & Wiryaningrum, 2018). According to Kwak and Mo (2018), earning management and default risk are measured. The study inferred the strong and positive negative relationship of earning management with default risk. The study by Xing and Yan (2019), investigated the impact of accounting quality on systematic risk. The high quality of accounting-based information reduces the risk premium of systematic factors. According to Siregar et al. (2018), the high level of corporate debt increases the chances of earning management to keep away from violating the debt contract. Moreover, a lack of supervision and inappropriate strategies to manage the finances of the firm create default risk. Thus, firms with a high level of debt are faced with higher default risk and high costs of financial distress, enabling more earnings manipulations (Thanh et al., 2019).

The study of Huang et al. (2015) documented that business risk is the part of an organization that firms face in an ongoing process. The study further argued that the main risks involved in the business are operational risk and financial risk. Januarti and Wiryaningrum (2018), claimed that the firms that used debt as capital faced a high risk in their operation. This risk faced due to debt often leads the firms towards default risk. Also, to hide the effect of default risk and maintain a good picture of the firm, most firms try to manipulate income and expenditure transactions. The literature posits that in a firm facing high default risk, its managers seem to be engaged in income-increasing practices to secure their interests and follow earning management activities (Kwak & Mo, 2018). The study of Siregar et al. (2018) explored the impact of default risk on earning management. The findings revealed that default risk is positively associated with earning management. The study inferred that with an increase in default risk, the firms attempt to adopt earning practices to show the good picture in financial statements. This study hypothesizes that:

H2: The default risk is positively associated with the earning management of non-financial firms.

Theoretical Framework

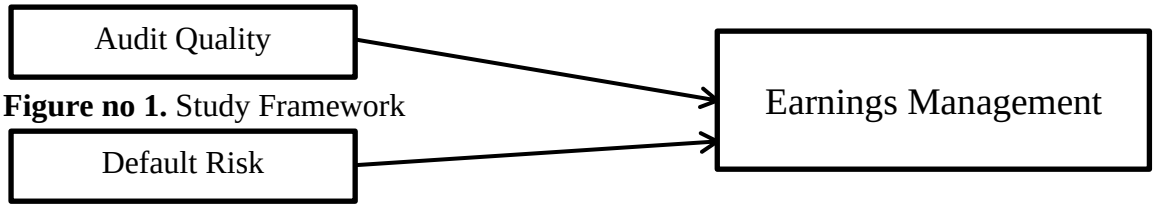

Figure no 1. Study Framework

Methodology

The secondary panel data is analyzed in this study for a time frame of 10 years (2011 to 2020). The State Bank of Pakistan (SBP) and the Pakistan Stock Exchange (PSX) official websites are the sources of the data. In this study, the listed firms in the non-financial sector of Pakistan are taken as the population. The non-financial sector, especially in Pakistan, is a leading contributor to the economy, and its share in the GDP of the country is the highest (Economic Survey 2017-18; SBP 2018; Rashid & Bilal, 2020). Moreover, the earnings misstatements also found in non-financial sector of Pakistan (Hussain et al., 2024). Accorindg to Khan et al. (2024) the financial sector has specific financial sector, distinct from non-financial sector. This study is anticipating to explore the effect of audit quality, default risk and four control variables, including firm size, firm performance, firm leverage and firm growth, on the earning management of the non-financial sector. The study underpins 2000 firm-year observations, and convenience sampling is used as a sampling technique. The sample size is selected before the effect of Covid-19, as the effect of the pandemic disease was started after 2020 (Hussain et al., 2024). However, future studies can look into the post-effect of Covid-19. In this study, OLS evaluates the relationship between audit quality, default risk, and earnings

management. The data is randomly taken in the study, and the quality of OLS regression is the best estimator when the data is unbiased and randomly collected. The unbiased property led to the least variance, that the more the sample is unbiased, the higher the chance of least variance in the measurement of factors. The following is the estimation model of this study;

$$(EM)_{it} = \alpha 0 + \beta 1(Big4)_{it} + \beta 2(Z-score)_{it} + \beta 3(size)_{it} + \beta 4(\mathrm{ROA})_{it} + \beta 5(Lev)_{it} + \beta 6(Growth)_{it} + e_{it} \ldots\ldots\ldots (\mathrm{Eq.}\ 5)$$

Earning management is denoted with EM and measured through the modified Jones model. The Big Four is the size of the audit firm used as a dummy variable to calculate audit quality. The Z-score is used as a proxy to measure default risk.

Measurement of Earnings Management:

Several methods currently employed for measuring earnings management to detect manipulation in financial statements and earnings. The study conducted by Jackson (2018) explored earning management and used modified Jones model to measure earning management. MacCarthy (2017) utilized the M-Score model to discriminate among firms that manipulated their financial reports. The study of Herawati (2015), Roy and Debnath (2015), Anh and Linh (2016) and Razali et al. (2019) also employed the M-Score model in their studies to compute earning management. Putri and Sujana (2018) used the Dechow model, while the investigation conducted by Habbash and Alghamdi (2017) detected earning management with the help of Kothari's discretionary accruals model. Alhadab and Clacher (2018) investigated the relationship between audit quality and earning management by operationalizing the Jones model and the Roychowdhury model has been selected to gauge earnings management.

Similarly, the study of (Alzoubi, 2018; Bajra & Cadez, 2018; Capalbo et al., 2018) employed the modified Jones model to quantify earning management. Consequently, this research operationalizes the modified Jones model, which is considered one of the well-known methods to gauge earnings management. It was introduced by Dechow, Sloan, and Sweeney in 1995. Their findings indicated that the modified Jones model is effective and powerful tool as compared to other methods of detecting earning management (Hussain et al., 2024). Earnings management activities are measured using discretionary accruals in accordance with the modified Jones model. The non-discretionary accruals are estimated as a percentage of the overall accrual in the modified Jones model in order to calculate the discretionary accruals.

$$TACCR_t = \Delta CRASS_t - \Delta Cas - \Delta CL_t + \Delta STB_t - DEPR_t \qquad \textbf{(Eq. 1)}$$

Where:

$TACCR_t$ = A total of the accruals in year *t,*

$\Delta CRASS_t$ = Changes in total current assets of year t,

ΔCas = Changes in year t cash and cash equivalents

ΔCL_t = Changes in current liabilities of year t

ΔSTB_t = Changes in short-term borrowing included in current liabilities for the year t,

$DEPR_t$ = Depreciation and amortization for the year t.

$$\frac{\mathbf{TACCRt}}{\mathbf{Ass\ t-1}} = \alpha 1\frac{1}{\mathbf{Ass\ t-1}} + \alpha 2\frac{(\mathbf{\Delta RV - \Delta RCt})}{\mathbf{Ass\ t-1}} + \alpha 3\frac{\mathbf{PP\&Et}}{\mathbf{Ass\ t-1}} + \varepsilon t \qquad (\mathrm{Eq.}\ 2)$$

Where:

$TACCR_t$ = Divide the total accruals for year t by the total assets for year t – 1,

ΔRV_t = Revenues for the year t minus Revenues for the year t – 1,

ΔRC_t = Net Receivables for Year t minus Net Receivables for Year $t-1$

$PP\&E_t$ = Total gross property, plant, and equipment for the year t

Ass_{t-1} = Total assets for the year $t-1$,

ε_t = Residuals in year t.

Finally, the following formula will be used to determine discretionary accruals:

$$DACCR_t = TACCR_t - NDACCR_t \quad \textbf{(Eq. 3)}$$

Measurement of Audit Quality:

Many researchers from recent studies have utilized audit size (Big Four) to quantify audit quality. Bratten et al. (2019) explored the relationship between audit tenure and reporting of financial quality. The study of Garcia-Blandon et al. (2019) and Che et al. (2020), investigated the factors improving audit quality. The Big Four auditors are revealed as one of the best tools for audit quality. Leung et al. (2019) found that large audit firms serve better audit quality than other auditors. The audit quality seems to be non-observable competency, which is the prime attribute used in previous studies (DeAngelo, 1981a). Boubaker et al. (2018) reported that Big Four audit firms have ample knowledge and more expertise because of large client portfolios. The study of Lopes (2018) studied the impact of earning management on the quality of audit and suggested that the hiring of Big Four audit firms presents an effective level of services in terms of audit quality. In recent study of Abu Afifa et al. (2023) Big 4 is considered a fruitful proxy to measure the audit quality. This study chooses the Big Four audit firm proxy for the measurement of audit quality. By using a dummy variable, the firms that appointed Big Four auditors will be given the value of 1, whereas the firms that have non-Big Four audit firms will be given the value of 0.

Measurement of Default Risk:

The study of Siregar et al. (2018) investigates the effect of default risk on earning management by selecting the ratio of debt to equity as the measurement of default risk. Ebrahimi and Mohammadi (2014) used debt to equity ratio to measure default risk. The literature shows that the Z-score is a widely used proxy to calculate the default risk of the firms. The study of Liu et al. (2024) employed the Z-score to measure the default risk and stated that it is the best indicator for calculating firm insolvency or default. Lassoued et al. (2016) documented that the Z-score is used to see the distance of default. The study selected the Z-score for the computation of default risk. The Z-score is computed by dividing the total return on assets (ROA) and equity-to-asset ratio by the return on asset standard deviation. The Z-score evaluates the firm's capital level to variability in its return.

$$\text{Z-score} = \frac{ROA + Equity/Assets}{\sigma ROA} \quad \textbf{(Eq. 4)}$$

Results and Analysis

Descriptive Statistics:

Table 1

Variables	Observations	Mean	Median	Std. Dev.	Maximum	Minimum
EM	2000	-0.503	-0.513	0.288	0.953	-3.019
BIG4	2000	0.461	0.000	0.498	1.000	0.000
ZSCORE	2000	12.694	10.149	12.604	64.938	-49.294
FS	2000	15.549	15.385	1.572	20.194	10.008
ROA	2000	0.041	0.036	0.102	0.669	-0.632
LEV	2000	0.925	1.212	46.999	795.696	-1604.517
FG	2000	0.385	0.091	7.413	323.171	-1.459

Table 1 presents the descriptive statistics of the variables used in this study. The mean value of earning management is -0.503, and the median value of earning management is -0.513. The mean value portrays a large part of firms that follow earnings manipulation practices. The maximum and minimum values carried by earning management are 0.953 and -3.019. The mean value of audit quality is 0.461, and the maximum value of audit quality is 1.0. The mean of the Z-score is 12.69, the median value is 10.149, the maximum value is 64.93 and the minimum value is -49.29. Among the characteristics, the firm size and firm performance have a mean value of 15.549 and 0.041 and a median value of 15.385 and 0.036. The mean of firm size shows the portion of the large firms involved in earnings manipulation practices.

Furthermore, the maximum value of 20.194 and 0.669 is indicated by firm size and firm performance. Whereas, the minimum value revealed by firm size is 10.008 and firm performance is -0.632. In addition, firm growth indicates a mean value of 0.385, a median value of 0.091, a maximum value of 323.171 and a minimum value of -1.459. The mean value of firm leverage is 0.925, which portrays that the firms of non-financial sectors of Pakistan are highly leveraged. The above value gives a picture of firms' capital structure, showing that these firms rely on a high level of debt compared to equity financing. The firm leverage then performs a median value of 1.212, maximum value of 795.696, and minimum value of -1604.517.

Correlation Matrix:

Table 2

	EM	BIG4	ZSCORE	FS	ROA	LEV	
EM	1						
BIG4	0.208**	1					
ZSCORE	0.170**	0.198**	1				
FS	0.149**	0.342**	0.104**	1			
ROA	0.323**	0.315**	0.408**	0.167**	1		
LEV	-0.018	-0.016	0.009	-0.019	0.017	1	
FG	-0.008	-0.026	-0.052*	-0.010	-0.026	-0.003	1

Table 2 presents a correlation matrix between all variables. The dependent variable is earnings management. The independent variables are Big Four and Z-Score. The firm-level control variables are firm size, ROA, leverage and firm growth. Based on the evidence, there is no issue of multicollinearity assuming criteria of 0.7, * and ** present the significance of coefficients at levels of 1% and 5%, respectively.

Table 02 shows the relationships between various variables. There is no multicollinearity among the variables, as all correlation values are below 0.7. Earning management has a positive correlation with Big4 (0.208), Z-Score (0.170), firm size (0.149), and ROA (0.323) but a negative correlation with firm leverage (-0.018) and firm growth (-0.008). Big4, Z-Score, firm size, and ROA also exhibit mostly positive correlations with each other, while firm leverage and firm growth have negative correlations with most other variables. In summary, the analysis of the correlation table reveals positive associations between earning management, Big4, Z-score, firm size, and ROA. In contrast, firm leverage and firm growth show negative correlations with most other variables.

Ordinary Least Square Regression:

Table 3

Variable	Observations	Coefficient	Std. Error	t-Statistic	Prob.

C	2000	-1.588	0.206	-7.689	0.000***
BIG4	2000	-0.050	0.023	-2.136	0.032**
ZSCORE	2000	-0.002	0.001	-1.618	0.105
FS	2000	0.072	0.013	5.345	0.000***
ROA	2000	0.468	0.076	6.121	0.000***
LEV	2000	-0.0002	0.0001	-2.044	0.041**
FG	2000	-0.0003	0.0006	-0.383	0.701
R-squared		0.544			
F-statistic		10.458			
Prob (F-statistic)		0.000			

Table 3 presents regression analysis of the variables, *, ** and *** representing the significance at 1%, 5% and 10% levels, respectively. EM is earnings management used as the dependent variable. BIG4 is the size of the audit firm used as a proxy of audit quality. ZSCORE is used as a proxy of default risk. The remaining are the four control variables. FS is a firm size used as a natural log of total assets. ROA is the ratio of return on assets, indicating the firm performance. LEV is a proxy of firm leverage and is measured with the ratio of debt to equity. FG is firm growth, which is calculated with a percentage increase in sales.

Table 3 presents the regression results of the study. The results show a statistically significant relationship. Companies audited by Big Four firms (higher quality audits) are less likely to manipulate earnings, suggesting that better audit quality reduces earnings management practices. This aligns with prior research highlighting the effectiveness of large audit firms in deterring such activities. The value of the R-square is 0.544, which means that predictors have a 54.4% effect on earnings management. First of all, the first determinant is audit quality, which is quantified by the Big4 proxy. The P-value of Big4 is 0.032, providing that the relationship of Big4 with earnings management is statistically significant at a 5% level of significance. The Big4 has a coefficient value of -0.050. The negative value indicates that Big4 is inversely related to earnings management. The inverse relationship presents that by increasing the audit quality, the earnings manipulation activities are mitigated. The findings are consistent with the study of Eilifsen and Knivsfla (2016), which found that large audit firms are effective in constraining earning manipulation activities.

The P-value of the Z-score is 0.105, which indicates that the relationship of default risk is not statistically significant with earnings management. The coefficient value of default risk is negative, which is -0.002. The analysis found no significant link between default risk and earnings management (p-value=0.105). This contradicts prior research (Fisher et al., 2015; Agrawal & Chatterjee, 2015) suggesting distressed firms manipulate earnings. The explanation may lie in creditor monitoring (Jelinek, 2007), as default firms prioritize positive cash flow to meet debt obligations, reducing incentives for earnings management. Firms prioritize avoiding debt covenant violations (Kim et al., 2010) due to potential consequences like reduced investment, higher borrowing costs, and renegotiation burdens. This incentivizes managers to focus on maintaining positive cash flow to meet debt obligations, potentially reducing earnings management practices. According to Susanto and Widyaswati (2019), large-sized firms have a base of wider interest holders, so the various policies of large firms have a greater impact on public interest than those of small firms.

The association between firm size and earnings management is supported by Ali et al. (2015), who highlight the pressure on large firms to demonstrate positive earnings. Houqe et

al. (2017) emphasize the impact of market position on earnings manipulation. Indrawan et al. (2018) note that larger firms face higher financial risks and tend to manage earnings to mitigate fluctuations, benefiting creditors and investors. Thu et al. (2018) discuss the bargaining power of large firms with auditors, leading to manipulations in financial statements. Regulatory authorities in Pakistan should ensure that large firms are regulated to promote fair accounting practices and shareholder value. Monitoring can improve management discipline and firm performance. Firm performance is positively associated with earnings management (Gras-Gil et al., 2016), with highly significant results ($p = 0.000$). Wang (2011) suggests that firm management influences profitability, impacting the quality of performance disclosures. Less profitable firms tend to manage earnings more aggressively (Lopes, 2018). Susanto and Widyaswati (2019) highlight the resource-intensive nature of improving firm performance, leading to increased management demands and, potentially, earnings management to meet personal interests.

The results indicate that high-profit firms are more likely to engage in income manipulations. Policymakers and regulatory authorities in Pakistan should monitor high-profit firms to ensure adherence to financial reporting standards and deter doubtful transactions leading to earnings management (Gray et al., 2015). Quality auditors play a crucial role in addressing information asymmetry and manipulation activities. Leverage shows a negative association with earnings management (Gray et al., 2015). Jelinek (2007) suggests that debt obligations prioritize cash flow for debt servicing, reducing the need for earnings manipulation. In Pakistan, non-financial firms rely heavily on debt financing, focusing on debt covenants rather than misrepresenting financial statements (Alsharairi, 2012). Firm growth does not significantly correlate with earnings management (Ghosh et al., 2005). Growing firms are less likely to engage in earnings manipulation as they already have sufficient earnings for business operations and shareholders.

Conclusion

This research investigates the impact of audit quality and default risk on earnings management practices (a method to manipulate financial statements). The study examines data from non-financial sectors in Pakistan from 2011 to 2020. The findings show that higher audit quality is associated with lower earnings management, but there is no significant link between default risk and earnings management. These results align with prior research by Choi et al. (2018), suggesting that strong audits reduce earnings manipulation. The study also finds that firms audited by Big Four accounting firms (known for having more resources) exhibit lower levels of earnings management. The study reveals that default risk isn't linked to earnings management, contradicting Agrawal et al. (2015) findings. They suggested struggling firms report their true finances for better creditor deals and face closer scrutiny, making manipulation unlikely.

For Pakistan's debt-reliant non-financial sector, the research suggests firms facing default should focus on overcoming challenges. This includes boosting revenue and cutting costs to improve performance and meet creditor expectations. The study emphasizes the importance of high-quality auditors for Pakistani non-financial firms. These auditors can help identify and prevent earnings manipulation arising from questionable transactions. Additionally, firms should ensure they use accurate accounting policies and avoid practices that distort their value and harm long-term performance. Consequently, the research highlights the role of auditors in guaranteeing financial statements accurately reflect a company's health. This helps investors make informed decisions based on a firm's true value.

The study finds that highly profitable firms in Pakistan's non-financial sector are more likely to engage in earnings manipulation. This highlights the need for regulators to oversee the accounting practices of such firms strictly. They should ensure firms follow financial reporting standards to prevent questionable transactions that inflate earnings. High-quality

audits can also help address information asymmetry and reduce manipulation. Interestingly, the debt-reliant nature of Pakistan's non-financial sector seems to act as a deterrent to earnings management. Firms focused on debt covenants prioritize generating positive cash flow to repay creditors, who are their main source of capital. This focus on maintaining good relationships with creditors reduces the incentive to manipulate earnings for shareholders. Future research should explore additional factors that influence earnings management in Pakistan. This could include examining how liquidity risk and credit risk impact firms and how these risks affect shareholder perspectives. In addition, the Pre and Post effect of Covid-19 may be investigated with earnings management.

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