IMPACT OF AUDIT QUALITY ON EARNING MANAGEMENT: A CASE OF CEMENT INDUSTRY

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Abstract. *The present study aimed to investigate the impact of audit quality (i.e., firm size, auditor tenure, audit committee financial expertise, and client importance) on earnings management in the cement industry firms listed on the Pakistan Stock Exchange. A quantitative and descriptive research design was employed in this study. The population for the study comprised of firms in the cement industry sector listed on the Pakistan Stock Exchange. A total of 14 firms were selected using a convenient sampling technique. Data for the study was collected from 2005 to 2019, covering a 15-year period. The study's findings suggest that organizations should ensure that their auditors possess expertise in the industry they are auditing. This, when combined with the audit committee members' accounting and financial experience, can mitigate earnings management, especially in complex business environments.*

Keywords: Audit quality, auditor tenure, earnings management, corporate governance

1. Introduction

Financial reporting is considered as the major responsibility of the management of companies. This enables the management to fulfill their stewardship responsibility. Manager of the public companies are expected for preparation of the annual financial reports for assessing financial position and the performance of reporting entity. Thus, provision of the financial information and providing the reporting entity, which is helpful for the users, is the major objective of the financial reporting. This results in enabling the decision makers for accessing the stewardship of the management and to formulate the economic decisions (Glautier, Underdown, & Morris, 2019).

Earnings management, which involves manipulative behavior on the part of managers, is often associated with changes made to financial statements using various judgments. Such behavior may be done to deceive stakeholders about the

firm's true financial position or to derive benefits from contracts that are based on reported accounting numbers. Accounting literature suggests that managers may alter data to gain favorable subscriptions during initial public offerings, exceed analyst estimates, or obtain bonuses, but this method can have severe consequences for reported accounting data and the company's survival. Hence, regulators, practitioners, and academics in the field of accounting are concerned about profit management.

To monitor such manipulative behavior by managers, regulators have established mechanisms such as audit quality, which quantifies the likelihood of any particular auditor discovering and disclosing any violation of generally accepted accounting standards (GAAP). Audit quality serves as a monitoring tool that captures management's opportunistic behavior and ensures that they run the company in the best interest of shareholders.

It has been demonstrated that audit quality limits managers' opportunistic earnings management behavior and upholds the integrity and transparency of the financial reports produced by businesses. Audited financial reports are thus trusted by their readers since they are seen to be devoid of prejudice and serious misstatements. Recent global accounting scandals and corporate bankruptcies, notably the two largest in history - WorldCom and Enron - have raised concerns about audit quality's ability to limit profit management techniques at businesses across industries (Albrecht et al., 2014).

Numerous attributes of audit quality, according to a study on the subject, have an effect on how a firm manages its profit. The most often used of these factors are the audit firm's size, its industry of specialization, its tenure, the relevance of its clients, and the audit committee's financial expertise. Analyze the businesses' methods for managing their earnings and the effect that audit quality has on them. The current study's objective is to ascertain the effect of audit quality on revenue management in Pakistan's cement business. The empirical evidence that the study provides can be used by regulatory authorities such as Pakistan’s Central Bank and Commission of Securities Exchange and among others, to strengthen existing regulatory policies that would enhance audit excellence and the honesty of financial reports of the companies quoted on Pakistan stock exchange.

Literature Review

Concept and Attributes of Audit Quality

There is no one commonly acknowledged definition of quality of audit in accounting literature. The auditor's ability to spot breaches of accounting rules in a client's accounting system is linked to their level of competence. However, an auditor's capacity to report on a violation in a client's accounting system is a sign of his or her independence. Other definitions correlate the quality of the audit with the trustworthiness of the information included in the financial statements. An

audit is quality may be measured by the auditor's compliance with widely recognized auditing standards, according to Bedard, Johnstone, and Smith (2010) (GAAS). Using GAAS, they claimed that a high-quality audit provides reasonable certainty that the audited financial statements and accompanying disclosures are presented honestly in conformity with generally accepted accounting standards (GAAP). According to this definition, high-quality audits are more likely than low-quality audits to comply with GAAS while performing audit assignments. Although audit quality is a challenging notion to define, they stated that the auditor must deliver an adequate audit report based on the client's degree of GAAP compliance. High quality audits, they said, adhere to established criteria and provide their clients with an accurate view on their financial accounts, all while taking a reasonable amount of risk. High-quality audits have been defined by Bedard et al. (2010) to have two main criteria. First and foremost, the auditor must offer an acceptable audit opinion on the client's financial statements with respect to their conformity with GAAP. Second, in order to conduct an impartial assessment of the client's financial statements, the audit must conform to GAAS in a reasonable manner.

According to the criteria above, audit quality is still a matter of debate among accountants. For this reason, this study defines audit quality as the likelihood that a given auditor would discover as well as report on a violation of GAAP in the client's accounting system. This study utilizes the De Angelo definition of audit quality as a starting point because of the relevance of competence and independence. When an auditor is able to detect a client's violation with GAAP, it is because of their independence that they feel compelled to report the issue. Since audit quality cannot be measured, the process becomes considerably more difficult. Various proxies have been used in the current study to signify good grade auditing. It has been proven in the literature that factors such as the size of the audit company, the industry specialization of the auditor, the audit fees, the tenure of the auditor, and the significance of the client to the auditor have a direct impact on audit quality and profitability.

Similar studies have shown that audit quality and earnings are linked when looking at audit fees, audit duration, and the significance of the auditor's clients. Larger audit firms provide higher-quality audits, according to a number of studies. Ethical examinations show that the size of an audit firm is connected to a company's profitability management. Researchers (e.g., Becker, DeFond, Jiambalvo, & Subramanyam, 1998) have shown an unfavorable relationship between the size of an audit firm and the management of public company profitability. Large audit firms spend more on their reputation and expertise, which helps to keep earnings under control. To secure and retain their reputation capital, large audit companies must provide high-quality, distinctive services. The literature on accounting also implies a link between the quality of the audit and the expertise of the auditors

themselves. Specialist auditors are better at spotting accounting problems than non-specialist auditors because of their industry-specific expertise and experience.

As a result, industry specialized auditors are more likely than their generalist colleagues to make larger investments in audit technology. When it comes to uncovering unethical accounting techniques like earnings management, they have an edge over other auditors. Efficient audit quality is also associated with audit firm earnings management, according to empirical research on the subject. As Balsam, Krishnan and Yang (2003) have shown, there is a negative correlation between earnings management and the specialty of auditors in that business. In accounting literature, auditor tenure is another indicator of audit quality that has been linked to earnings management. Auditor tenure and earnings management have been linked in two different ways. The auditor's independence may be jeopardized by personal relationships and familiarity with the client if the relationship between the auditor and the client becomes too lengthy. Long auditor tenure, on the other hand, is likely to result in the auditor losing his or her neutrality and making the audit engagement a regular one.

Proponents of extended auditor tenure, on the other hand, argue that as the duration of the auditor-client relationship grows, so does audit efficiency and expertise. In the early stages of the audit engagement, auditors were less adept in spotting problematic accounting practices on the part of the client than they are now. Another theory implies that extended auditor employment is connected with less earnings management of companies. The link between auditor tenure and earnings management is supported by empirical research.

Extant literature connects business earnings management behavior with the value of clients as another proxy for audit quality. Commonly it has been found that when a customer is financially significant to the auditor, he or she is more likely to ignore the client's accounting mistakes than when the client is less significant. The auditor's neutrality is thus likely to be impaired when he confronts the danger of losing a significant customer and failing to reveal accounting problems of the same client. Furthermore, empirical data supports the link between the significance of audit clients and the management of a company's profitability (Okolie, Izedonmi, & Enofe, 2013). Also, the financial knowledge of the audit committee is another indicator of audit quality that has been linked to earnings management in the literature. If an audit committee has financial experience, it is more likely to uncover and limit accounting problems than an audit committee without financial understanding.

Audit quality frameworks

After SOX, a lot of research was done on audit quality. Quality indicators for the inputs, process, output, and context are often included in this kind of framework. Frameworks like these aid auditors by offering a clear knowledge of the factors that influence their ability to conduct an audit (AFM, 2014). The quality of audits

has been evaluated by academics and regulatory authorities. As stated by Francis (2004), the quality of an audit is directly related to the success of an audit. An audit is more likely to fail if the quality is low. According to Francis (2004), the most compelling indication of an audit failure is a lawsuit against the auditors. In spite of Francis' statement, the failure rate of an audit is not a reliable indicator of audit quality. At an average of 28 a year for the roughly 10,000 publicly traded corporations in the United States, there were nearly 1000 reported lawsuits between 1960 and 1995. Because of the tiny number of successful cases, civil litigations are suspect indication of quality of audit. But Francis contends that just 25% of those auditors who examine failing corporations are held liable. So, audits that end in lawsuits or firm bankruptcy are rather rare. If auditor fail to submit qualified audit reports in right conditions, or if GAAP standards are not applied (GAAP failure), an audit will fail (Francis 2004).

Financial statements may be regarded dishonest in any of these instances. Francis cites the reclassification of profits as a sign of an audit failure. An investigation of how many restatements were made in the 1990s revealed a majority of them to be accounting changes rather than direct audit errors (Francis, 2004). In addition, the absence of SEC action against the restatements indicates that most restatements are not audit failures. There are no audit failure signs that contradict this conclusion. Known audit failures that have significant ramifications are rare (Francis, 2004). It was later mentioned by Francis in his work that "binary audit quality" might also be described as the audit is ability to pass or fail.

In this case, an audit failure happens when the auditor is not really independent, or if the audit report is mistakenly issued owing to a lack of evidence. In this context, a "good audit" is one in which the auditor adheres to auditing standards and offers the accurate opinion on the financial statements of the client. A methodology for audit quality based on current law was originally developed in 2008 by Britain's Financial Reporting Council. The FRC enhanced their model by tying audit quality criteria to the five major drivers in addition to establishing the model's five primary drivers. Furthermore, the IAASB produced a framework in addition to the FRC's (2011). The input variables (auditor qualities) impact audit quality; the outputs (audit reports); and the context (rules and regulations) influence audit quality, according to the IAASB. The FRC model was widely criticized. Since the FRC framework is not complete, further concerns need to be addressed in order to boost and guarantee audit high-quality. There are four problems: skill and professionalism of auditors, commercialization, audit transparency, and regulatory attention. Audit firms have mostly concentrated on problems that may not constitute a direct danger to their business interests. He goes on to say that the FRC's drivers were not derived from a methodical examination of audit failures.

Furthermore, many additional measures of audit quality have been suggested (Appendix I include a graphic representation of the audit quality criteria of both sample groups assessed according to their perceived significance. Both groups' expectations and views of audit quality are somewhat different, which is interesting. Both groups were questioned in the post-SOX period, which is the present regulatory and legal climate. In light of these findings, it is clear that investors place a great value on having competent auditors. This is determined by the audit firm's size, auditor experience, and inspection outcomes. Researchers have found that the quality of an audit is influenced by the qualities of the auditor. Furthermore, the frequency of audit committee meetings, restatements, and SEC enforcement proceedings are indications of audit quality. The inputs and processes section of the framework is where most of the investor-valued features may be found. Auditors, on the other hand, concentrate primarily on audits that are in compliance with GAAS. Although this is on input side of structure, auditor tends to concentrate on the outputs, and opinions component since it's what they are graded upon.

Concept of Earning Management

The word "earnings management" is defined differently by different scholars. Earning management, according to common practice of changing the financial reporting system, and transaction structure to influence contractual outcomes that are reliant on reported accounting figures. Management of earnings happens when managers have influence over accounting numbers, whether or not they are subject to rules, according to Fields, Lys, and Vincent (2001). It is up to managers' judgment whether to use discretion to boost business value (the wealth of shareholders) or maximize their own financial gain (opportunistic earnings management). According to Fields et al. (2001), earning management may take place both within and outside of GAAP, depending on the situation. Based on these factors, accounting research has yet to agree on a single definition of earning management. Due to the concept's wide scope and the difficulty of distilling it down to a single definition approved by all accounting academics, this is the case. Definitions of earnings management provided two opposed points of view. Using GAAP as a framework, the first argument claims that earnings management is legal and good to shareholders. When compared to the first argument, the second argues that earnings management is immoral and detrimental to shareholders, especially when it breaks accounting rules (GAAP). Consequently, this research supports the second point that earnings management is immoral and does not benefit corporate shareholders. It is said that earnings management is the process by which executives use accounting procedures and estimations that are outside of generally accepted accounting principles (GAAP) in order to attain goals that are not in line with the firm's actual economic reality. Earnings management encompasses a wide range of behaviors, from perfectly legal ones to downright dishonest ones.

There are four primary sorts of these activities (Zhao 2012). The first sort of earnings management is known as "within GAAP earnings management" because of the use of accounting rules (GAAP) flexibility. GAAP provides a wide range of options for companies to generate financial statements that accurately represent the underlying economy. Some managers, on the other hand, take advantage of these accounting latitudes by manipulating profits. Examples of GAAP's flexibility include the ability to choose from a variety of inventory valuation and depreciation methodologies. Several academics believe that this form of profits management is both legal and advantageous to shareholders, especially if it is clearly mentioned in the financial statements.

Earnings management operations that break accounting rules are part of the second category (GAAP). It is referred to as "without-GAAP" management of earnings. Using accounting principles to manipulate profits is a common practice among companies that have exhausted their ability to use some degree of leeway in their internal controls. This kind of profits management is referred to as deceptive financial reporting by Dechow and Skinnern (2000). The intentional, purposeful falsification or omission of significant facts, or accounting data, which is deceptive and, when examined with all other information made available, would cause the reader to modify or alter his or her judgment or choice is the definition of fraud (The National Association of Certified Fraud Examiners, 1993). Earnings management outside of GAAP is not mentioned in the financial statements, unlike "inside GAAP" management. Auditors and regulators are more likely to penalize companies that engage in this form of accounting trickery. Real activity manipulation is the name given to the third kind of earnings management activity.

However, this is not the same as within-GAAP profits manipulation since it is not exposed to audit scrutiny. Management actions that vary from conventional company processes, with the main goal of achieving particular profits benchmarks, are referred to as real activities manipulation. Real-world examples of activity manipulation include, but are not limited to, early expenditure on maintenance or R & D when reported profits are greater than projected. Classification shifting is the name given to the fourth kind of earnings management activity. Another method of "misclassifying line items inside the income statement to inflate core profits" is classification shifting, which involves "misclassifying things within the income statement" (Zhao, 2012). The moving of key expenditures like selling, administrative, and general expenses to non-core categories like restructuring charges is an example of categorization shifting.

Motives for Earnings Management

For a variety of reasons, managers attempt to manipulate earnings reports. Earnings manipulation can be attributed to a variety of factors, including: increasing share prices, meeting performance-based compensation targets,

avoiding debt covenant violations, and manipulating earnings around equity offerings such as IPOs and seasoned equity offerings (SEOs), according to the literature (Teoh, Wong, & Rao, 2019). Earnings management may be justified for a variety of reasons, but these arguments fall into four broad categories. Financial markets, management contracts, debt contracts and political and regulatory obligations all have an incentive effect. Managers' capacity to manipulate results may be affected by the capital market's interplay between reported accounting earnings and stock prices. The discretionary accruals of publicly listed businesses are at least 1.2 percent of lagged total assets higher than those of private enterprises. For public companies, this finding suggests that the stock market provides an incentive for them to manipulate their results.

Investing in a portfolio of potentially profitable enterprises is mostly based on expert estimates in more sophisticated nations like the United Kingdom and the United States, where the capital market is more efficient. Capital markets such as this need that analysts' expectations be met. However, firms that meet or exceed analyst estimates garner better returns on their shares even if the expectations are likely to be attained by earnings manipulations (Bartov & Mohanram, 2004). Stock returns of publicly listed companies might suffer greatly if analysts' expectations are incorrect, for example, in efficient capital markets. Investors see companies that fall short of analyst predictions as riskier than those that do. For this reason, managers are more inclined to manipulate pre-managed profits higher if anticipated profits are lower than pre-managed profits. Pre-managed earnings, on the other hand, may be manipulated to delay certain rewards to future reporting periods if they are above analysts' predictions (Habbash, 2010). Equity offerings (such as an IPO) on the capital market may also act as a motivator for companies to better manage their profits. Stock prices for newly public companies, on the other hand, are set entirely by the company's financial success before to becoming public. Prior to their IPOs, managers of IPO companies are influenced to control profitability in order to obtain attractive stock prices (Teoh, at et al., 2019). Incentives for earnings manipulation are also provided through management pay contracts. Using agency theory, it is possible to match the interests of shareholders with those of managers and reduce agency costs, such as manipulating results, via management pay contracts.

This is due to the fact that contracts for management remuneration also function as agreements to monitor and bind managers and shareholders of the company (Habbash, 2010). Contracts for management remuneration are commonly related to accounting figures in order to keep track of whether or not the contract terms are being met. Financial performance-based remuneration might lead managers into making decisions that will increase the value of their bonus incentives (Watts & Zimmerman, 1986). Performance-based compensation systems may have the unintended effect of encouraging managers to manipulate their profits in order to increase their own pay. Previous studies have shown a link between managers'

opportunistic conduct and earnings-based incentive programmers. Healy (1985), for example, discovered evidence that managers manipulate profitability in order to boost cash pay when bonuses are linked to the financial success of the company. According to him accruals (a proxy for earnings management) are strongly linked to managers' motivations under a management bonus scheme to declare their income (Healy, 1985).

Another study conducted by Leuz, Nanda, and Wysocki (2003) found a connection between managers' opportunistic behavior and performance-related compensation. As a result, management pay schemes connected to business success encourage managers to manipulate reported accounting results higher in order to maximize their own benefits at the cost of other stakeholders. The agency hypothesis predicts that there would be a conflict of interest between stockholders and managers, as well as between shareholders and bondholders (Jensen & Meckling, 1976). Excessive dividend payments, for example, meant to benefit shareholders' interests, may be harmful to debt holders' interests. Agency costs arise from a conflict of interest between shareholders and bondholders. According to Jensen and Meckling (1976), if no action is done to lower these expenses by contract monitoring and bonding, shareholders and management will be on the hook for them. Management is thus motivated to engage into monitoring and bonding arrangements, such as inserting restrictive covenants in loan agreements. For example, the debt covenants limit management's ability to pay dividends, issue new debt, and provide debt holders the right to demand early repayment of their loan if minimum accounting figures are not met (Habbash, 2010). According to the debt covenant theory the more loans a company has, the more restrictive its borrowing circumstances become.

In order to avoid breaching onerous financial covenants linked with borrowing, the corporation is always under pressure. When debt-laden companies are near to breaking these covenants, they resort to making income-increasing accounting decisions in order to minimize the penalty associated with debt breach. Managers of companies on the verge of breaking debt covenants are more inclined to alter accruals in order to avoid the accompanying expenses.

There is a strong link between debt covenant violations and companies' profit management strategies, according to a slew of studies. For example, DeFond and Jiambalvo (1994) studied the association between accrual manipulation and debt covenant violations for a sample of US corporations. Debt covenant violations and irregular accruals (a proxy for earnings management) were shown to be linked in research. Researchers (e.g., Sweeney 1994) also found evidence of a favorable link between debt and earnings management strategies of companies. Regulators and politicians have an effect on managerial decisions, which may lead to mismanagement of profits. Public companies may be compelled to control profits

if they must comply with accounting regulations. Some nations' regulatory frameworks place reporting companies under a lot of pressure, and this may lead to manipulation of profits figures. For example, the high listing standards of several stock exchanges encourage the manipulation of profits. When a company's profits come near to breaking the rules of a stock market, managers may turn to manipulating them in order to stay on the exchange. Researchers such as Johnson and Rock (2005) found a favorable correlation between the regulation of public companies' revenues and their ability to manage them.

Earnings management may be a way for managers to minimize political consequences (Watts & Zimmerman 1986). Studies (e.g., Guay 2010) show that political costs and managerial opportunism are linked. Oil firms employed income-decreasing accounting techniques during the Gulf War to minimize political consequences of presenting larger profits from rising retail prices, for example Han and Wang (1998) offered evidence in the end, managers of public companies are more likely to be motivated to control accounting earnings by regulatory constraints and political consequences. Managers take advantage of regulatory loopholes to manipulate profit reports.

Measurement of Earnings Management

In accounting literature, the measurement of earning management is highly debated since it is not visible. Various ways of assessing earnings management are described in the existing literature, each with their own advantages and disadvantages. Although widely regarded as a proxy for earnings management, accounting accruals have been widely utilized and approved in literature (Jones, 1991; Teoh, et al., 2019). As a result, several of the most frequent accrual estimating models in the accounting literature is examined in this paper. Healy's approach is the first to try to quantify earnings manipulation. It is the discrepancy between accounting profits and operating cash flow that he refers to as accruals. According to this concept, every reporting period is subject to systematic manipulation of profits. As a result, earnings management is calculated as the average of all accruals over the course of a given time. As per his claim, the following are the discretionary accruals: DAit is equal to TAit/Ait-1 divided by TAit. Despite the fact that Healy's model was the first to try to assess earnings management, it has been criticized for assuming incorrectly that non-discretionary accruals of enterprises are zero or constant. A consequence of this is that the model incorrectly defines company expenses as discretionary (Jones, 1991). The Healy (1985) model was the inspiration for this vehicle. Total accruals in the current year and total accruals in the preceding year, multiplied by lagged total assets, are used to calculate discretionary accretions, according to DeAngelo (1986). Firms' non-discretionary accruals are assumed to be constant in this model. In other words, here's how it is expressed:

$$DAit = (TAit – TAit-1)/ Ait-1$$

However, this approach is criticized for misclassifying non-discretionary accruals as discretionary accruals since it assumes that non-discretionary accruals would always be the same. It has been said that a company's total accruals are affected by both managerial discretion and changes in the economy. As a result, Jones (1991) came up with a model that accounted for both impacts. Non-discretionary accruals in the Jones' (1991) model are neither zero nor constant, as in Healy (1985) and DeAngelo (1986), but rather a linear function of revenue and fixed assets. For non-discretionary working capital, sales growth is employed; for depreciation expenditures, property, plant, and equipment levels are used to regulate (Habbash, 2010). Revenue changes are used as a proxy for uncontrolled revenue change. In order to calculate discretionary accruals, total accruals are regressed on gross property, plant, and equipment value and changes in revenues to get coefficients. The residuals of a regression model reflect accruals that can be managed (discretionary accruals) (Xiong, 2006). Here's how it works, as per Jones' model:

Ait-1 multiplied by 1 is equal to (1/Ait-1) times twice.

In Jones (1991) model, both the expected value and the forecast error are dependent on accruals that are not random. Management's effect on revenue is believed to be negligible in the model, which results in incorrect discretionary accruals. Contrary to Healy and DeAngelo's hypotheses, the non-discretionary accruals of firms do not remain constant over time, according to the industry model (1991). Industry models do not take into account non-discretionary accruals since it is assumed that these changes are the same across all businesses in that industry. An example of how to describe the business model is shown in the following. One median and two medians are added together to arrive at the final result. Dechow, Sloan, and Sweeney (1995) found that the major error in the (Jones 1991) model is the assumption that non-discretionary accruals comprise only revenues that have been received. The Jones (1991) model excludes non-discretionary accruals from total revenues. For the detection of revenue manipulations, evidence was shown by Dechow et al. (1995) that the Jones (1991) modified model is more effective. Non-discretionary accruals are calculated by regressing total accruals on gross PPE in the modified Jones model, which compensates for revenue variations. However other approaches of calculating discretionary accruals, the model is believed to be more powerful.

The modified Jones model outperforms other discretionary accrual models in terms of performance, according to previous studies. To provide only a few examples, Dechow et al. (1995) compared with the results of Jones (1991) versions of the Jones model (1995). Jones and modified Jones models were shown to be the most effective in identifying earnings management, according to the empirical test. Jones (1991) and the modified Jones model were first created in the form of a time series. It has been suggested that the cross-sectional Jones model rather than the

time series model presented by Defond and Jiambalvo (1994) is a superior approximation of accruals. Discretionary accruals may be estimated more accurately using the cross-sectional modified Jones model, according to recent research on earnings management (Klein, 2002; Teoh, et al., 2019; Xie, Davidson & DaDalt, 2003). So, the modified cross-sectional Jones Model is seen as more powerful than any other models available to estimate discretionary accruals. However, the model has been challenged for its measurement inaccuracies, particularly when it comes to predicting discretionary accruals for businesses in an industry that is not homogenous. However, compared to other models, the model is still superior since it accurately calculates discretionary accruals.

It has been shown that discretionary accruals assessed using both Jones and the modified Jones models have a strong positive correlation with a firm's Return on Assets (ROA). As a consequence, using the Jones and modified Jones models to estimate accruals is likely to result in performance-related misspecification of accruals. To get around this issue, Kothari, Leone, and Wasley (2005) proposed using a matched-firm or portfolio approach to modify the predicted discretionary accruals in order to remove any link between them and earnings performance. They proposed a novel model that uses lagged return on assets as a control variable for company performance (ROA). When it came to calculating discretionary accruals, researchers first tested the accuracy of the Jones and modified Jones models before retesting them after accounting for company performance. Performance-matched discretionary accruals improve the credibility of earnings management research findings, according to the tests. Though it seems that the new model overcomes the difficulties connected with the Jones and modified Jones models, it is nevertheless constrained. Due to its inability to handle type II errors, the model is constrained (accepting the null hypothesis when it should be rejected).

Relationship of audit firm size and earnings management

According to a number of studies, the quality of an audit is affected by the size of the auditor. Many studies have explored the relationship between earnings management and the size of the audit firm. Apparently, the top six auditors are better able to detect and report on profits management because of their superior knowledge. Well-known auditing firms provide more transparent and reliable financial accounts. It has been found that the more customers an audit business has, the more probable it is to lose them. Similarly, to Becker et al. (1998), considering these prior findings, the following hypothesis is tested accordingly:

H1: *There is relationship between audit firm size and earnings management.*

Relationship of Auditor Tenure and Earnings Management

According to the third theory, auditor tenure affects financial management. The impact of auditor tenure on the degradation of independence is still being debated. Regulators, on the other hand, have determined that the quality of an audit is

affected by the tenure of the auditor. Because of this, the European Parliament recently enacted legislation requiring public interest entities (PIEs) to rotate their audit firm every 10 years. EU policy currently mandates (PwC, 2015). Academic research, on the other hand, offers a mixed picture when it comes to the impact of auditor tenure on financial reporting. As auditor tenure grows, investors are more concerned about the quality of the audit, which in turn affects earnings quality. On the other hand, the length of an auditor's career grows. Thus, the next hypothesis is as follows:

H2: *There is relationship between auditor tenure and earnings management.*

Relationship between audit committee financial expertise and earnings management

Audit committee financial knowledge is also a proxy for audit quality that is currently associated with earnings management, according to existing research. Accounting errors are more likely to be detected and curtailed by an audit committee with members who have financial knowledge, according to the agency hypothesis. The empirical data supporting the link between financial knowledge in the audit committee and earnings management is strong (Molik, et al. 2013). The Jones 1991 model was used to estimate anomalous accruals, while the major 5 audit firms and the audit committee were used to reflect the audit quality of the business. On the basis of this, the next hypothesis is as follows:

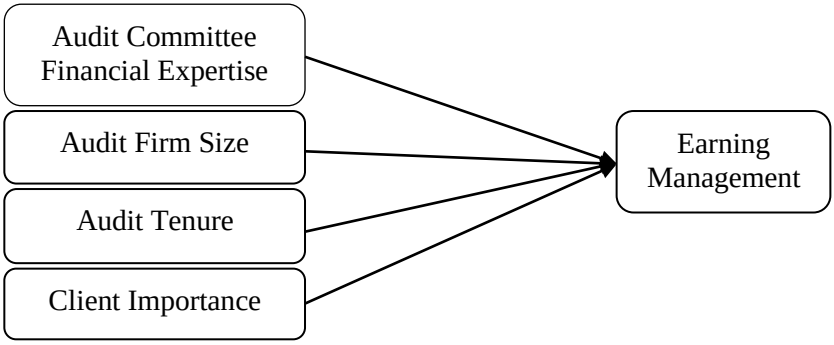
H3: *There is relationship between audit committee financial expertise and earnings management.*

Relationship between Client Importance and Earnings Management

A sample of 1,938 NYSE, AMEX, and NASDAQ listed businesses from 1988 to 1999 was used by Ebrahim (2001) to examine the impact of audit quality on earnings management. It was calculated using a modified Jones model, and audit quality proxy by audit firm size, audit duration, and client relevance. Earnings management was represented by discretionary accruals (DA). DA in US companies was shown to be negatively correlated with the size of the audit firm, according to the study's findings. In US businesses, the number of years an auditor has been with the company and the prominence of the customer had no effect on the DA. Auditors are not more inclined to give their major customers greater leeway in financial reporting because of the negative correlation between client significance and DA, this suggests. There are a few drawbacks to this research, though. Thus, the next hypothesis is as follows:

H4: *There is relationship between client importance and earnings management.*

Conceptual Model



Research Methodology

Research Design

In this study, the objective is to test the relationship among the independent variable i.e., quality of audit and dependent variable i.e., earning management through statistical analysis techniques, therefore quantitative research design was chosen for the study. Similarly, as in this study the objectives are achieved through data collected from a sample of the population, therefore descriptive design of the study is chosen for the current research.

Population and sample size

Our study aims to examine relationship among quality of audit and earning management in the cement sector of Pakistan, therefore the cement sector firms listed on Pakistan stock exchange was chosen in the current study as the population. The data was collected from the sample of firms of cement sector that was considered as the population.

In this study, the sample is chosen from the population of cement sector firms that are listed on Pakistan stock exchange. The sample was chosen from the population through convenient sampling technique. A sample of 14 firms was chosen that is presented in the below table.

Table 1: *Study Sample*

#	Abbreviation	Name
1	ASM	Ashraf Sugar Mills Ltd.
2	CSM	Chanar Sugar Mills Ltd.
3	CSM	Chaudhry Sugar Mills Ltd.
4	ESM	Etihad Sugar Mills Ltd.
5	FSM	Fatima Sugar Mills Ltd.
6	HSM	Hamza Sugar Mills Ltd.
7	H-I-SM	Hunza-I Sugar Mills Ltd.
8	H-II.SM	Hunza-II Sugar Mills Ltd.
9	H-SM	Husein Sugar Mills Ltd.
10	ISM	Indus Sugar Mills Ltd.
11	ISM	Ittefaq Sugar Mills Ltd.
12	JJWSM I	J.D.W - I (United) Sugar Mills Ltd.
13	JJWSM II	JDW-II (united) Sugar Mills Ltd.
14	JSM	Jauharabad Sugar Mills Ltd.
15	ASM	Ashraf Sugar Mills Ltd.

Source: Pakistan Stock Exchange Limited

Data collection

Data for current research was gathered from financial reports and websites of the selected 15 cement companies that are listed at Pakistan stock exchange. The data of the current study was collected from the year 2005 to 2019. Thus, the data was collected for a total 15 years.

Variables Measurement

The variables of the current study were measures through different relevant proxies that are presented below.

Dependent Variable (Earning Management)

Earning management was the dependent variable of the study. In this study earning management was calculated through the Discretionary accrual Formula developed by Becker et al. (1998). To estimate discretionary accruals; the modified cross-sectional Jones Model was used in view of the fact that it is superior to other models of estimating discretionary accruals. The formula for measuring the earning management is presented below.

Discretionary accrual formula= Total accruals minus non-discretionary accruals

Independent Variable

The audit quality was the independent variable of the current study. In this study, the below proxies of the audit quality were considered.

a. Audit firm size

A dummy variable 1 if firm is to be audited by Big 4 auditor, otherwise 0 (Becker et.al, 1998). SPPS will be used for the analysis.

b. Audit firm tenure

Number of consecutive years the client has retained a particular audit firm. Dummy variable 1 for 3 years+, 0 otherwise (Inaam, Khmoussi, & Fatma, 2012)

S. no	Variable name	Variable Type	Proxy	Used by
1	Earning Magnt	Dependent Variable	Total accruals minus non-discretionary accruals	(Becker et.al, 1998).
2	Auditor Tenure	Independent Variable	The number of years a customer has used the same audit company for.	(Inaam et al. 2012)
3	Audit Committee financial expertise	Independent Variable	Proportion of audit committee members with the accounting and financial expertise	(Thoopsamut et al. 2008)
4	Client Importance	Independent Variable	An auditor's sample size divided by the total sales of all customers is used to calculate this ratio.	(Ebrahim 2001)
5	Audit Firm Size	Independent Variable	If the company is being audited by a Big 4 auditor, the ratio of client sales to the total of client sales within the sample size will be 0, otherwise.	(Becker et.al, 1998).

SPPS will be used for the analysis

c. Client Importance

Ratio of client's sales to the sum of all clients' " sales audited by an auditor within the sample size" (Ebrahim, 2001).

d. Audit Committee Financial Expertise

Proportion of audit committee members and their accounting and financial expertise.

Study model

The following is model of the current study;

$$DAC = \alpha + \beta 1AFS + \beta 2AT + \beta 3\, CI + \beta 4\, ACFE + \varepsilon$$

Where; DAC is discretionary accruals
AFS is Auditor firm size; AT is Auditor tenure
CI is client importance; ACFE is audit committee financial expertise

Analysis

Different statistical analysis tools and techniques were used in the current study. The study used descriptive analysis to find the descriptive of the study variables. Correlation analysis was used to find the relation between the variables while the regression analysis was used to find the extent of the relationship. EViews software was used for the analysis. The same software is used by Habbash and Alghamdi (2019), for the analysis between audit quality and earning management.

Results

Descriptive Analysis

Mean and standard deviation analysis were used in this study to examine the central tendency and distribution in the data for checking the data normality. The table below shows the results of the descriptive analysis.

Table 1: *Descriptive Analysis*

Variables	Minimum	Maximum	Mean	Std. Deviation
Earning Management	0.000	0.218	0.111	0.053
Auditor Tenure	0	1	0.535	0.419
Audit Committee financial expertise	0	0.323	0.125	0.123
Client Importance	0.123	1	0.512	0.253
Audit Firm Size	0	1	0.665	0.364

The preceding descriptive study, in developing nations, income management is undervalued in comparison to other studies. Bangladesh had a mean value of income management of 0.831, whereas Tanzania's mean value of earning management was 0.731. Also, in compared to other developing nations, Pakistan's audit duration and client importance were both found to be greater than average. The average size of an audit company was found to be 2.3452 (Muttakin et al. 2020) and 2.3816 by (Katmon 2019). As in Bangladesh, (Ibrahim and Nanefah 2016) in Iran, (Barako and Brown 2018) in Kenya and (Hafsa and Turgut 2019) for Bangladesh, the values of the audit Committee financial competence in Pakistan were not consistent with prior research.

Unit Root and Stationary Test

Statistics utilizes unit root and stationary tests to identify whether a time series variable is non-stationary and, as a consequence, has a unit root, or whether it is stationary. The null hypothesis indicates that the variable has a unit root, while the alternative hypothesis argues that the variable is not stationary in the case of the unit root test.

When the series data is employed in research, there is a risk that the data may have unit root issue. Because of the unit root, the value of the R square is presented as exceeding the value of Durbin Watson that indicates that the data is spurious. To overcome this issue of the unit root, Augmented Dickey-Fuller (ADF) is undertaken (Lau, 2009). Augmented Dickey-Fuller (ADF) was undertaken for assessing unit root in the variables of investigation (Hall, 1994). "Ho: Series has no unit root" was the null hypothesis of ADF test. Below table is providing outcomes for the ADF test.

Table 2: *Augmented Dickey-Fuller (ADF) Test*

	At Level I (0)		**At First Difference I (1)**	
Variables	t-statistics	Prob.	t-statistics	Prob.
Earning Management	2.786	1.213	4.856	0.014*
Auditor Tenure	1.787	3.230	6.831	0.009*
Audit Committee financial expertise	2.710	2.055	3.520	0.013*
Client Importance	1.874	1.254	1.515	0.001*
Audit Firm Size	1.013	2.346	1.660	0.004*

First and foremost, all variables were examined at the level I (0). Findings from level I (0) analysis showed that none of the variables were stationary Earning Management (1.213), Auditor Tenure (3.230), Audit Committee financial expertise (2.055), Client Importance (1.254) and Audit Firm Size (2.346)]. The null hypothesis was accepted because these variables were likewise insignificant. Then, in the second step, the Augmented Dickey-Fuller (ADF) test was performed at first difference I. (1). To begin with, all variables were found to be significant while doing first difference I. (1) [Earning Management (0.0141), Auditor Tenure (0.009), Audit Committee financial expertise (0.0125), Client Importance (0.0013) and Audit Firm Size (0.0039)]. Based on these significant values "Ho: The series has a unit root" which was thus rejected, meaning that the variables were thus stationary at first difference I. (1).

When all the variables are not stationary at the Level and then they become stationary at the First Difference, which shows the same order of integration among variables, and based on the same order of integration, OLS regression can be applied to variables for examining the impact of independent variable on dependent variable (Lau, 2009).

Correlation Analysis

Correlation analysis is used to examine how the dependent and independent variables are linked together. Earning management was been the dependent variable in this research, whereas audit quality was the independent variable. The value of the correlation coefficient reveals the connection between the study's independent and dependent variables. The results are presented in the below table.

Table 3: *Correlation*

Variables	EM	AT	ACFE	CI	AFS
Earning Management	1				
Auditor Tenure	-0.340**	1			
Audit Committee financial expertise	0.072*	0.003*	1		
Client Importance	0.261*	0.02*	-0.44**	1	
Audit Firm Size	-0.062**	0.053**	-0.74*	0.77**	1

*p < .05; ** p < .01

The results show that audit committee financial expertise (0.07), client importance (0.26) have a weak positive relationship with the earning management, while the auditor tenure (-0.340) and audit firm size (-0.062) have moderate negative and weak negative relationship with the earning management respectively.

Because of the weak negative correlation between the size of the audit company and the selected firms' earnings management, we may infer that the size of the audit firm shrank throughout the time period under consideration. Big 4 audit firms have the resources and ability to provide high quality audits capable of minimizing the earnings management of companies. This link is not unexpected. Earnings management is adversely correlated with auditor tenure. Because the auditor grows more acquainted with the client's company and accounting methods over time, this kind of connection is to be anticipated. The auditor's client-specific expertise makes him more successful in the latter years of the assignment than he was in the earlier stages of the project.

Multi co-linearity

Multi co-linearity test is conducted to examine the occurrence of inter-correlations between the independent variables of the study. Analysis of variance inflation factor (VIF) is used in this study to examine the multi co-linearity in this study. Formula of variable inflation factor is given below;

VIF q = 1 / (1 - q)

The results of multi co-linearity test are presented in below table.

Table 4: *Multi co-linearity*

Variable	Coefficient Variance	Centered VIF
C	0.001	NA
Auditor Tenure	0.123	1.185
Audit Committee financial expertise	1.173	1.375
Client Importance	1.285	
Audit Firm Size	0.846	1.484

The above table is indicating that variance inflation factor for all independent variables is lesser than standard value of 5, thus, meaning that no inter-correlations exist between the study independent variables.

Regression Analysis

At first, Hausman test was conducted to identity the model that is to be adopted in the study. Based on the results of the Hausman test, panel random effects (PRE) model was chosen for the regression analysis. The results of the Hausman test are presented in the below table.

Table 5: *Hausman Test*

Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	17.244	7.240	0.1014

When the value of the p is insignificant in the Hausman test, then random effect model is chosen for the regression analysis, while when the p value if significant then fixed effect model is applied in the regression analysis. In p value is the above table is 0.1014, meaning that Hausman test given insignificant results, thus based on findings of the Hausman test, random effect model is chosen for the regression analysis. The results of the regression analysis are presented in below table.

Table 6: *Random Effect Model*

Dependent Variable: Earning Management				
Method: GLS				
Sample: 2005-2019				
Periods Included: 15				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.341	0.114	2.242	0.015
AT	-0.425	0.021	-4.17	0.004
ACFE	0.118	0.131	2.59	0.034
CI	0.351	0.145	3.24	0.014
AFS	-0.105	0.312	-2.11	0.048
R-squared	0.532	Mean dependent var		0.111
Adjusted R Square	0.420	S.D. dependent var		0.053
Sum squared resid	0.224	Schwarz criterion		-0.212
Log likelihood	0.312	Hannan-Quinn criter.		-0.321
F-statistics	19.24	Durbin-Watson stat		1.913
Prob	0.022			

Above table is showing that value of adjusted r square is .420, meaning that unit change in the independent variable audit quality cause 42 percent change in the dependent variable earning management. Similarly, the probability value of 0.0221 (f=19.239) shows the good fitness of the model. While the Durbin-Watson value of 1.913 shows that there is no auto correlation in the data.

Likewise, the greater value of coefficient at relevant t and p values shows higher impact of independent variable on dependent variable. The table shows that coefficient value of audit tenure is -0.425 (t=-4.17, p=0.004), meaning that audit tenure has more significant negative impact on earning management, while values of coefficient for audit committee financial expertise, client importance and audit firm size are 0.118 (t=2.59, p=0.034), 0.351(t=3.24, p=0.014) and -0.105 (t=-2.11, p=0.048) respectively, showing a significant impact on earning management. Thus, H1, H2, H3 and H4 of the study are accepted.

Discussion, Conclusion and Suggestions

Discussion

The financial reports that are published but fails to provide the required information to the users do not fulfill its actual purpose and aim. Due to such manipulative behavior of the company's management for their own interest, the regulatory authorities put some mechanisms of the monitoring for ensuring that the managers run the company in best favor of the shareholders. The management's opportunism is described by the audit quality, a monitoring tool. Generally accepted accounting principles (GAAP) violations are considered to be of low audit quality if they are not detected and reported by the auditors (GAAP). There are several audit quality aspects that influence a company's profits management, as reported in the literature. These criteria include audit firm size, audit industry specialty, auditor tenure, client significance, and audit committee financial knowledge. The behavior of corporations in managing their profits and the influence of audit quality on this behaviour must be thoroughly examined. Previous studies on the quality of audits and the management of profits by companies in developed and developing nations often omit audit committees despite their participation. The current study filled the identified gap through examining the impact of audit quality i.e., firm size, auditor tenure, audit committee financial expertise and client importance on earnings management for the cement industry firms listed on Pakistan Stock Exchange. The results indicated that audit committee financial expertise and client importance have a weak positive relationship with the earning management, while the auditor tenure and audit firm size have moderate negative and weak negative relationship with the earning management respectively. Researchers have found that their results are in line with those of earlier research. Because big audit firms have greater resources to undertake high-quality audits than small audit firms, a priori assumptions say that audit firm size has a negative relationship with earnings management. Large audit companies are less reliant on a single customer, which reduces the risk of compromising the quality of their audits. As a result, large audit firms have a greater investment in reputation capital at risk if they are proven to have compromised audit quality. The familiarity of the auditors with listed Nigerian oil

marketing businesses may be a contributing factor to the strong correlation between the size of the audit firm and the discretionary accruals of that company. Due to the greater financial resources available to Big 4 audit firms, compared to smaller audit firms, it is assumed that they would be able to afford to recruit audit professionals that are competent and well-trained and can provide their customers with better audit services. The quality of audit services provided by the audit company and, as a result, the quality of financial reports will suffer if the audit firm does not have a competent audit team. According to the findings, lengthier auditor tenure is related with worse profits management in Nigerian companies. This is likely to happen because the auditor's ability to uncover problematic financial reporting procedures of the client improves with time as he acquires a deeper understanding of the client's business environment and financial reporting processes. Third hypothesis of the research, that auditor tenure has no substantial impact on profits management of listed cement marketing businesses in Pakistan, is denied based on the empirical findings in this area of the study. There are several studies that have shown a negative correlation between auditor tenure and earnings management, including (Ebrahim 2001; Inaam et al., 2012; Okolie et al., 2013). Researchers (e.g., Ching, Teh, & San 2015; Gul, Fung, & Bikki, 2009) on the other hand, found evidence of a favorable link between auditor tenure and business profits management, which contradicts this study's findings. Predicted correlations between customer importance and earnings management of cement marketing companies in Pakistan were also confirmed by this study. In Nigeria, auditors are more inclined to give major (in terms of fee income contribution) customers more freedom in financial reporting than small clients, which explains the positive association between client significance and profits management in listed cement marketing enterprise. As a general rule, auditors are more prepared to lose customers who contribute much to their fee revenue than those who provide little. To avoid losing a significant economic customer, most auditors will lower their standards of judgment. Aliyu, Musa, and Zachariah (2015) discovered a favorable correlation between the financial dependency of auditors and the management of Nigerian banks' profitability, and this research supports their findings. Okolie, et al. (2013) on the other hand, found a negative association between customer significance and business earnings management. Financial expertise on audit committees have had a substantial positive connection with discretionary accruals in the sampled businesses, showing that financial experience on audit committees during the research period does not restrain but improves earnings management in firms. An audit committee's ability to successfully restrain profits management in the cement industry may be hindered by the cement industry's complicated structure, which may need members with accounting and financial skills as well as industry knowledge. Some selected organizations do not even have members on their audit committee who have accounting and financial competence, according to the descriptive data included in the report.

Conclusion

The current study filled the identified gap through testing the impact of quality of audit that is firm size, auditor tenure, audit committee financial expertise, and client importance on earning management for the cement industry firms which are listed on Pakistan Stock Exchange. The cement sector firms which are listed on Pakistan stock exchange was chosen in this study as a population. A sample of 14 firms was chosen through convenient sampling technique. The data of the current study was collected from the year 2005 to 2019. The results indicated that audit committee financial expertise and client importance have a weak positive relationship with the earning management, while the auditor tenure and audit firm size have moderate negative and weak negative relationship with the earning management respectively. Findings of the current study are consistent along with the old studies. Accounting and finance committees should push their organizations to engage industry-specific auditors, according to the findings. Auditor understands of a company and its industry is likely to make him/her a better auditor and a better member of the audit committee, which may help mitigate earnings management, particularly in businesses with a complicated business environment.

Suggestions

On the basis of the current study findings, following suggestions are presented to versatile parties which are indirectly or directly are involved in financial report process in Pakistan:

1. Audit businesses in Pakistan should not only be judged on the basis of their size, but also on the quality of their work in previous tasks. Due to the fact that audit firm size is not correlated with lower profits management in Pakistani companies. Companies seeking audit services in Pakistan should prioritize expertise and experience above scale, which is sometimes a sign of poor financial management. It does not matter whether the audit report comes from a large or small organization; all audited financial statements should be scrutinized equally. It is to keep you from making bad financial choices.
2. Regulatory authorities in Pakistan should encourage audit firms in Pakistan to form units inside their businesses that specialize along industry lines of companies that are listed on the Pakistan Stock Exchange (PSX) (PSX). In spite of the small number of businesses listed on the PSX and the strong correlation between auditor industry specialty and earnings management in the tested companies, this is an essential step. As a result of the interplay between audit committee financial knowledge and auditor sector specialty, the influence on earnings management of selected Pakistani enterprises was considerable. Corporate governance procedures are not replacements, but

rather complement one other in order to properly control the management of a company's financial results.

3. Companies in Pakistan should be required to declare audit and non-audit fees paid to their auditors by regulatory agencies as a matter of policy. Non-audit fees paid to external auditors in Pakistan are now declared voluntarily by Pakistani corporations. Informed consumers of audited financial statements in Pakistan will be able to identify the significance of the auditor client and, as a result, the degree of trust in the auditor's report, thanks to the disclosure of both fees.
4. Accounting and financial members of a company audit committee ought to advocate for specialized audit firms. An auditor's business understanding mixed with audit committee members' financial expertise is likely to make them more successful at preventing corporations from manipulating their results, particularly in complicated sectors like the cement industry.

Future Directions

In order to have a better understanding of the interrelationships between the factors studied, the results of this study point to the need for more research. Father studies should be conducted having an emphasis on the other firms that are listed in Pakistan. Likewise, future studies should have an emphasis on the data from the current and previous years also. Likewise, other variables of the corporate governance mechanisms should also be emphasized in the current study. Similarly, the earning management and its relationship with audit quality should also be analyzed the other emerging markets.

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