

# IMPACT OF CAPITAL STRUCTURE AND AUDIT COMMITTEE INDEX ON EARNINGS MANAGEMENT PRACTICES: MODERATING ROLE OF CORPORATE GOVERNANCE

Riffat Mughal<sup>1</sup>, Asad Ali<sup>\*2</sup>

<sup>1</sup> Assistant Professor, SZABIST, Karachi, Pakistan

<sup>\*2</sup> Senior Lecturer, Bahria University, Karachi, Pakistan

<sup>1</sup>riffat.mughal@szabist.pk, <sup>\*2</sup>asadali.bukc@bahria.edu.pk

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Corresponding Author: \*

Asad Ali

## Abstract

The study examines the impact of capital structure and audit committee characteristics (size, independence, and gender) on the earnings management of commercial banks in Pakistan. A quantitative research design was adopted to achieve the research objectives. Earnings management was measured using the earnings management index derived from the total accruals method. Whereas, the debt-to-equity ratio measured capital structure, and audit committee characteristics were assessed by creating an index of the un-weighted average of audit committee size, independence, and gender. The corporate governance of the moderator was measured by the board size of commercial banks in Pakistan. Nineteen companies are registered on the Pakistan Stock Exchange (PSX). The type of data collected was panel data, which was acquired from the published annual reports and the financial statements of the selected banks. The collected data was then entered into EViews 12, a statistical software used to analyze data, in order to determine the impact of independent variables on dependent variables. The Panel regression analysis was used to analyze the data and test the hypotheses. Results demonstrate that capital structure and audit committee characteristics index have a positive and significant impact on earnings management. The moderating variable, corporate governance, also has a positive and significant effect on earnings management. The moderating interaction of capital structure is also substantial. Whereas, the audit committee characteristics index moderating interaction is insignificant in the model. These findings will help determine whether capital structure and audit committee characteristics influence earnings management in commercial banks.

## INTRODUCTION

### 1.1. Background of Study

In the banking industry, earnings management refers to the intentional manipulation of financial reporting to influence perceived performance, meet regulatory requirements, smooth revenue, or send positive market signals. In contrast to traditional businesses, banks employ specialized accounting structures, such

as mark-to-market valuations, complex derivatives, and discretionary loan loss provisions (LLPs), which grant bank managers considerable control over reported earnings while ostensibly staying within legal limits. A variety of earnings management techniques are made possible by this discretion, such as income smoothing, in which banks reduce profit volatility

from year to year, communicating confidential information to stakeholders, or preserving capital buffers, particularly in times of economic downturn or crisis.

The manipulation of LLPs is one of the most common techniques. Banks may affect net income by delaying or accelerating expense recognition, or modifying LLPs under the pretext of covering loan losses. Banks use LLPs to smooth earnings or conceal poor performance, according to research conducted in jurisdictions ranging from Europe and BIS-member countries to emerging economies. Activity is more prevalent during loan booms or in highly capitalized institutions. Although income-smoothing incentives typically predominate, another strategy is to maintain capital ratios or fulfill profitability criteria by taking advantage of nondiscretionary components, such as write-offs or recovery provisions. Pressures from loan covenants, regulatory oversight, analyst projections, and incentives linking executive pay to financial success are other factors contributing to earnings management in the banking industry. Managers may be encouraged by these pressures to "cook the books" by making drastic changes to revenue recognition, provisioning, or accounting decisions. Sometimes, as demonstrated by scandals involving significant accounting irregularities, the misreporting of derivatives, or abusive fee practices, earnings manipulation can escalate into open fraud, particularly when internal controls or governance are inadequate.

Regulation and corporate governance are important checks on earnings management. Effective governance practices, including independent audit and risk committees, well-organized boards, joint audits, Shari'ah boards in Islamic banks, and effective regulatory regimes, considerably lessen opportunistic income smoothing, according to studies from Bangladesh and India. Analyses of the Single Supervisory Mechanism in Europe indicate that stricter oversight and on-site inspections help prevent discretionary provisions that could impact profitability. Although managers frequently discover workarounds, especially in companies that offer sophisticated financial products, U.S. regulatory frameworks, such as SEC disclosure requirements and SOX internal control standards, also encourage increased financial reporting transparency.

Furthermore, cultural context affects managerial strategies. For example, executives may be more likely to manipulate earnings to match expectations in countries with high levels of individualism or uncertainty avoidance. The constant conflict between regulatory transparency and management opportunism underscores the need for robust governance and close supervision to maintain stability and confidence in the banking industry.

In Respect of Pakistan, development was slow in 1998 and remained sluggish until about 2000, when reforms resumed with a focus on privatization and restructuring under foreign guidance and further financial assistance (Husain, 2005). As of 2018, Pakistan had over 50 million bank accounts, a penetration rate of 24.34%, thousands of bank branches, ATMs, and POS terminals (SBP, 2018). The court, on April 28, 2022, declared the interest-based banking system illegal, and the government was assigned a deadline to switch to an interest-free banking system by December 2027 (Khan, 2022). Earnings management, a process of influencing financial outcomes to achieve targets, has been a long-standing practice in the banking sector (Healy & Wahlen, 1999). During the 1980s and 1990s, deregulation and heightened competition prompted banks to smooth their earnings, attract investors, and maintain stability (Ahmed & Shah, 2002). In the following years, a succession of significant financial scandals and the 2008 crisis revealed aggressive behavior, leading to regulatory reforms and more transparent accounting principles (Bushman & Williams, 2012). Despite increased monitoring and regulation, some banks continue practicing earnings management, attempting to balance compliance and performance targets (Dechow et al., 2010). This dynamic situation highlights the ongoing tension between profitability and regulatory integrity in the global banking sector.

## 1.2. Problem Statement

In today's globalized economy, the services sector takes its rightful place as the driver of growth and development in financial markets worldwide (Levine, 2005; Cantwell & Linder, 2006). As nations transition from an industrial to a services-based economy, the financial services industry has emerged to support this shift, providing essential capital and

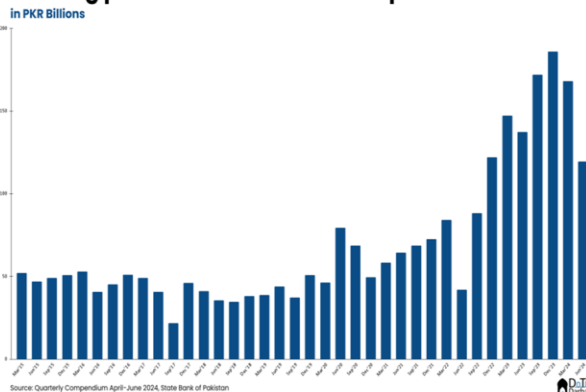
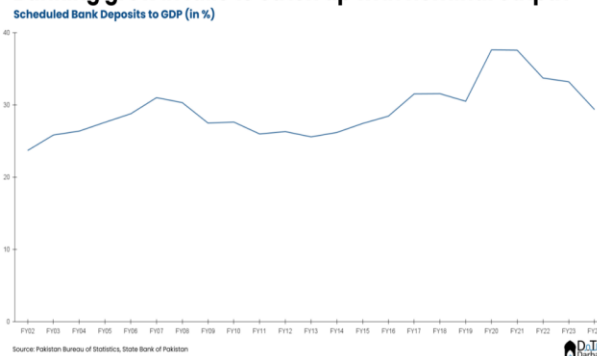
risk management functions (Saunders & Cornett, 2018). In the industry, commercial banks and, more specifically, financial institutions serve as central intermediaries, mobilizing savings, channeling credit, and generating liquidity (Saunders & Cornett, 2018). Nevertheless, the quality of financial reporting in these institutions is becoming a growing concern (Healy & Wahlen, 1999).

Commercial banks are inclined to engage in earnings management behaviors, fudging financial outcomes to present a more favorable scenario than their actual performance, hiding their true financial well-being, and misappropriating resources (Healy & Wahlen, 1999; Jones, 1991). These actions not only destroy investor confidence and market stability but also tend to increase systemic risk (Epstein, 1988). When earnings management corrupts a bank's performance, the ripple effects can have far-reaching implications that extend beyond the institution, undermining regulatory efforts, deceiving policymakers, and ultimately impacting the global economy (Epstein, 1988). Despite the core importance of these problems, a crucial gap exists in knowledge regarding the intersection of global economic patterns with sectoral forces, including the changing service sector and the growing financial services sector, as well as the micro-level practices of commercial banks.

The present research aims to fill this gap by investigating the interconnected channels between the global economy and commercial banks, via the service sector, financial services, and institutions, and vice versa, through earnings management practices (Healy & Wahlen, 1999). Filling this entire cycle is crucial to building sound regulatory frameworks and enhancing the transparency and resilience of the global financial system (Saunders & Cornett, 2018).

Research on Pakistani commercial banks (covering data from 2010 to 2015) found that banks frequently use both discretionary and non-discretionary accruals to "smooth" their earnings. For example, Malik et al. (2019) demonstrated that discretionary accruals were statistically significant predictors of a bank's likelihood of financial distress, suggesting that earnings management practices can mask true asset quality and risk levels. This manipulation may contribute to an over-optimistic portrayal of financial health even when underlying risk factors (like non-performing loans) remain elevated.

Ashfaq & Saeed (2017) studied that increased loan loss provisions, often used as a tool for earnings management, tend to have a negative impact on reported profitability. In one analysis, a negative regression coefficient for loan loss provisions indicated that, as banks increased these provisions to smooth earnings, profitability was adversely affected. Such findings suggest that earnings manipulation may obscure deteriorating credit quality and contribute to systemic risk by delaying corrective measures. The KPMG "Pakistan Banking Perspective 2024" report reveals that despite nominal profit growth, several banks are grappling with rising non-performing loan ratios and inconsistent loan loss provisioning. These factors suggest possible earnings management practices that may be masking underlying issues with asset quality. In addition, Işık et al. (2025) highlighted that the pace of technological adoption in Pakistani banks remains slower compared to their global peers, which may compound data integration issues and further enable earnings management by limiting the availability of robust real-time financial analytics.

**Banking profits slide to lowest in 6 quarters****Banking growth fails to catch up with nominal output**

**Figure-1 & 2: Banking Sector Profitability and Growth**  
Source: State Bank of Pakistan

Jilani (2024) analyzed the persistence of earnings manipulation, finding that it not only undermines the reliability of financial reports but also has far-reaching consequences for investor confidence and market stability. For instance, recent news indicates that banks have been earning bumper profits on government debt, even as private sector credit growth remains sluggish—a situation that regulators worry may be partly due to manipulated earnings figures that overstate financial strength. This was evidenced by the December 2024 decision to scrap a proposed tax on banks' profits from government debt, following concerns that such measures could distort lending behavior and obscure underlying financial vulnerabilities (Khan, 2024). Overall, scheduled banks in Pakistan reported a post-tax profit of PKR 119.4 billion. Not only does this represent a decrease of 13% YoY and 29% QoQ, but the net income is actually the lowest since Q3'22. Obviously, that is not a great time horizon to begin with, since the last couple of years have been overly easy for banks even by their standards. Consequently, the net margin of 20.7% was the second lowest in five and a half years. While banking has always been a lucrative business, the last few years have been particularly extreme: assets, liabilities, and profits have increased like never before. However, most of this growth is largely superficial.

For now, let us skip the arguments about the lack of credit issuance, innovation, or any regard for the customer. Those have never been the industry's goals anyway. Instead, focus on how deposits held by scheduled banks in Pakistan, as a percentage of gross

domestic product, fell to 29.4% by FY24, the lowest since FY16, and 8.25 percentage points below the peak of 37.6% seen in FY20. During this period, the industry has consistently touted its ability to mobilize new funds from customers at conferences and on social media, yet here we stand. The objectives of the study are to determine the impact of the audit committee and capital structure on earnings management practices. Furthermore, to determine the moderating effect of corporate governance on the relationship between capital structure, audit committee, and earnings management practices.

### 1.3. Research Scope & Significance

This research proposes to analyze the effect of audit committee characteristics (size, independence, and gender) and capital structure on earnings management. Although the effect can be studied at an international level, our study will specifically target the Asian continent, with a focus on the case of Pakistan. The analysis will focus on commercial banks based in Pakistan, given their integral role in Pakistan's financial market. More precisely, our study focuses on those commercial banks that are duly listed on the Pakistan Stock Exchange (PSX). By focusing on these listed banks, we aim to identify well-regulated financial institutions that comply with corporate governance rules and financial reporting principles. This will enable a more comprehensive and accurate analysis of how audit committee attributes and capital structure influence earnings management in the Pakistani banking industry.

This research offers valuable critical insights for banking institutions and regulatory authorities by examining the importance of an ideal capital structure and an effective audit committee in shaping earnings management practices. An understanding of such dynamics enables banks to manage their financial reporting and risk exposures more effectively, ultimately ensuring operational efficiency and stability. For example, an ideal capital structure reduces excessive borrowing and the subsequent risks, thereby lowering the risk of bankruptcy. Concurrently, an effective audit committee provides robust scrutiny, thereby ensuring higher transparency and accountability in financial reports. These results are of great importance to policymakers, particularly regulatory bodies such as the State Bank of Pakistan (SBP), as they provide valuable insights into financial management practices in the banking industry. Through understanding the relationship between audit committee features, capital structure, and earnings management, policymakers can develop informed regulations and guidelines that promote financial transparency and stability. These findings can inform the development of policies that promote more secure lending, enabling banks to assess credit risk more effectively and reduce their exposure to financial instability. Additionally, by using policy to encourage commercial banks to hold lower levels of debt, policymakers can help decrease vulnerabilities associated with the financial system, strengthen overall economic stability, and support long-term, sustainable banking growth.

This study sets the stage for further research, as it provides fresh insights and helpful recommendations. These can be utilized by researchers and practitioners alike in constructing further study dimensions of the subject matter, leading to enriched academic knowledge as well as practical applications. Agency theory offers an alternative perspective that addresses management-shareholder conflicts. Under this theory, managers (agents) have incentives to distort reported earnings to achieve performance targets or gain higher personal compensation, thereby raising agency costs (Jensen & Meckling, 1976). Audit committees, as a central corporate governance tool, are established to oversee managerial activities and mitigate information asymmetry. By providing increased independent monitoring, good audit

committee attributes can counter earnings management behavior. In addition, sound corporate governance is a moderating variable that still aligns managerial actions with shareholders' interests and lowers the tendency to manipulate earnings (Healy & Wahlen, 1999).

Financial intermediation theory contributes by explaining the distinctive balance sheet configurations of banks and how their capital structure choices are affected by their status as financial intermediaries. Banks convert short-term deposits into long-term loans while balancing liquidity and risk under tight regulatory constraints. These pressures may influence the debt and equity composition of banks, which in turn may encourage managers to smooth or manipulate earnings to satisfy regulatory capital requirements or prevent loan covenant violations (Boot & Thakor, 2000). In your study, this theory helps explain why banks may engage in earnings management as a consequence of their capital structure choices.

In the Pakistani banking sector, the research is theoretically significant in that it addresses issues that are currently relevant, including high leverage, governance failures, and pressure to meet performance targets. Through the development of an integrated model that addresses the interdependencies among capital structure, audit committee effectiveness, and corporate governance, the research provides a state-of-the-art analysis of how these factors influence earnings management. The conceptual model is specifically tailored to the financial and regulatory context of Pakistan, providing valuable insights that can inform industry practices and policy formulation. It also provides a yardstick for future research to investigate and address the unique issues in earnings management of emerging market banking industries.

#### 1.4. Organization of Study

This research comprises five sections, each covering a primary area of the study. Section 1: Introduction provides an overview of the research, including background, problem statement, objectives, significance, and scope. Section 2: Literature Review presents recent research, theories, and relevant studies to establish a conceptual framework and identify research gaps. Section 3: Research Methodology

outlines the research design, data collection techniques, sampling methods, and analytical tools employed in the study. Section 4: Data Analysis and Findings presents the findings, interprets the data, and highlights the major insights derived from the analysis. Lastly, Section 5: Conclusion summarizes the research, determines key findings, discusses implications, and gives recommendations for future research.

## 2. LITERATURE REVIEW

### 2.1. Theoretical Background

The theoretical framework outlines the reasoning behind the interaction among the examined variables. This segment explores the Financial Intermediary Theory and Agency Theory. The way banks handle the innate tensions between management and stakeholders (shareholders, depositors) while carrying out their primary intermediation function is where agency theory and financial intermediation theory converge in Pakistan's traditional banking industry. Financial intermediation theory highlights a bank's role in pooling deposits, screening borrowers, and transforming maturities and risks. Nevertheless, these procedures lead to information asymmetries and moral hazard since managers or borrowers may seek personal gain at the expense of depositors or owners. These tensions are highlighted by agency theory: bank management (agents) may favor lending to riskier or related-party projects, yet depositors (principals) depend on them to allocate credit responsibly. In reality, Pakistani banks reduce these agency expenses by strict internal controls, regulation by the State Bank of Pakistan, and robust audit committees with independent members and women's participation. By aligning managerial incentives with depositor and shareholder objectives, these actions enhance credit monitoring and screening. Therefore, the combination of agency theory and intermediation theory highlights how strong governance not only prevents opportunistic behavior but also improves the stability and efficiency of Pakistan's traditional banks.

### 2.2. Financial Intermediary Theory

Financial intermediation theory examines the crucial role of financial institutions, such as banks, investment funds, and insurance firms, in facilitating efficient capital allocation within the economy. These

intermediaries act as bridges between surplus units (savers) and deficit units (borrowers) to overcome fundamental market inefficiencies, such as information asymmetry, transaction costs, and liquidity mismatches (Mishkin, 2019). Under perfect conditions with no transaction costs and perfect information, financial intermediation would be redundant. Perfect financial markets, however, are nonexistent, and financial intermediaries ensure that funds flow efficiently, risk is mitigated, and financial stability is improved (Allen & Gale, 2004). Different economic theories reinforce the presence of financial intermediation, such as Diamond's delegated monitoring theory (1984), which emphasizes how banks monitor borrowers' creditworthiness, and Stiglitz and Weiss's model of credit rationing (1981), explaining how intermediaries address adverse selection and moral hazard issues.

Financial intermediaries play several important roles that enhance financial market efficiency and promote economic growth. They enable liquidity transformation, where depositors can withdraw funds when needed while advancing long-term credit to individuals and companies (Freixas & Rochet, 2008). They also diversify risks by collecting funds from a large number of investors and lending to a wide range of sectors, thereby minimizing exposure to any single borrower default (Greenbaum et al., 2019). Intermediaries also reduce transaction costs by leveraging economies of scale, offering standardized lending procedures and financial products that facilitate greater capital mobility (Saunders & Cornett, 2018). Additionally, financial systems can be bank-based or market-based, with bank-based systems relying heavily on financial institutions for capital allocation and investment decisions. In contrast, market-based systems focus on direct financing through capital markets (Demirgüç-Kunt & Levine, 2001). Both frameworks play important roles in economic development, and the extent of their effectiveness depends on the regulatory landscape and institutional setup.

Even as they offer benefits, financial intermediaries are not without problems, especially regarding systemic risk, regulatory management, and technological disruptions. The 2008 global financial crisis highlighted the potential for risk-taking by banks and financial institutions to create economic

instability, underscoring the need for stringent regulatory measures such as Basel III and the Dodd-Frank Act to enhance financial resilience (Acharya & Richardson, 2009). Governments and regulators enforce capital adequacy standards, liquidity restrictions, and consumer protection legislation to avoid financial crises and ensure investor confidence (Barth et al., 2012). In addition, the development of FinTech, blockchain, and decentralized finance (DeFi) is transforming the landscape of financial intermediation, lowering reliance on conventional intermediaries and presenting new challenges for regulators (Arner et al., 2017). As the financial markets continue to evolve, the future of financial intermediation will be characterized by increased digitalization, enhanced risk management measures, and a shift towards more efficient and decentralized financial products.

### 2.3. Agency Theory:

Agency theory is a fundamental economic, financial, and corporate governance concept that examines the principal-agent relationship, in which one entity (the principal) authorizes another entity (the agent) to make decisions on their behalf. This delegation can lead to conflicting interests, with agents acting in their interest rather than in the optimal interest of the principals (Jensen & Meckling, 1976). Michael C. Jensen and William H. Meckling codified this theory in their groundbreaking 1976 paper, "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure." They developed the concept of agency costs, which arise from conflicting incentives between principals and agents. These include monitoring costs (the expenses incurred by principals in observing agents), bonding costs (the actions taken by agents to demonstrate trustworthiness), and residual loss (the financial inefficiencies resulting from conflicts of interest) (Fama & Jensen, 1983). Another problem that affects agency relationships is information asymmetry, where agents typically hold more information than principals, creating opportunities for opportunistic behaviors such as risk-taking, moral hazard, or adverse selection (Eisenhardt, 1989). Mechanisms of corporate governance, such as board supervision, executive compensation design, shareholder activism, and rule compliance, serve to mitigate agency issues by aligning managerial

incentives with shareholder goals (Shleifer & Vishny, 1997).

The agency theory is extremely important to corporate finance and governance and bears on core decision-making activities across firms. The theory serves as the vehicle by which one comes to comprehend the mechanisms through which interest clashes between managers (agents) and shareholders (principals) are mitigated. These conflicts result from information asymmetry, heterogeneity in risk attitudes, and managerial opportunism (Ross, 1973). Consequently, corporations establish governance mechanisms and financing policies to ensure that the interests of managers and shareholders are aligned, so that managerial decisions lead to long-term value creation rather than self-interest. Some of the most important areas where agency theory is applied include executive compensation, board governance, mergers and acquisitions (M&A), and regulatory schemes (Denis & McConnell, 2003).

One of the most fundamental uses of agency theory in corporate finance is the structure of executive compensation and incentives. Firms utilize performance-based compensation schemes, such as stock options, profit-sharing, and performance-linked bonuses, to minimize agency costs (Core et al., 1999). These incentives align managerial decision-making with shareholders' interests by rewarding executives when they meet financial goals, enhance stock prices, or improve firm profitability. However, poorly designed compensation plans can lead to excessive risk-taking or manipulation of short-term earnings, thereby exacerbating agency issues (Murphy, 1999). Thus, boards of directors and compensation committees play a crucial role in structuring balanced incentives that promote long-term growth. Additionally, board monitoring and corporate governance arrangements are crucial means of preventing agency conflicts. Independent boards, audit committees, and shareholders' voting rights ensure that managerial activity is supervised and executives are held accountable for the decisions made (Bhagat & Bolton, 2008). Independent directors enable the objective monitoring of managerial performance, thereby decreasing the likelihood of self-interest behaviors.

#### 2.4. Empirical Study:

Xie et al. (2002) examined the functions of the executive committee, audit committee, and board of directors in stopping earnings manipulation. In line with the SEC Panel Report's conclusion that audit committee members need to be financially savvy, we find that a company's propensity to use earnings management is correlated with the makeup of its board in general and its audit committee in particular. Firms with lower discretionary current accruals tend to have board and audit committee members with corporate or financial backgrounds. Lower discretionary current accruals are associated with the frequency of board and audit committee meetings. We conclude that board and audit committee activity, as well as the financial acumen of their members, can be significant factors in curbing managers' propensity to use earnings management.

Sofia and ETTY (2019) examined how, as the economy and technology advance, firms are expanding to diversify and protect themselves from industry rivalry. Managers in highly complex and varied businesses are more likely to employ a range of earnings management techniques. In addition to diversification, ownership and capital structure, as well as knowledge asymmetry, other factors that affect earnings management include these. The primary objective of this study was to discuss a comprehensive understanding of earnings management and the factors that influence it, including information asymmetry, ownership structure, capital structure, and business diversification.

According to Stubben's (2010) methodology, the second objective was to empirically investigate how these factors affect earnings management and ascertain whether information asymmetry can lessen the impact of the other three elements on earnings management. The study made use of leverage, ROA, ROE, growth opportunity, and total asset control. Data collected between 2015 and 2017 from the financial accounts of 165 manufacturing businesses in the chemical, pharmaceutical, and consumer goods sectors. These findings indicate that, whereas capital structure, ownership structure, and information asymmetry have been shown to have a significant impact on earnings management, diversification has no relationship with earnings management. The

impact of capital structure and ownership structure on earnings management can be mitigated by variables related to information asymmetry.

Faiza et al. (2019) analyzed the fact that, despite numerous rules and regulations that oversee Earnings management and the financial reporting process, it is growing in enterprises today at an astounding rate. This study aims to examine the impact of board and audit committee characteristics on accruals and real earnings management practices in Pakistan.

Masmoudi and Makni (2020) examined the effect of audit committee characteristics on real earnings management in the Dutch context. Our sample comprises 80 non-financial companies listed on the Amsterdam Stock Exchange between 2010 and 2017. Four proxies are used to measure audit committee characteristics, specifically audit committee independence, financial expertise, gender diversity, and the frequency of audit committee meetings. To test our hypotheses, we employ a regression model to examine the influence of a set of audit committee characteristics on real earnings management, while controlling for firm audit committee size, leverage, loss, growth, and board size. Our analyses provide evidence that audit committee independence and gender diversity constrain real earnings management.

Our findings also suggest that audit committee financial expertise reduces, to some extent, the likelihood of engaging in real earnings management. To the best of our knowledge, the Dutch context has not yet been explored, especially following the issue of the long-awaited new Dutch Corporate Governance Code in 2016, which was updated in 2008. Therefore, corporate governance is a relevant topic in the Netherlands. This study contributes geographically to the Audit Committee and earnings management literature, examining another possible method, specifically, real earnings management.

Anam et al. (2022) investigated whether, with the audit committee acting as a moderating element, corporate governance eliminates accrual earnings management techniques. The study's findings demonstrated that corporate governance procedures severely restrict the use of earnings management strategies. The findings show that the absence of a CEO duality, board meetings, board independence, and board size all have a significant impact on limiting accrual earnings management techniques.

Furthermore, the audit committee's size and member independence have a moderating effect that is statistically negative and greatly aids in reducing the earnings management practices of Malaysian non-financial enterprises that adhere to Shariah.

Abdulnaser et al. (2023) investigated the moderating role of corporate governance in the relationship between capital structure, debt levels, and earnings management. The results indicated that Earnings Management (EM) had a significant negative impact on the amount of debt in Palestinian manufacturing companies. According to the moderating function of corporate governance (CG), the high-leverage effect of EM is increased by larger boards and the inclusion of female board members. In contrast, the high-leverage effect is decreased by CEO duality. However, EM had no discernible impact on the amount of debt held by Jordanian industrial firms. Regarding CG's moderating role, it was found that institutional investors counterbalanced the firm's use of debt financing due to EM practices. At the same time, the presence of female directors on the board increased the firm's use of debt financing. Due to EM practices, it was found that having female directors on the board increased the company's use of debt financing; however, institutional investors counteracted the effect of EM on debt financing, resulting in a decrease in the use of debt.

Sari and Murtanto (2023) studied the effects of Efficiency, intellectual capital, and liquidity risk on profits. Corporate governance will act as a moderating variable, and management will be the dependent variable. This is also what the current study aims to do. Purposive sampling is a sample selection strategy used in research. Forty-five banking companies make up the population for this study. The 33 companies in the sample were selected based on predetermined criteria and were observed over six years, from 2015 to 2020. This study concluded that corporate governance, Efficiency, and intellectual capital all have a detrimental impact on earnings management. Firm size, capital sufficiency, and liquidity risk all have a favorable impact on earnings management. Corporate governance improves both the link between Efficiency and earnings management and the impact of intellectual capital on earnings management, which is the moderating variable. The moderating variable of corporate governance

mitigates the relationship between liquidity risk and earnings management.

Saleh and Mansour (2024) investigated that a company's earnings management (EM) practices may suffer from an audit committee (AC) with members holding multiple directorships due to time constraints that may prevent members from carrying out their responsibilities with diligence. Examining the moderating effect of foreign ownership (FOWN) of audit committee multiple directorships (ACMD) on accrual EM is the aim of this article.

Mardianto and Jaslyn (2024) investigated the effect of the COVID-19 pandemic on the relationship between ownership structure and earnings management strategies of Indonesian listed companies in the LQ 45 index, which is the purpose of this study. The main emphasis is placed on how ownership concentration, managerial, institutional, and family ownership influence Accrual Earnings Management (AEM) prior to and subsequent to the pandemic period. Using multiple linear regression, the study examines the impacts of these ownership features on AEM in pre-COVID and post-COVID times. The study finds that a sudden shift in the landscape effect of ownership structure towards AEM. The results are highly informative regarding the impact of ownership structures on earnings management during economic downturns and provide valuable insights for regulators and policymakers in regulating earnings practices.

Jameel et al. (2024) investigated the effect of audit committee attributes on earnings management using data gathered from the annual reports of Dubai-based banks for the period 2010-2022. The independence of the audit committee and the board size significantly influenced earnings management. However, auditor reputation, gender, financial experience, time commitment, and board size had no significant impact on earnings management. The findings of this research are beneficial to business executives and investors, who are eager to gain a deeper understanding of their business's financial condition by enhancing the auditing process.

Suharti and Murwaningsari (2024) analyzed the impact of capital structure, business risk, and profit persistence on the earnings return coefficient. The Indonesian Stock Exchange's subpar data from 2014 to 2020 was quoted in this study. The industrial

sector listed on the Indonesian Stock Exchange between 2016 and 2020 makes up the study's population. The study's population comprises 56 industries. Purposive sampling was the technique employed for sample collection. Forty industries comprised the research sample. In this study, multiple linear regression analysis was performed using SPSS. The results of the study indicate that DER affects ERC, whereas profit persistence and business risk do not. The GCG variable increases the impact of DER on ERC while decreasing the impact of business risk and profit persistence.

Amara et al. (2025) examined the impact of audit quality and the proportion of women on an audit committee on profit management. We also examined the impact of age diversity and the presence of non-foreign women on audit committees on earnings management. Data from 165 UK-listed companies between 2011 and 2021 is used in our empirical investigation. The results were empirically discovered through a combination of static and dynamic analysis. According to the Kothari model, the results show a strong and unfavorable relationship between audit quality and earnings management. Earnings management is unaffected by the presence of a female member on the audit committee. However, when demographic variables such as age and nationality are taken into account, we found that while the age diversity of female audit committee members had no effect, non-foreign female audit committee members reduced earnings management. Subsequent studies using the Dechow model revealed that the nationality and presence of female audit committee members had an impact on earnings management. Our findings contribute to the discussion of corporate governance by demonstrating the influence of female audit committees and audit quality on earnings management in UK-listed companies. One of the rare studies to look into demographic traits (such as age or nationality) is this one.

Thaker (2025) investigated the role of the Audit Committee in promoting good corporate governance by ensuring the integrity of financial reporting, internal controls, and regulatory compliance. As a foundation of accountability, the Audit Committee acts as a protection against the mismanagement of finances and financial fraud activities, such as earnings management. Its power lies in its ability to

oversee the organization's financial processes autonomously, thereby building stakeholder confidence and promoting transparency. The paper examines the views of Chartered Accountants (CAs) in Gujarat regarding the effectiveness of Audit Committees and their capacity to counter earnings management practices in Indian firms. The opinions of a sample of 202 CAs were collected using a random sampling technique to survey their views and analyze the correspondence between their demographic profiles and their views on Audit Committees. With the help of statistical measures such as Chi-Square and One-Sample T-Tests, the results indicate that CAs strongly agree on the need to strengthen the role, power, and autonomy of Audit Committees in order to tackle earnings management effectively. Significant correlations were found between demographic variables, such as age, gender, and professional position, and their corresponding perceptions. The research highlights the paramount role of strong Audit Committees in guaranteeing transparency and accountability in financial reporting, providing important recommendations for policymakers and stakeholders in corporate governance. The research identifies an overwhelming consensus among CAs that Audit Committees play a significant role in countering earnings management. The research finds that strengthening Audit Committees is a vital step towards enhancing corporate governance and ensuring transparent financial reporting among Indian companies.

Alrawashedh et al. (2025a) analyzed the effect of different corporate governance practices on profit management, with a particular emphasis on Jordanian businesses. To determine the influence on earnings management, the study employed data and regression analysis of scores that included coefficients for several corporate governance characteristics, such as leverage, size, cash flow, company growth, board size, board independence, and managerial ownership. The results show that rules and corporate governance have a significant influence on earnings management. High cash flows are associated with high earnings management and limitations on manager discretion, which can reduce earnings decision-making. In contrast, the statistical significance of the leverage coefficient, board size, board independence, and managerial ownership

suggests that these factors are effective in guaranteeing low levels of earnings management. As a result, it is noted that corporate governance plays a critical role in ensuring financial examination, which in turn helps to guide stakeholders, policymakers, the public in Jordan and other democratic countries, and researchers to ensure that accounting practices are fair and that EM is kept to a minimum.

## 2.5. Hypothesis Development

### 2.5.1. Earnings Management

The phenomenon of earnings management can be understood through the lens of agency theory. Earnings management is often employed as a strategy to mitigate adverse financial conditions or financial distress (Yolanda et al., 2019). This practice has the potential to undermine investor confidence (Karina et al., 2023). Earnings management involves managers exercising discretion in choosing specific accounting methods for financial reporting. Discretionary and non-discretionary accruals are its two main constituents (Holly & Lukman, 2021). Real activities and accrual-based activities are the two categories into which earnings management may be divided (Chang et al., 2019). Managers generally opt for the earnings management method that best suits their company's circumstances, though some companies may use both accrual-based and real earnings management simultaneously (Mardianto et al., 2024). One approach to earnings management involves manipulating income, which can impact the company's cash flow. Increasing inventory to lower the cost of products sold, reducing research and development costs, and offering discounts to boost sales are all methods to achieve real earnings management (Alexandra & Eriandani, 2022). Managers can manipulate short-term profit reports by making operational decisions that have a direct impact on the company's cash flow, a practice known as Accrual Earnings Management (AEM). This approach is frequently subject to less scrutiny from regulators, auditors, and other stakeholders (Arbi et al., 2022).

### 2.5.2. Capital Structure

Capital structure refers to the source of funding that a business uses to fund its regular operations, expansion prospects, and assets (Martin & Baker,

2011). "Leverage" is one of the many metrics that make up capital structure. Leverage can be measured in four ways (Rajan & Zingales, 1995). The first and broadest indicator of leverage is the ratio of total debt to total assets. The ratio of short- and long-term debt to total assets comes in second. Third, the ratio of net assets to total debt. Finally, the ratio of total debt to capital is the sum of all debt and equity. The "capital employed" component of this ratio best reflects the impact of previous financial choices. It also has the closest connection to the agency's issues with debt.

### 2.5.3. Audit Committee Characteristics Index

To effectively oversee earnings management (EM) and improve earnings quality, audit committee (AC) attributes, including size, independence, and gender composition, are crucial. According to research, an ideal AC size is usually three to four members, as a size that is too small or too large may affect the efficacy of the directors' performance and monitoring (Pincus et al., 1989; Garcia et al., 2012; Vafeas, 2005). Although empirical research has produced conflicting or unfavorable results regarding the direct relationship between AC size and EM (Bala, 2014; Elijah & Ayemere, 2015; Fodio et al., 2013; Juhmani, 2017; Mishra & Malhotra, 2016), larger ACs may offer broader skills, strength, and competency, reflecting greater resource availability for governance (Bedard et al., 2004). Agency theory, which posits that independent directors enhance monitoring efficacy (Fama & Jensen, 1983), forms the foundation for audit committee independence, as assessed by the percentage of independent non-executive directors (Al-Rassas & Kamardin, 2015). While some studies find no significant correlation between independence and accruals-based EM (Roodposhti & Chashmi, 2011; Soliman & Ragab, 2014; Latif & Abdullah, 2015; Latif & Eriki, 2014; Iqbal et al., 2015; Alkdai & Hanefah, 2012), others report a strong negative correlation (Visvanathan, 2008; Inaam et al., 2012). Independent ACs are expected to mitigate EM, poor reporting quality, and fraud (Abbott et al., 2004; Mustafa & Youssef, 2010; Soliman & Ragab, 2014). The efficacy of AC is further enhanced by gender diversity: teams with a higher proportion of women typically perform better in information processing, planning, and long-term decision-making, which adds to collective intelligence and enhanced monitoring

(Masmoudi Mardessi & Makni Fourati, 2020; Woolley et al., 2015). A comprehensive evaluation of the ways in which AC composition affects EM oversight is made possible by taking into account these factors taken together.

#### 2.5.4. Corporate Governance

The meaning of Good Corporate Governance is an entity that coordinates, controls, and supervises the manner in which resources are utilized to enhance shareholder value, while demonstrating care toward stakeholders, employees, and local communities. Good corporate governance is an initiative to strengthen industrial capacities by overseeing management capacities and making stakeholders accountable for administration based on established regulatory systems.

#### 2.5.5. Earnings Management & Capital Structure

Due to the expense of capital, EM is mandatory for the majority of intensive managers. A substantial positive correlation between the debt ratio and discretionary accruals (EM) was demonstrated by Nikoomaram et al. (2016) and An et al. (2016). When combined with the presumption that a firm's EM captures the agency conflicts arising from information asymmetry between investors and management, this conclusion is consistent with the disciplining effect of debt in lowering the agency cost of FCF. On the other hand, Jelinek (2007) found a negative correlation between leverage and opportunistic conduct, suggesting that managers' opportunistic behavior and EM decrease as leverage increases. Additionally, over five years, Tahir et al. (2011) examined some of the EM drivers influencing the gearing of Pakistani non-financial enterprises. The results showed that the gearing ratio was negatively impacted by EM, as measured by return on assets (ROA).

*H<sub>1</sub>: Capital Structure has a significant impact on Earnings Management.*

#### 2.5.6. Earnings Management & Audit Committee Index

The number of members of the audit committee or the size of the audit committee influences the prevention of earnings management practices. Having a large number of members in the audit committee can enhance the quality of audit reports and,

therefore, reduce earnings management practices. According to international experience and practice, the Audit Committee Task Force set a guideline that the ideal audit committee should have three to five members. Wedari (2004) found that the size of audit committee members negatively influenced earnings management. Susilo (2010) discovered a positive influence on the other hand. According to the findings of previous research, which yielded both significant and insignificant results, having more members on the audit committee can lead to a smoother and tighter financial reporting process.

The audit committee must be free from, and inaccessible to, any influence, uncontrolled, and unbiased in undertaking its role and providing opinions to auditors, thereby maintaining the public's trust and the quality of audit services in the public accounting profession. Pamudji and Trihartati (2010) found that the independence of the audit committee had a negative impact on earnings management. Prabowo (2014) also determined a significant effect of independence on earnings management. Nevertheless, Dwikusumowati and Rahardjo (2013) found that the independence of the audit committee had no negligible effect on earnings management. In contrast, Guna and Herawaty (2010) determined that autonomy did not affect earnings management.

Men and women differ in their problem-solving abilities. Women auditors tend to be more risk-averse than men when identifying or solving problems. Mason and Mudrack (1996) proposed two opposing concepts on the ethical differences between men and women. As per the gender socialization theory, men react to a situation with a "less ethical" reaction than women because women are socialized by society to possess broader values. On the other hand, the work socialization theory assumes equal compensation for men and women. Companies with female directors or more female directors were of higher quality and had lower earnings management (Gul et al., 2008). As found in a similar study, companies with at least one female audit committee director exhibit superior earnings management and earnings quality (ibid.). Additionally, not only are women more ethical in their behavior, but they are also more effective in collecting volunteer information, which can help reduce the information gap between female directors and managers (ibid.). Qi and Tian (2012) found that

female audit committees were associated with poor earnings management. Additionally, gender representation on the board of directors can reduce profit management even when gender equality is achieved (Kyaw et al., 2015).

*H<sub>2</sub>: Audit Committee Characteristics Index has a significant impact on Earnings Management.*

### 2.5.7. Earnings Management, Capital Structure and Corporate Governance

Good Corporate Governance is a concept that is employed to manage and control the company to generate additional value for the stakeholders or otherwise, it can be stated that good corporate governance is employed in order to prevent issues that are usually encountered among agents (managers) as well as also principals (company owners) in operating the company. Corporate Governance also helps enhance company performance by monitoring and supervising management performance, and holding management accountable to stakeholders within the regulatory environment. The standards of good corporate governance, as compiled by the Organization for Economic Cooperation and Development (OECD), are transparency, accountability, responsibility, independence, and fairness. (Burak et al., 2016).

*H<sub>3</sub>: Corporate Governance has a moderating effect in between Capital Structure & Earnings Management.*

### 2.5.8. Earnings Management, Audit Committee Index and Corporate Governance

Effective corporate governance procedures are essential to lowering earnings management strategies. By enforcing checks and balances that discourage opportunistic conduct, a robust governance framework enhances the accuracy and reliability of financial reports (Latif & Abdullah, 2014; Al-Bassam et al., 2018). As stakeholders come to believe that financial statements accurately reflect performance, strong governance, including independent audit committees, open disclosure procedures, and board oversight, also helps build investor confidence (Jiang et al., 2008; Donadelli et al., 2014). By creating mechanisms that specifically

deter earnings manipulation, regulatory agencies and legislators can leverage these findings to reduce unethical misreporting and promote transparency (Sadiq et al., 2020; Alqatan & Hichri, 2025). Professionally speaking, these insights can inform business choices and strategic plans that reduce the risk of earnings management, such as enhancing internal auditing or revising incentive schemes. As a result, corporate governance actively influences a company's ability to deliver superior earnings and maintain stakeholder trust, rather than merely supporting compliance. (Alrawashedh et al., 2025b).

*H<sub>4</sub>: Corporate Governance has a moderating effect in between Audit Committee Characteristics Index & Earnings Management.*

### 2.5.9. Conceptual Framework

The conceptual model examines the relationship between capital structure and audit committee features (size, independence, and gender) and earnings management, with corporate governance at the center. In particular, both capital structure and audit committee features are shown to have direct effects on earnings management. Corporate governance, in turn, is set to moderate or otherwise influence the nature and direction of these relationships. In reality, effective corporate governance arrangements can mitigate opportunistic earnings management resulting from certain capital structure choices or inadequate oversight by the audit committee. Based on agency theory (Jensen & Meckling, 1976), the model posits that good governance practices, such as well-specified board monitoring, effective internal controls, and clear responsibility, can alleviate agency tensions between managers and shareholders. Likewise, a good audit committee (e.g., independent directors with accounting backgrounds) can enhance the monitoring of financial reporting, thereby reducing the risk of earnings manipulation (Healy & Wahlen, 1999). Overall, the conceptual model highlights the interaction between these important variables in determining the degree to which firms manage earnings.

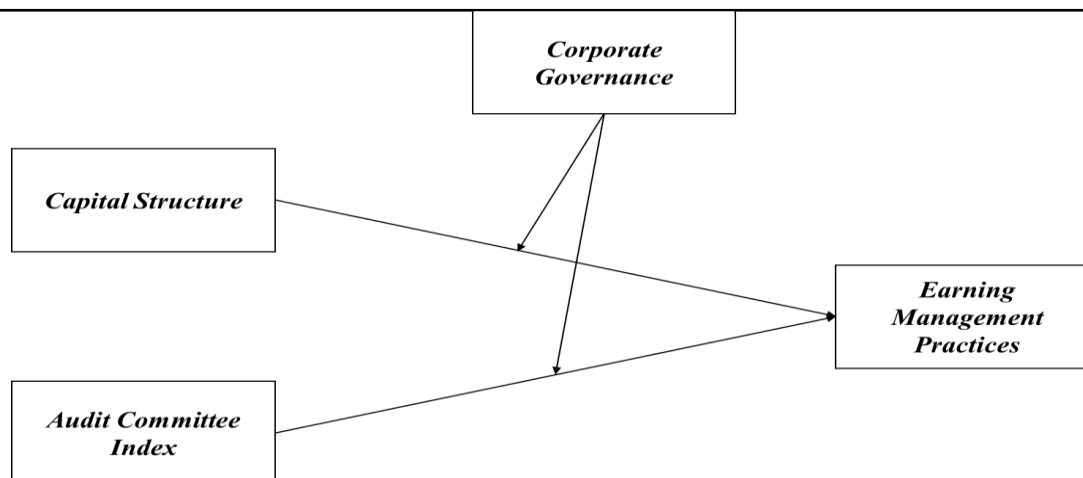


Figure-3: Conceptual Framework

Source: Authors Construction

### 3. RESEARCH METHODOLOGY

#### 3.1. Quantitative Research Design

The research approach is explained in the current study using the research onion. The researcher employs the deductive approach, adopting a positivist mindset. The impact of capital structure and audit committee characteristics (size, independence, and gender) on earnings management, with the moderating effect of corporate governance, is assessed using a quantitative research design for commercial banks listed on the Pakistan Stock Exchange (PSX). The link between the constructs is tested using the Panel Regression approach.

#### 3.2. Data Collection

Nineteen PSX-listed Conventional banks will be employed to constitute the research sample. These firms have been chosen based on whether their financial data is available in their annual financial reports. Secondary sources, particularly companies listed under the bank sector's financial reports on the PSX website, will be employed to constitute the data of this research. To retrieve useful financial information, the annual reports of companies for the period 2020-2024 will be carefully analyzed. According to recent research on Pakistani banks, COVID-19 caused quantifiable but non-permissible disturbances. According to Zaman et al. (2023), for instance, although COVID-19 had a negative impact on financial performance during the outbreak, its overall effect on the banking sector was minimal. It

differed between public and private banks, with the fundamentals of the industry remaining sufficiently intact for panel analysis (using annual data from 2018 to 2022). Similarly, when Mohsin Raza et al. (2023) look at corporate governance during COVID-19, they find that governance mechanisms (like board size and audit committee independence) have a big impact on resilience and long-term performance. This highlights the importance of including those years rather than excluding them. These results show that data from the epidemic era offer variance in stress circumstances without compromising the validity of model assumptions. A total of 95 bank-year data points from a panel of 19 banks over five years match or surpass sample frames in comparable governance-performance studies conducted in Pakistan. For instance, a study on corporate governance and bank performance drew strong conclusions on governance indicators (such as board size, audit committee size, and gender diversity) and a range of performance metrics using annual data from 19 Pakistani banks from 2013 to 2020. Using a sample of 33 banks from 2018 to 2022, another study was able to identify the pandemic's effects without excluding the COVID years. For panel estimators, a sample of 19 banks × 5 years is therefore statistically plausible, particularly when controls and robustness tests are employed.

#### 3.3. Data Analysis

When conducting panel data analysis, we believe that there is unobserved heterogeneity. We first wish to

investigate whether this heterogeneity impacts the intercept, error term, or slope. If, in our opinion, we anticipate that it would affect the intercept, we apply a Fixed Effect Model and, secondarily, perform an F-test to compare the fit against a simple Ordinary Least Squares (OLS) regression. However, we believe the heterogeneity would affect the error term or slope. In that case, we will test a Random Effects Model and apply an LM test to determine the superiority of our fit compared to that of OLS. Where there could be interference in the slope, we would also investigate

applying a Chow test to discriminate between a Random Coefficient Model, a Hierarchical Linear Model, and a lesser Random Effect Model. Finally, to make a firm choice between Fixed Effect and Random Effect models, we will perform a Hausman test, with this allowing us to select the statistically best model for the analysis of panel data, or to default to OLS in the absence of any specific benefit of one of the two more sophisticated models.

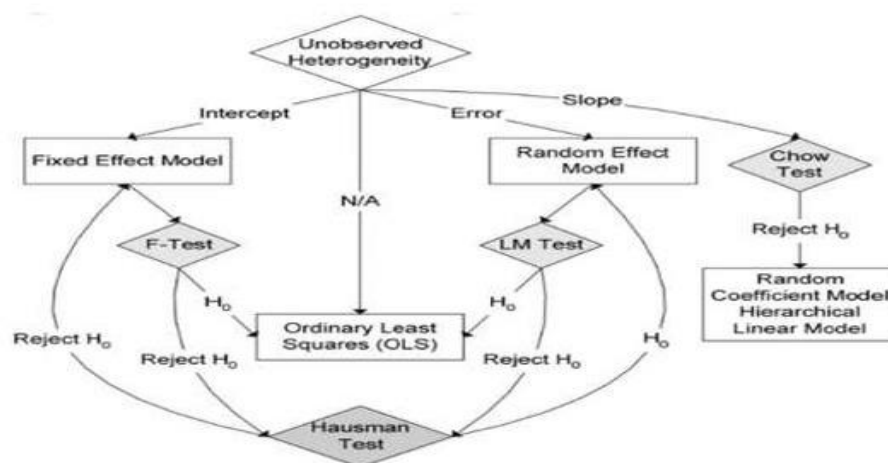


Figure 4: Pooling Technique

Source: Ali et al., 2024<sup>[1]</sup>

3.4. Econometric Model

$$EM_{i,t} = \beta_0 + \beta_1 CS_{i,t} + \beta_2 ACI_{i,t} + \beta_3 CG_{i,t} + \beta_4 (CS * CG)_{i,t} + \beta_5 (ACI * CG)_{i,t} + \epsilon_{i,t}$$

Where,

- EM = Earnings Management
- CS = Capital Structure
- ACI = Audit Committee Index

- CG = Corporate Governance
- $\beta_0$  = Coefficient
- i = Cross Section
- t = Time Series
- $\epsilon_i$  = Error Term

3.5. Variables and Measurement Tools:

Table-1: Variables and Measurement Tools

Source: Literature

S. No.	Variable	Variable Name	Tool	Reference
1	Dependent Variable	Earnings Management	Total Accruals Method	(Kumawat, 2020)
2	Independent Variable	Capital Structure	Debt to Equity Ratio	(Suharti & Murwaningsari, 2024)
3	Independent Variable	Audit Committee Index	Unweighted Average of Audit Committee Size, Independence, Gender	(Jameel et al., 2024), (Masmoudi Mardessi & Makni Fourati, 2020)

4	Moderating Variable	Corporate Governance	Number of Board of Directors	(Suharti & Murwaningsari, 2024)
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4. FINDINGS

4.1. Descriptive Analysis

We have here 95 observations of all our measures (earnings management, capital structure, audit committee index, corporate governance). A descriptive analysis test was conducted to investigate the central tendencies of the variables. The mean value indicates the average value of the series. The median value is the middle value in an ordered list of values. Standard deviation is a measure of the dispersion or variability of the data from the mean.

Table-2: Descriptive Analysis

Source: Author Estimation

	EMI	CS	ACI	CG
Mean	5.663	16.172	0.518	8.684
Median	6.000	15.720	0.330	8.000
Maximum	8.000	27.620	1.000	13.000
Minimum	3.000	7.840	0.330	5.000
Std.Dev	1.349	5.193	0.223	1.733
Skewness	-0.023	0.262	0.747	0.592
Kurtosis	2.090	2.037	2.431	3.064
Jarque-Bera	3.285	4.760	10.115	5.573
Probability	0.193	0.092	0.063	0.061
Observations	95	95	95	95

Skewness represents the asymmetry of a distribution; negative Skewness indicates a tendency toward larger values, while positive Skewness indicates a tendency toward smaller values. The best Skewness result is a figure between -1 and +1, whereas values between -2 and +2 are acceptable in most cases. If the figures fall outside of -2 and +2, that indicates severe non-normality.

When compared to a conventional distribution, Kurtosis indicates whether the distribution is overly peaked or flat. Positive Kurtosis indicates a higher peaked distribution, while negative Kurtosis indicates a flatter distribution. A distribution that is excessively peaked is indicated by Kurtosis greater than +2, and one that is too flat is indicated by Kurtosis less than -2. A distribution is considered to be normal when its Skewness and Kurtosis are close to zero.

4.2. Pairwise Correlation

The correlation matrix tests inter-correlations between Earnings Management (EMI), Capital Structure (CS), Audit Committee Index (ACI), and Corporate Governance (CG). EMI is positively

correlated with CS (0.548) and ACI (0.451), which means higher earnings management is associated with higher leverage or audit committee effectiveness. CG is weakly positively correlated with EMI (r = 0.181) but weakly negatively correlated with CS (r = -0.060) and ACI (r = -0.140), indicating a weak association with governance practices. CS and ACI surprisingly correlate moderately positively (r = 0.469), while CG behaves relatively independently. The weak inter-correlations with CG suggest that governance practices here do not strongly connect with the other variables. The stronger EMI-CS relation, however, indicates possible interdependencies in financial policies.

**Table-3:** Correlation Analysis

Source: Authors Estimation

	EMI	CS	ACI	CG
EMI	1	0.548	0.451	0.181
CS	0.548	1	0.469	-0.060
ACI	0.451	0.469	1	-0.140
CG	0.181	-0.060	-0.140	1

The correlation matrix tests inter-correlations between Earnings Management (EMI), Capital Structure (CS), Audit Committee Index (ACI), and Corporate Governance (CG). EMI is positively correlated with CS (0.548) and ACI (0.451), which means higher earnings management is associated with higher leverage or audit committee effectiveness. CG is weakly positively correlated with EMI ( $r = 0.181$ ) but weakly negatively correlated with CS ( $r = -0.060$ ) and ACI ( $r = -0.140$ ), indicating a weak association with governance practices. CS and ACI surprisingly correlate moderately positively ( $r = 0.469$ ), while CG behaves relatively independently. The weak inter-correlations with CG suggest that governance

practices here do not strongly connect with the other variables. The stronger EMI-CS relation, however, indicates possible interdependencies in financial policies.

**4.3. Data Normality**

The Jarque-Bera test checks if the error term in the dataset is normally distributed. The null hypothesis ( $H_0$ ) states that the error term is normally distributed. A P-value of greater than 0.05 suggests that the error term in the dataset is normally distributed.

**Table-4:** Jarque-Bera Test of Normality

Source: Authors Estimation

Variable	EMI	CS	ACI	CG
Jarque-Bera	3.285	4.760	10.11	5.573
Probability	0.193	0.092	0.063	0.061

**Regression Analysis**

**4.3.1. Pooled OLS Method (POLS)**

To run the regression model, we pool all the 95 observations together, as in the Pooled Least Squares Method, we neglect the time series and cross-sectional

data. The POLS method was applied to check the relationship between EMI, CS, ACI, CG, and CG interaction with dependent variables.

**Table-5:** Pooled OLS Method

Source: Authors Estimation

Model	Coefficients		T	Prob.
	Unstandardized Coefficients			
	B	Std. Error		
C	-0.176	0.484	-0.363	0.045
CS	0.239	0.030	7.754	0.000
ACI	0.682	1.078	0.632	0.050

CG	0.200	0.055	3.650	0.0004
CS*CG	0.0007	0.003	0.196	0.044
ACI*CG	-0.051	0.130	-0.394	0.694
R-Squared	0.958			
Adjusted R-Squared	0.955			
Prob (F-Statistic)	0.000			
Durbin Watson	1.993			
<b>a. Dependent Variable: EMI</b>				

The constant parameter of commercial banks shows a negative value of 0.176, indicating that if all interacting variables are held constant, the likelihood of earnings management occurring decreases by 0.176. CS is significantly and positively related to EMI, such that a 1-unit increase in CS leads to a 0.239-unit decline in EMI. ACI also has a significant positive relationship with EMI. This implies that if CS is held constant, a unit increase in ACI will result in a 0.682-unit increase in EMI. The moderator CG is also significant and exhibits a positive relationship with EMI, with a coefficient of 0.2 units in favor. The CS interaction with CG is also positively significant to EMI, with a substantially low coefficient of 0.0007 units. Meanwhile, the ACI interaction with CG is non-significant on EMI. The variation in EMI is

95.8% explained by the dependent variables, the moderator, and the moderating interaction of CS. The combined effect of explanatory variables is also present in the model, and the value of the Durbin-Watson statistic is 1.993, indicating that autocorrelation does not exist in the model.

**4.3.2. LM Test (POLS Vs REM)**

To check the suitability of the model. The Breusch Pagan LM test is applied to test whether the Pooled OLS method is appropriate or the Random Effect model is appropriate. The null hypothesis (H0) states that the Pooled OLS method is appropriate, which can be justified by the P-value > 0.05 from the table. Suggesting to accept the null hypothesis (Ho).

**Table-6:** Breusch Pagan LM Test

Source: Authors Estimation

Test Summary	LM.Stats	d.f	Prob
Breusch Pagan LM Test	1.274	5	0.259

**Random Effect Method (REM)**

According to the Random Effects Model, Only CS and the moderator CG have a significant and positive relationship with EMI, with coefficients of 0.239 and 0.209, respectively. Meanwhile, the other dependent

variable, ACI, as well as the moderating interactions of CS and ACI, and the constant factor, are non-significant. CS and CG contribute 94.7% towards the variation in EMI.

**Table 7:** Random Effect Method

Source: Authors Estimation

Model	Coefficients		T	Prob.
	Unstandardized Coefficients			
	B	Std. Error		
C	-0.247	0.521	-0.474	0.626
CS	0.239	0.032	7.368	0.000
ACI	0.852	1.134	0.751	0.454
CG	0.209	0.059	3.528	0.001

CS*CG	0.0006	0.003	0.159	0.873
ACI*CG	-0.071	0.138	-0.516	0.607
R-Squared	0.947			
Adjusted R-Squared	0.939			
Prob (F-Statistic)	0.000			
Durbin Watson	1.984			
a. Dependent Variable: EMI				

4.3.3. Hausman Test (REM Vs FEM)

To check the suitability of the model. The Hausman test is applied to determine whether the Random Effects method is more appropriate than the Fixed Effects model. The null hypothesis (H0) states that the

Random Effect method is appropriate, which can be justified by the P-value > 0.05 from the table. Suggesting to accept the null hypothesis (Ho).

Table-8: Hausman Test

Source: Authors Estimation

Test Summary	Chi-Sq.Stats	Chi-Sq d.f	Prob
Cross Section Random	03.233	5	0.664

Fixed Effect Model (FEM)

Similar to the Random Effect model. Only CS and the moderator CG are significant in the Fixed Effects model, while the other variables, including moderating interactions and the constant coefficient, are insignificant. To check the suitability of the model, the F-statistics from the Fixed Effect model are

examined. With a P-value > 0.05, suggesting that the null hypothesis (Ho) should be accepted, which states that the Pooled Model is appropriate to determine the results of the Panel Regression Analysis.

Table-9: Fixed Effect Method

Source: Authors Estimation

Model	Coefficients		T	Prob.
	Unstandardized Coefficients			
	B	Std. Error		
C	-1.532	1.257	-1.218	0.227
CS	0.266	0.052	5.077	0.000
ACI	2.361	1.675	1.409	0.163
CG	0.377	0.153	2.464	0.016
CS*CG	-0.003	0.006	-0.525	0.601
ACI*CG	-0.256	0.217	-1.181	0.241
R-Squared	0.948			
Adjusted R-Squared	0.951			
Prob (F-Statistic)	0.089			
Durbin Watson	1.993			
a. Dependent Variable: EMI				

Discussion

The pooled-OLS model is excellent, accounting for 95.8% of the variance of earnings management (EMI) in 95 observations ( $R^2 = 0.958$ , Adjusted  $R^2 = 0.955$ ;  $F(5,89) p < 0.001$ ), and passes the Durbin-Watson test (1.993) with no egregious first-order autocorrelation. Consistent with theory, capital structure (CS) is strongly positively correlated with

EMI ( $\beta = 0.239$ ,  $p < 0.001$ ), suggesting that banks with more leveraged capital structures are likely to engage in more earnings management. Corporate governance (CG) also has a significant positive coefficient ( $\beta = 0.200$ ,  $p < 0.001$ ), emphasizing the contribution of high-quality governance to explaining discretionary reporting. The audit committee index (ACI) is marginally significant ( $\beta = 0.682$ ,  $p = 0.050$ ), implying that higher quality audit supervision may be modestly associated with more earnings management, perhaps as a coincidental byproduct of more sophisticated reporting environments. More importantly, the CS $\times$ CG interaction term is significant ( $\beta = 0.0007$ ,  $p = 0.044$ ), implying that the leverage effect on earnings management is more powerful in higher quality governance regimes, and the ACI $\times$ CG interaction is not significant ( $p = 0.694$ ). In practical terms, this implies that policymakers and regulators in Pakistan must monitor not only capital adequacy ratios but also governance improvements, as higher-quality governance arrangements can inadvertently amplify earnings management incentives when banks have a significant debt overhang.

Capital structure (CS) and EM have a substantial positive association ( $\beta = 0.239$ ,  $p < 0.001$ ), which implies that banks with higher levels of leverage report more discretionarily. This finding is consistent with the literature on risk-shifting and debt covenants, which suggests that managers may alter accruals to satisfy covenant obligations or provide creditors with a false sense of financial health when debt loads increase (Healy & Wahlen, 1999; Jensen & Meckling, 1976). In the traditional banking environment of Pakistan, where regulators closely monitor capital adequacy, managers could feel under pressure to smooth earnings to prevent capital shortages or unfavorable market reactions. Therefore, policymakers should understand that more leverage gives EM more incentives, which calls for close

observation of loan-loss clauses and other discretionary elements.

If one expects stronger audit committees to curb EM, the marginally significant positive effect on ACI ( $\beta = 0.682$ ,  $p = 0.050$ ) is surprising. According to one theory, banks with more advanced audit committees operate in more complex reporting environments; as complexity increases, there may be more room for, and even implicit support for, subtle discretionary changes that still "pass" governance checks (Klein, 2002; Carcello & Neal, 2000). An improved ACI in Pakistan might represent formal frameworks (such as more regular meetings and technical know-how). However, it might not necessarily entail more stringent prohibitions on all types of accrual manipulation. This result emphasizes the necessity of looking at audit committee efficacy (such as meeting quality and members' industry experience) in addition to index ratings.

The positive relationship on CG ( $\beta = 0.200$ ,  $p < 0.001$ ) suggests that larger EM is linked to "higher quality" governance as indicated by your assessment. Although initially unexpected, this could be the result of a selection effect: banks with more robust governance systems may also employ more aggressive development or signaling tactics, utilizing advanced reporting methods while being closely monitored (Bushman & Smith, 2001). On the other hand, the CG index may be recording institutional processes (such as disclosure policy and board composition) that encourage rather than restrict certain discretionary decisions. Banks in Pakistan may embrace sophisticated reporting procedures as a result of changing governance regulations, thereby giving EM more leeway.

Higher-quality governance systems enhance the positive leverage relationship, as evidenced by the considerable positive interaction between CS and CG ( $\beta = 0.0007$ ,  $p = 0.044$ ). In other words, leveraged banks have an even greater incentive to manage earnings when governance systems are stronger (as measured by the index). This might happen as a result of strong governance, which gives managers greater trust with stakeholders and allows them to deploy EM strategies with a lower perceived risk of being discovered or punished (Dechow et al., 1996). Additionally, it implies that when debt pressures are significant, governance changes alone

may not be sufficient to prevent EM; rather, improved governance may provide managers with the means (such as advanced internal controls and analytical skills) to either limit or influence earnings. The conclusion that composite governance quality and leverage dynamics are more important than audit committee features alone is further supported by the non-significant ACI×CG interaction ( $p = 0.694$ ), which suggests that moderately adding ACI to CG does not further alter the leverage linkage.

## 5. CONCLUSION & RECOMMENDATIONS

### 5.1. Conclusion

Our pooled OLS regression on 95 bank-year observations for the period 2020–2024 exhibits extremely high explanatory power ( $R^2 = 0.958$ , Adjusted  $R^2 = 0.955$ ;  $F(5,89) p < 0.001$ ) and passes simple diagnostic tests (Durbin-Watson = 1.993). The key finding is that capital structure, as captured by leverage ratios, is the most significant determinant of earnings-management intensity (EMI), with an extremely highly significant positive coefficient ( $\beta = 0.239$ ,  $p < 0.001$ ). This suggests that, in the aftermath of Pakistan's post-pandemic recovery and amid tightening monetary conditions, banks are using discretionary reporting while facing increased debt burdens. Also unexpected is the counterintuitive influence of quality corporate governance: superior governance architecture (CG) is associated with higher EMI ( $\beta = 0.200$ ,  $p < 0.001$ ), suggesting that stronger board monitoring and formal governance guides sometimes enable rather than constrain more sophisticated earnings-management practices. The audit-committee index (ACI) is marginally significant ( $\beta = 0.682$ ,  $p = 0.050$ ), suggesting that optimally crafted committees add to the reporting vocabulary but do not discourage risky accrual choices. Finally, a positive and significant CS×CG interaction ( $\beta = 0.0007$ ,  $p = 0.044$ ) suggests that governance excellence amplifies the debt-based reporting incentives, with sobering implications for financial risk-taking watchdogs that depend on governance reforms.

### 5.2. Recommendations and Future Research Direction

To counter the interaction of governance, leverage, and earnings management (EMI), policy and regulatory reforms must give the highest importance

to dynamic capital adequacy buffers, imposing counter-cyclical requirements that rise for better-governed banks to buffer the risks of the leverage-governance nexus. Regulators can also demand better audit-committee expertise, mandating minimums for financial and risk-management experience as well as external performance evaluations, raising the bar for scrutiny of discretionary accounting techniques. Moreover, including "governance-stress" simulations, wherein banks test their governance strength in hypothesized high-leverage conditions, would force institutions to develop remediation plans for unmanaged EMI risks. At the managerial level, boards must prioritize specialized training in recognizing subtle earnings-management techniques, especially in high-leverage environments, while employing integrated risk and reporting dashboards that connect real-time capital measures with accrual ratios to mitigate biases ahead of time. Future research must explore hierarchical or random-coefficient specifications to account for bank-specific and time-related heterogeneity in reporting incentives, conduct comparative studies between conventional and Islamic banks to examine Shariah-compliant governance effects on the EMI-leverage nexus, and include macroeconomic determinants like interest-rate volatility and fiscal deficits to examine how external shocks influence earnings-management tactics. Overall, these provisions aim to strengthen regulatory frameworks, promote managerial vigilance, and enhance the empirical understanding of systemic risk in financial governance.

Regulators (like the State Bank of Pakistan) ought to mandate thorough disclosures regarding loan-loss provisioning practices, especially for banks with significant leverage, and evaluate them on a regular basis. Focus on "quality" above formal indices: make sure audit committee members possess the necessary knowledge, rotate membership on a regular basis, and evaluate meeting minutes and follow-up activities. Incorporate stress-test scenarios that analyze the effects of aggressive provisioning assumptions when banks have larger debt levels, and modify regulatory capital buffers appropriately. Be aware that under leveraged stress, governance improvements might not always result in a uniform decrease in EM. Provide guidelines for aligning governance incentives, such as tying compensation to

long-term success indicators rather than immediate accounting results. To verify the robustness of these associations, use endogeneity-robust techniques (e.g., GMM), alternative EM proxies (actual activities vs. accrual-based), and subsample analyses (pre-, during-, and post-COVID).

### 5.3. Limitations

This approximation is limited to its 2020–2024 sample window. It only considers listed Pakistani commercial banks, which may limit the external validity of our estimates to prior years, unlisted institutions, or other subsectors within the financial industry, such as investment banking or microfinance. In addition, omitting potentially strong variables such as political connections, executive compensation incentives, and implicit government guarantees also contributes to the possibility of omitted-variable bias in our estimates of leverage and governance effects. Lastly, as pooled OLS yielded a superior fit, the homogeneous slopes and constant variance assumption of the method means that unobserved heterogeneity and cross-sectional dependence are still potential threats to causal interpretation, highlighting the necessity of future research using more accommodating panel-data techniques.

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