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ROLE OF CORPORATE GOVERNANCE IN EARNINGS MANAGEMENT

AMANDEEP KAUR

ABSTRACT

Earnings management remains a central focus of academic inquiry and regulatory concern, particularly in emerging market contexts, where evolving governance mechanisms and institutional frameworks influence managerial discretion in financial reporting. The extraordinary disruption caused by the COVID-19 pandemic has heightened academic attention toward examining how firms adjust their reporting behaviour during periods of crisis. Unlike conventional financial or economic downturns, the COVID-19 crisis originated from non-economic sources yet resulted in widespread disruptions to production, supply chains, demand cycles, and capital markets. This unique context has raised significant questions about the incentives, opportunities, and constraints influencing earnings management practices during periods of extreme uncertainty. Prior empirical evidence offers mixed conclusions: while several studies document increased manipulation as firms attempt to portray distress or manage contractual pressures, others observe improved earnings quality driven by heightened monitoring, relaxed investor expectations, and elevated litigation risks. Against this backdrop, the present study provides an integrated examination of how corporate governance, audit quality, promoter ownership, firm-level cost determinants, and regulatory reforms interact to influence both accrual-based earnings management and real earnings management in India.

The study is motivated by the distinctive characteristics of the Indian corporate structure, where concentrated promoter ownership, family-led management, and less stringent enforcement environments create conditions that differ significantly from those in widely held ownership systems typical of developed markets. High-profile accounting scandals, including those involving Satyam Computers, IL&FS, DHFL, and the PNB–Nirav Modi scam, have revealed recurring gaps in internal controls, auditor oversight, and board independence, underscoring the need to investigate earnings management behavior within India's institutional context. The adoption of Ind-AS, which converged with IFRS, represents a significant regulatory development aimed at enhancing the credibility of financial reporting. However, emerging literature suggests that while stricter recognition and measurement rules may curb some forms of accrual manipulation, they may simultaneously incentivise a shift toward more opaque and

harder-to-detect forms of earnings management, such as manipulation through real activities. In line with this, the study applies a multi-period empirical methodology to investigate shifts in earnings management behaviour across the pre-Ind-AS, post-Ind-AS, and COVID-19 periods.

The study is designed to address three fundamental objectives. Initially, the research evaluates how the adoption of Ind-AS influences accrual-based earnings management among Indian companies. The study incorporates Beneish M-score parameters and discretionary accruals to examine the differences between pre- and post-Ind-AS periods. Results indicate that while key indices linked to performance pressure, such as the Gross Margin Index and Sales Growth Index, were strong predictors of accrual manipulation in the pre-Ind-AS era, their influence weakened significantly post-adoption. This suggests that enhanced revenue recognition standards and improved disclosure requirements under Ind-AS have reduced opportunities for traditional forms of manipulation. Nevertheless, the continued significance of Total Accruals to Total Assets confirms that accrual-based manipulation has not been eliminated, highlighting the need for more targeted enforcement.

The research also seeks to determine whether governance mechanisms are effective in limiting accrual-based and real earnings management under differing economic environments, particularly during the pandemic. Empirical evidence suggests that under normal economic conditions, board independence, board size, and the engagement of Big Four auditors serve as effective monitoring mechanisms in curbing earnings management. However, these mechanisms lose strength under crisis conditions. During the pandemic, logistic constraints, virtual board meetings, and audit disruptions appear to have diminished oversight quality. Consistent with institutional theory, governance mechanisms functioned more symbolically than substantively, weakening their ability to constrain managerial opportunism. Firm-specific attributes, such as size, leverage, and profitability, also demonstrate varying effects under crisis versus non-crisis periods. Distressed firms exhibit more conservative reporting behavior during the pandemic due to heightened scrutiny and concerns about survival.

The third objective investigates whether accrual-based and real earnings management function as substitutes or complements in Indian firms. While firms in stable periods appeared to use these techniques selectively based on contextual incentives, the pandemic introduced a shift in strategy. As real activity manipulation became costlier and operationally difficult during

lockdowns, many firms relied more heavily on accrual adjustments. During the pandemic period, a statistically significant positive relationship between unexpected real and accrual-based earnings management suggests that firms employ these strategies in a complementary manner in response to increased economic pressure. The findings also show that promoter ownership moderates this relationship, with higher promoter dominance curbing manipulation under distress, which may stem from long-term reputational concerns or the ability to absorb temporary losses.

Overall, the findings enrich the theoretical discourse on earnings management by demonstrating that managerial reporting choices are shaped by an interplay of regulatory environments, crisis conditions, cost structures, and governance quality. The study contributes to agency theory by highlighting how monitoring failures create opportunities for earnings manipulation; to stewardship theory by revealing contexts in which unified leadership may reduce earnings management; and to institutional theory by showing how governance mechanisms may lose effectiveness during systemic disruptions. It also extends the cost-based trade-off framework by explaining why firms switch between earnings management techniques depending on resource constraints and external monitoring.

The study offers important policy implications for regulators, auditors, boards, and investors. Strengthening enforcement mechanisms, enhancing audit independence, adopting data analytics-driven supervision, and promoting genuinely independent board structures could collectively improve earnings quality. Furthermore, crisis-responsive governance frameworks and revised auditing protocols are crucial in preventing opportunistic reporting in volatile environments. By integrating insights from an emerging economy undergoing significant regulatory transformation, this study advances the global understanding of earnings management behaviour and strengthens the literature on corporate governance, financial reporting, and crisis-driven managerial incentives.

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CHAPTER – 1

INTRODUCTION

1.1 Introduction

The introductory chapter presents an overview of the study. The chapter sets the context by examining earnings management (*hereafter referred to as* EM) in the context of India, an emerging market. The chapter subsequently explains the rationale for the study, delineates its objectives, and describes the methodological framework adopted. Finally, the chapter summarizes the work done in each of the thesis chapters.

Corporate plans are scarcely realized without deviation (Cadez & Guilding, 2008). Managers are eager to disclose financial information to the public when a firm is in a strong financial position, allowing it to reap the benefits of good performance and timely disclosure. However, in poor economic conditions and circumstances where targets are not met, they resort to various methods to alter financial statements to maintain a good performance. Over the past few decades, it has become apparent that most scandals have been associated with weak managerial oversight and accounting practices influenced by accounting discretion embedded in Generally Accepted Accounting Principles (*hereafter referred to as* GAAP). Management of earnings by corporate executives is omnipresent (Ajit et al., 2013). One of the primary concerns behind any corporate collapse is the various accounting choices made by executives while preparing financial statements to maximize their personal wealth. Issues arise when these accounting choices thwart the fundamental objective of transparency (Kapoor & Goel, 2017), which raises significant questions about the effectiveness of the prevailing governance mechanisms intended to control opportunistic managerial behavior. Improper revenue recognition (Enron, 2002), acquisitions, fabricated cash balances, unethical corporate conduct (Satyam, 2008), misrepresentation of financial statements (Toshiba, 2015), aggressive accounting practices (Kingfisher, 2013), etc., have shaken the investor's confidence in financial reports and governance mechanisms (Hussain, 2020). Such concerns have intensified doubts about the sufficiency of monitoring devices in controlling strategic managerial conduct, underscoring the importance of strong governance frameworks.

1.2 Concept of Earnings Management

EM has been the subject of extensive research, with numerous scholars commenting on the topic. (Schipper, 1989) defines EM as a deliberate manipulation in financial reporting to fulfill personal gains. (Levitt, 1998a) defines EM as "a grey area" where financial reports reflect the executives' desires rather than the company's actual financial performance. According to (Healy & Wahlen, 1999), EM occurs when managers alter transactions and financial reports using their judgment while reporting financial statements, thereby misleading stakeholders about the true economic performance or controlling contractual outcomes that depend on the reported accounting figures. The only persistence among these is the impression that managers' intent in accounting choices is driven by their personal goals when preparing financial statements. Hence, it can be said that there is no consensus on the definition of EM (Beneish, 2001; Callao et al., 2014). Managers adjust upward or downward income using accounting discretion embedded in GAAP (L. Li, 2019). Despite the above definitions, there is

concurrence that managers often resort to two instruments while preparing financial statements, viz., real and accrual earnings management (Chouaibi et al., 2018). When financial statements are altered using income-increasing accruals in a specific period, an opposite accounting treatment has to be pursued in the following year, as the accruals tend to reverse over time (Healy, 1985), leaving firms with decreased flexibility to manage earnings, which ultimately forces managers to resort to fraudulent activities by violating GAAP (Beneish, 1997).

On the other hand, real earnings management (*hereafter referred to as* REM) involves a direct flow of cash that impacts current-period earnings, compelling firms to deviate from optimal planning and incur extra costs in the future (Pathak, 2015). (Roychowdhury, 2006) advocates that REM masks the actual economic performance of the firm by deviating from standard business practices to meet earnings thresholds. Accordingly, concerns over earnings manipulation underscore the crucial role of robust governance mechanisms in mitigating opportunistic managerial behaviour.

1.3 Earnings Management in India

Emerging economies such as India are frequently characterized by weak institutional frameworks, limited investor protection, and concentrated ownership structures, all of which exacerbate agency conflicts and information asymmetry between managers and stakeholders (Khanna & Palepu, 2000). Consistent with these structural challenges, prior research documents substantially high levels of discretionary accruals (hereafter referred to as DA) among Indian corporates, indicating widespread EM practices (Kapoor & Goel, 2017). Empirical evidence provided by (Ajit et al., 2013) reveals that the average level of EM in Indian listed firms amounts to approximately 2.9 percent of total assets, which is notably higher than that observed in several developed markets. The study further highlights firm size as a significant determinant of earnings manipulation, with small-scale firms exhibiting considerably higher levels of EM, around 10.6% of total assets, compared to their medium- and large-sized counterparts. In contrast, EM in the United States and European markets is generally reported to range between 1% and 5% of total assets, underscoring the relatively higher intensity of earnings manipulation in the Indian context.

These concerns have been further amplified by major corporate scandals in India, most notably the Satyam Computer Services fraud in 2008–2009, which involved the fabrication of cash balances, and the collapse of Kingfisher Airlines in 2012–2013, marked by aggressive accounting practices and weak governance oversight. Such high-profile failures not only

eroded investor confidence but also raised serious questions regarding the effectiveness of the corporate governance (*hereafter referred to as* CG) framework and the reliability of reported financial statements in India.

1.4 Impact of Changes in Accounting Standards on Earnings Management

The economic events of a corporation are disseminated by accounting statements (Kaplan & Roll, 1972). Managerial self-interest may lead to the manipulation of accounting information, thereby compromising the quality of financial reporting. To emphasize the high financial reporting quality of financial statements, several jurisdictions have adopted International Financial Reporting Standards (*hereafter referred to as* IFRS) (Himanshu & Singh, 2021). The collective empirical evidence states that firms adopting IFRS have better disclosure quality (Bassemir & Novotny-Farkas, 2018; Daske & Gebhardt, 2006). Following this argument, (Ho et al., 2015) state that firms are less likely to manage accrual earnings after adopting IFRS. Also, it has been found that with tighter accounting standards, firms switch to REM as a substitute because higher earnings quality tends to increase the marginal benefit of REM (Ewert & Wagenhofer, 2005; Ho et al., 2015).

To improve the quality of financial reporting in India, Indian Accounting Standards (hereafter referred to as Ind-AS) were adopted in alignment with IFRS. (Rudra & Bhattacharjee, 2011) report that Indian firms adopting IFRS are more likely to manage their earnings using DA than non-adopters. Along similar lines, (R. Kaur et al., 2014) highlighted that the Indian telecom sector, followed by the retail sector, is found to have reported the maximum EM. Furthermore, (Himanshu & Singh, 2021) evaluated the underlying causes of EM in India, and their findings reported a significant relationship between EM and the Leverage Index. In addition, the study finds that firms often re-evaluate useful life and depreciation methods to manipulate property, plants, and equipment. Hence, examining the impact of Ind-AS adoption on EM would be worthwhile.

1.5 Rationale of the Study

EM persists as a significant challenge in financial reporting, particularly in emerging markets such as India that are experiencing ongoing regulatory and governance reforms. Prior research has extensively documented the prevalence of accrual-based earnings management (*hereafter,* AEM) and REM, highlighting how managers strategically choose between these techniques to meet earnings targets or contractual obligations. The COVID-19 pandemic adds further

complexity to this behaviour. As an unprecedented, non-economic shock with widespread economic consequences, the pandemic has been shown in global literature to both encourage and deter earnings manipulation. Some studies find that firms intensify EM during crises either to signal financial distress and justify external support or to correct past DA, while others suggest that heightened scrutiny, relaxed profitability expectations, and elevated litigation risk improve earnings quality during such periods. These mixed findings underscore the need to examine EM behaviour in crisis settings, especially within emerging markets.

Yet, much of the existing EM literature remains concentrated in developed economies, with limited comprehensive evidence on how Indian firms navigate between AEM and REM, particularly against the backdrop of major regulatory reforms such as the convergence to Ind-AS. While IFRS-aligned standards were expected to enhance transparency and comparability, initial evidence suggests that although AEM may have declined post-IFRS, firms could be shifting toward less detectable forms, such as REM or classification shifting. This raises important questions about whether firms are substituting between AEM and REM in response to regulatory scrutiny, audit quality, and pandemic-induced pressures.

Additionally, the ability of CG mechanisms to mitigate EM in India has yet to be conclusively established. Unlike the shareholder-centric governance frameworks prevalent in the US and UK, India's promoter-driven ownership structure gives rise to distinct agency conflicts between controlling shareholders and minority investors, thereby restricting the applicability of evidence from developed economies. Given these contextual differences, it is imperative to empirically investigate the role of governance characteristics, including board independence, board size, meeting frequency, CEO duality, and Big Four audit quality, in shaping firms' accrual-based and REM across regular and crisis periods.

Motivated by these considerations, the study examines whether AEM and REM operate as substitutes or complements in Indian firms and assesses the influence of governance structures and cost determinants on this relationship under conditions of regulatory transformation and the pandemic. In addressing these gaps, the research provides valuable and timely insights for policymakers, regulators, investors, and boards committed to enhancing financial reporting quality and corporate accountability in emerging economies.

1.6 Objectives of the Study

The study aims to examine the following research objectives:

- To examine how the adoption of Ind-AS (IFRS converged) has affected EM.

- To assess the role of governance mechanisms in accrual and REM.
- To examine whether EM techniques (real and accrual) are used as substitutes or complements by firms in India.

Given that Objective 1 examines the impact of Ind-AS adoption on earnings management, the sample period is divided into a pre-adoption phase (*2014–15 to 2015–16*) and a post-adoption phase (*2016–17 to 2021–22*). In contrast, for Objectives 2 and 3, the fiscal years are grouped into a pre-pandemic period (*2014–15 to 2018–19*) and a pandemic period (*2019–20 to 2021–22*).

1.7 Hypotheses Development

The research analyses the effect of CG on EM and explores whether Indian firms adopt alternative earnings management strategies in a substitutive or complementary manner. More precisely, the study seeks to achieve the following objectives:

16 **$H_0$1a:** Adopting Ind-AS (IFRS converged) reduces firms' reliance on traditional accrual-based EM strategies.

$H_0$2a: There is a negative association between board independence and AEM.

$H_0$2b: Board independence is not significantly associated with REM.

$H_0$3a: Increased frequency of board meetings is negatively associated with accrual-based EM.

$H_0$3b: The frequency of board meetings is not significantly associated with reduced REM.

$H_0$4a: Board size is negatively associated with accrual-based EM.

$H_0$4b: Board size has no significant association with REM, as larger boards may lack the agility and detailed insight necessary to monitor operational decisions underlying REM.

$H_0$5a: Firms with CEO duality are likelier to engage in accrual-based EM than firms with separate CEO and board chair positions.

$H_0$5b: CEO duality is positively associated with REM, as unified leadership may weaken the board's ability to scrutinize operational decisions.

38 **$H_0$6a:** Firms audited by foreign (particularly Big 4) auditors are less likely to engage in accrual-based EM.

$H_0$6b: The presence of foreign auditors has a limited or insignificant effect on constraining REM, as such practices involve operational decisions that are harder to detect through standard auditing procedures.

H_07: Ceteris paribus, the relative degree of AEM vis à-vis REM is determined by the relative costs associated with each method.

H_07a: Ceteris paribus, firms facing greater scrutiny from Big Four auditors have a higher level of manipulation of real activities.

H_07b: Ceteris paribus, firms with poor financial health have higher AEM.

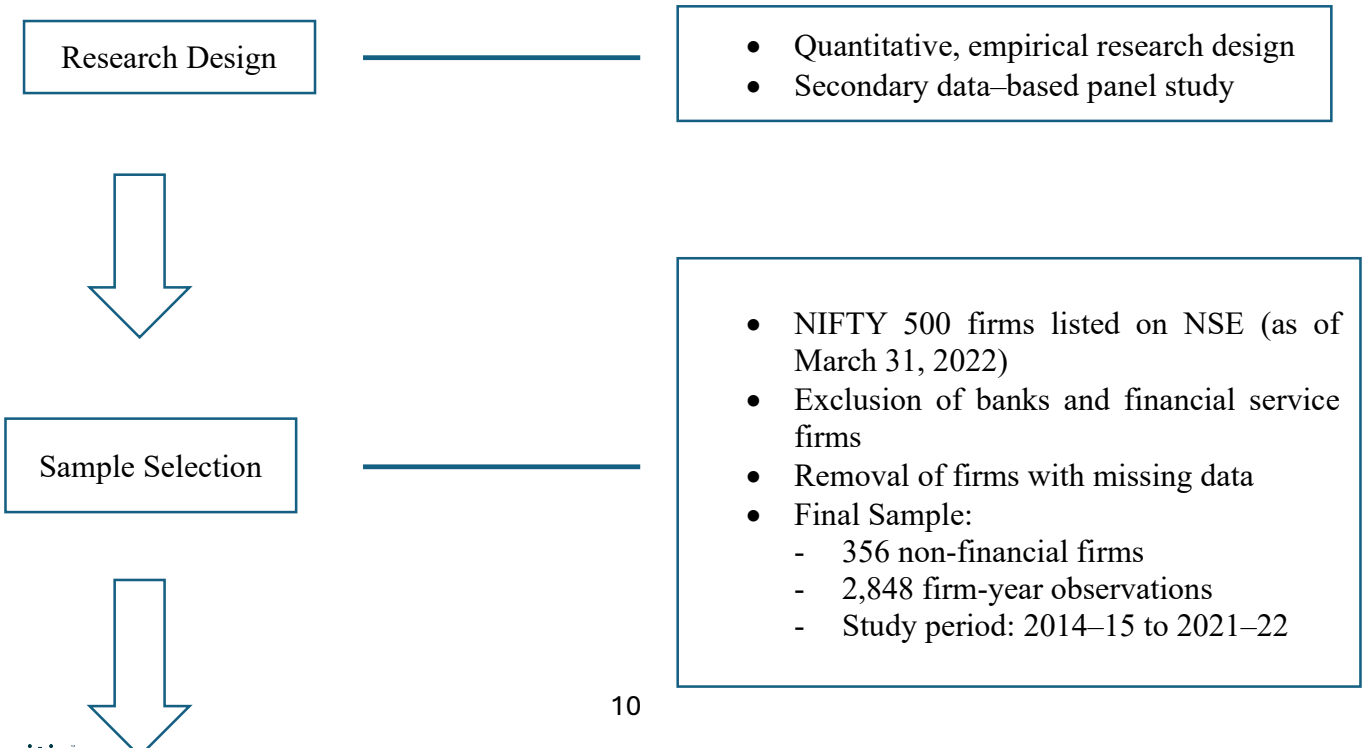
H_08: Ceteris paribus, the relative degree of accrual-based EM vis-à-vis real activities manipulation is determined by the relative costs associated with each method, and the level of promoters' ownership moderates this relationship.

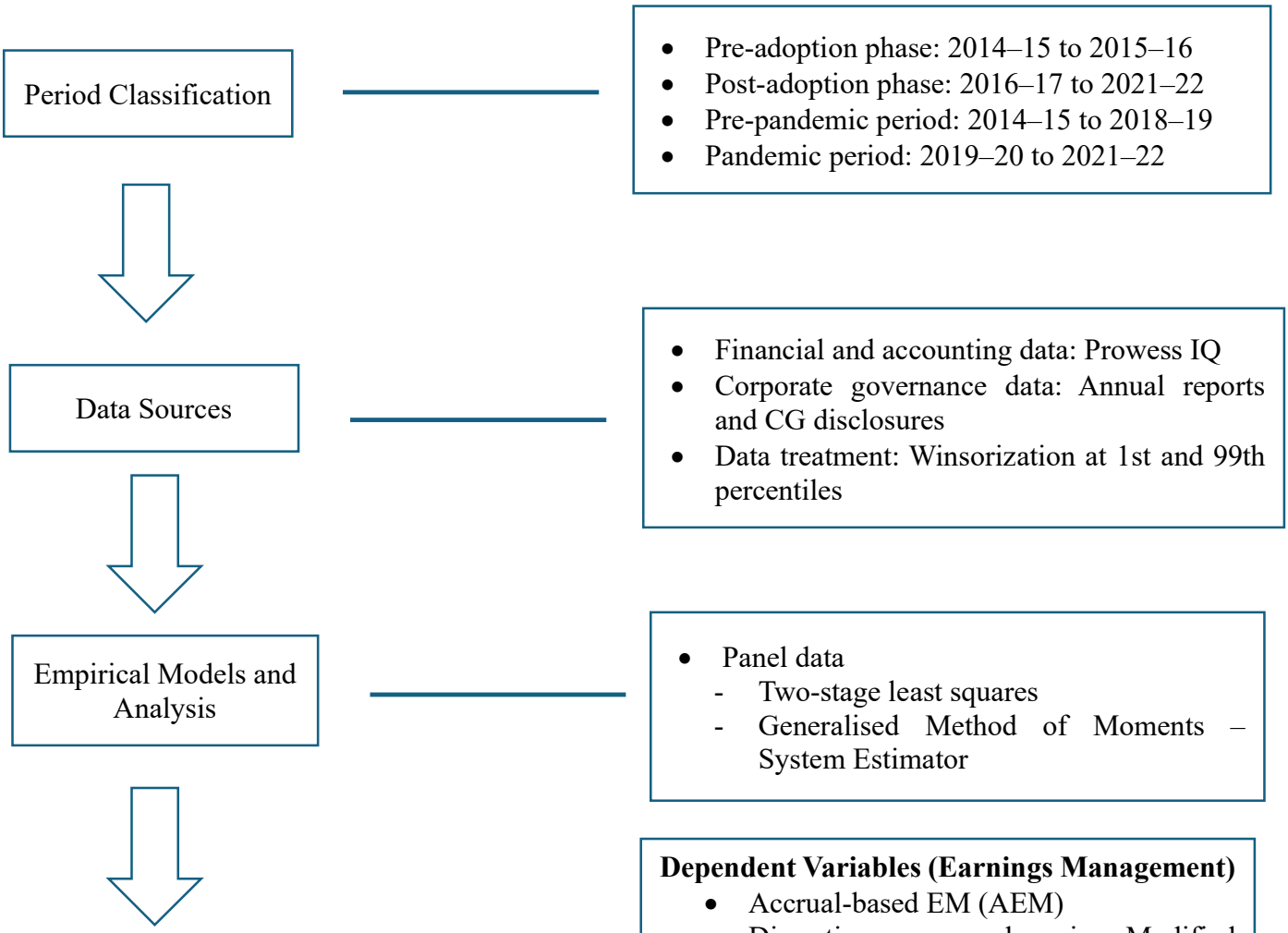
H_08a: Ceteris paribus, firms facing greater scrutiny from Big Four auditors exhibit a higher level of manipulation of real activities, and the extent of promoters' ownership influences this relationship.

H_08b: Ceteris paribus, firms with poor financial health engage in higher accrual-based EM, and promoters' ownership moderates this effect.

1.8 Methodological Framework

The present study adopts a quantitative, empirical research design based on secondary data to examine the relationship between CG mechanisms and EM practices in Indian firms under varying regulatory and economic conditions. Figure 1.1 presents the methodological framework.





Dependent Variables (Earnings Management)

- Accrual-based EM (AEM)
- Discretionary accruals using Modified Jones Model
- Real EM (REM)
- Abnormal CFO
- Abnormal discretionary expenses
- Abnormal production costs
- Aggregate REM index

Independent Variables

- Beneish M-Score (earnings manipulation indicator)
- Corporate governance mechanisms:
- Board independence
- Board size
- Board meeting frequency
- CEO duality
- Big Four audit quality
- Financial distress indicator: Altman Z-score
- *Control Variables*
- Firm leverage
- Firm liquidity
- Firm profitability
- Firm size

Variable Measurement

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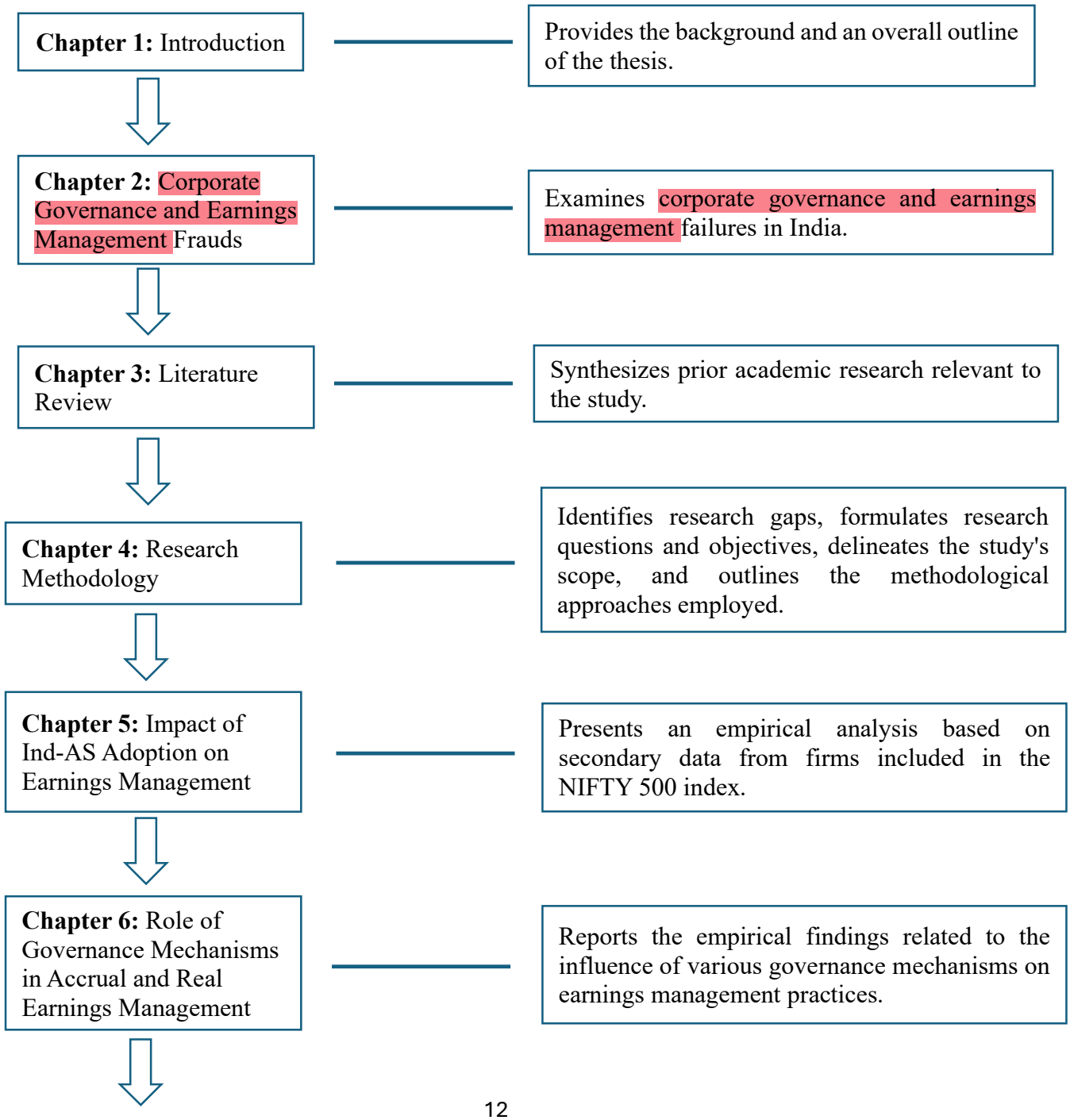
Figure 1.1: Methodological Framework

1.9 Organization of the Thesis

The thesis is organized into eight chapters, each addressing a distinct component of the research.



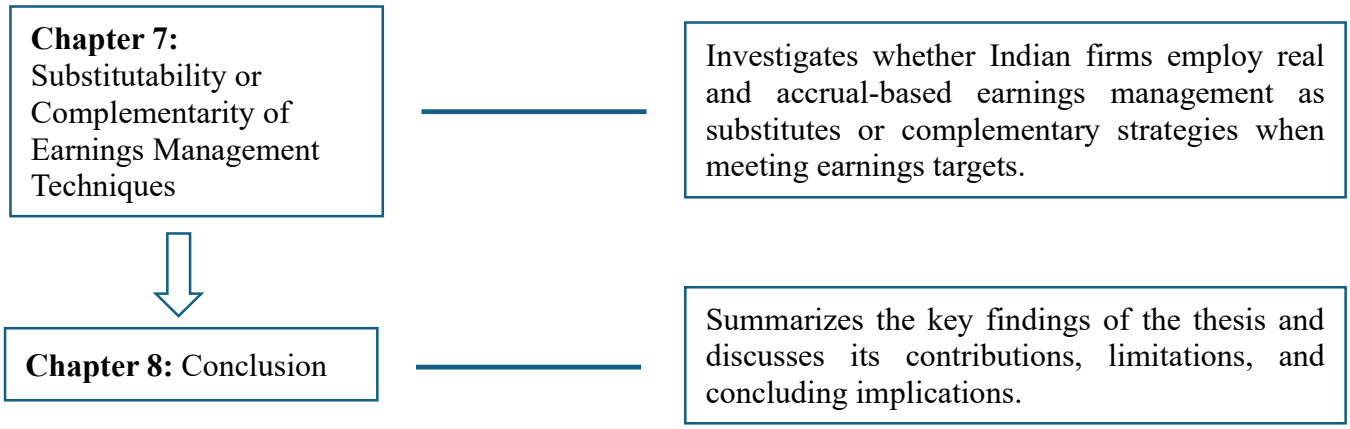


Figure 1.2 Thesis Summary

Chapter 1, introduces the study by outlining its background and overall framework. *Chapter 2,* examines prominent cases of corporate governance and earnings management frauds in India. *Chapter 3*, reviews the relevant academic literature. *Chapter 4,* presents the research methodology, including the identification of research gaps, formulation of research questions, and delineation of the study's scope, along with the methodological approaches employed to address the stated objectives. *Chapter 5*, analyzes the impact of Ind-AS adoption on earnings management using secondary data from NIFTY 500 firms. *Chapter 6,* investigates the role of corporate governance mechanisms in accrual-based and real earnings management, in line with the second research objective. *Chapter 7,* examines whether accrual-based and real earnings management techniques function as substitutes or complements in Indian firms, consistent with the third objective of the study. *Chapter 8*, concludes the thesis by summarizing the findings and discussing the study's contributions and limitations.

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CHAPTER – 2

CORPORATE GOVERNANCE AND EARNINGS MANAGEMENT FRAUDS

2.1 Introduction

CG and EM have become central concerns in India's corporate and financial landscape, especially in the aftermath of major frauds that exposed deep-rooted weaknesses in oversight, accountability, and financial reporting practices. High-profile cases such as Satyam Computers, Kingfisher Airlines, Infrastructure Leasing & Financial Services (hereafter referred to as IL&FS), Dewan Housing Finance Corporation Limited (hereafter referred to as DHFL), and the Punjab National Bank (hereafter referred to as PNB) PNB–Nirav Modi scam illustrate how gaps in governance structures, concentrated promoter control, ineffective boards, and weak audit mechanisms create opportunities for AEM and REM. These incidents not only undermined investor confidence but also highlighted the limitations of existing regulatory frameworks and enforcement mechanisms.

The present chapter discusses the major frauds in the Indian landscape in Section 2.2, followed by the conclusion in Section 2.3.

2.2 Corporate Governance and Earnings Management in India

CG and EM have emerged as critical issues in India's corporate landscape, particularly after high-profile scandals such as Satyam Computers in 2009, which exposed inflated revenues and assets exceeding ₹7,000 crore (Bhasin, 2013). These incidents revealed the vulnerabilities of Indian firms to weak governance structures, promoter dominance, and inadequate board oversight. Whether through accrual manipulation or real activity-based strategies, EM remains a concern in Indian capital markets, where promoter ownership is often high, potentially enabling greater discretion in financial reporting (Mangala, 2019). Regulatory reforms have attempted to address these challenges, including the enactment of the Companies Act, 2013, the mandatory adoption of Clause 49 of the Securities and Exchange Board of India's (hereafter referred to as SEBI) listing agreement, and the transition to IFRS-converged Ind-AS, which have collectively enhanced transparency and disclosure standards (Thoppan et al., 2021). Empirical research further confirms that board independence, gender diversity, and diligent audit committees significantly constrain earnings manipulation in Indian firms (Biswas et al., 2022; Chatterjee & Rakshit, 2023). Notwithstanding these initiatives, repeated corporate collapses such as IL&FS in 2018 and the DHFL scam in 2019 underscore enduring governance deficiencies, indicating that although India has reinforced its regulatory framework, the ability of governance mechanisms to restrain EM ultimately hinges on effective enforcement and corporate culture. The ensuing sub-sections discuss notable corporate fraud cases, highlighting lapses in governance mechanisms and the avenues these weaknesses open for earnings manipulation.

2.2.1 Satyam Computers Fraud

The collapse of Satyam Computers in January 2009, often referred to as "India's Enron," is considered one of the largest corporate frauds in Indian history and has become a critical reference point in discussions of EM and CG in emerging markets. Satyam's chairman, B. Ramalinga Raju, confessed to manipulating the company's financial statements for several years, admitting to inflating cash balances, overstating revenues, and fabricating assets to the tune of approximately ₹7,136 crore (Bhasin, 2013). The fraudulent reporting relied heavily on

accrual-based EM techniques, such as fictitious invoices, overstated bank balances, and manipulated accounts receivable, which created an illusion of consistent profitability and growth (A. Kaur et al., 2024). By misrepresenting earnings, Satyam could maintain investor confidence, secure financing, and sustain its stock market valuation, illustrating the dangers of aggressive financial reporting without robust oversight mechanisms.

The scandal also revealed profound CG failures. The board of directors, which included high-profile independent directors, failed to monitor management practices adequately (Narayanaswamy et al., 2015). Despite being responsible for overseeing financial reporting, the audit committee did not detect discrepancies in the company's inflated financial statements. Additionally, PricewaterhouseCoopers (hereafter referred to as PwC), the external auditor, was complicit through negligence, as it failed to independently verify key balances, which undermined auditor independence (Bhasin, 2013). This convergence of weak board oversight, auditor failure, and management collusion exposed structural flaws in India's governance framework, particularly in firms with concentrated promoter control.

The aftermath of the Satyam scandal led to significant regulatory and legal reforms in India, such as the strengthening of Clause 49 of the SEBI Listing Agreement and the introduction of stricter governance provisions in the Companies Act, 2013 (Mangala, 2019). These reforms emphasized the responsibilities of independent directors, mandatory audit committee oversight, and enhanced disclosure requirements. Nevertheless, scholars argue that while legislative improvements have curtailed some forms of opportunistic reporting, the persistence of EM in Indian firms reflects a deeper challenge rooted in enforcement and corporate culture (Chatterjee & Rakshit, 2023).

2.2.2 Kingfisher Airlines Fraud

The collapse of Kingfisher Airlines stands out as one of India's most significant corporate governance failures, illustrating how poor oversight and deliberate mismanagement can result in large-scale financial distress. Founded by Vijay Mallya in 2005, Kingfisher Airlines expanded rapidly but soon faced severe financial difficulties due to misaligned business strategies, poor financial controls, and high operational costs. The airline reportedly accumulated debts exceeding ₹9,000 crore, much of which remained unpaid, leading to defaults on loans and wages (A. Kaur et al., 2024).

Central to the Kingfisher case was the application of EM strategies designed to conceal the company's deteriorating financial health. The company reportedly engaged in capitalizing

operating expenses and deferring provisions for liabilities to artificially inflate profitability and understate losses. This manipulation of financial statements created a misleading picture of sustainability, allowing for continued access to bank loans and investor confidence, even as underlying losses accumulated. Further, the CG structure at Kingfisher was notably weak. The board lacked independence, and many key positions were held by individuals with close ties to the promoter group, reducing accountability. Despite increasing losses and warnings from auditors, the board failed to exercise due diligence or effectively challenge management's strategies. Furthermore, regulatory authorities were slow to act, and the internal audit mechanisms were largely ineffective. The promoter's dominant role and conflict of interest further exacerbated governance failures, demonstrating how promoter-driven companies in India often lack the necessary checks and balances for transparent operations.

Following the airline's collapse, Vijay Mallya faced legal actions, and banks moved to recover the massive defaulted loans. The Kingfisher episode led to renewed demands for stronger CG reforms in India, emphasizing the importance of stricter enforcement of board independence, enhanced financial disclosure standards, and a more proactive regulatory approach. The Kingfisher scandal exposed weaknesses in financial reporting practices and reflected systemic governance deficiencies in the Indian corporate sector (Pathak, 2015).

2.2.3 IL&FS Crisis

The collapse of IL&FS in 2018 exposed a systemic failure of corporate governance and revealed persistent EM and financial reporting malpractices within a large Non-Banking Financial Company (*hereafter,* NBFC) group, posing contagion risks to India's financial system. What initially appeared to be a liquidity problem rapidly became evidence that bad loans and losses had been concealed for years through aggressive and opaque accounting practices and related-party transactions. This led regulators to conclude that IL&FS had likely not disclosed significant stressed assets on its books over an extended period (Subburayan, 2023).

From an EM perspective, it has been documented that IL&FS engaged in practices that masked underlying asset quality deterioration and overstated the firm's ability to service liabilities. These practices included the misclassification of receivables and loans, delayed recognition of losses, and financial engineering across group entities to present a healthier consolidated position—techniques consistent with both accrual-based manipulation and inter-entity round-tripping that artificially smoothed reported results and hid related-party exposures. Such reporting choices kept funding channels open longer than would have been possible otherwise,

exacerbating the eventual shock when defaults became unserviceable (Kukreja et al., 2021; Subburayan, 2023).

Equally important was the governance breakdown that allowed these manipulations to continue. The concentration of decision-making, weak board oversight, ineffective internal controls, and inadequate external audit scrutiny are key factors contributing to the failure. The board and senior management structure failed to provide effective risk governance; audit committees and external auditors did not detect or escalate warning signals; and credit-rating agencies and lenders did not act decisively despite deteriorating indicators—creating an environment where managerial discretion went largely unchecked. Scholars treating IL&FS as a corporate-governance case highlight the aggregation of agency problems, lack of transparency in related-party transactions, and poor risk management as structural drivers of the crisis (Arora, 2020; Kukreja et al., 2021).

The IL&FS episode prompted various regulatory responses and generated scholarly debate about the sufficiency of India's governance and regulatory architecture for NBFCs and large, complex corporate groups. Analyses argue that while post-crisis interventions (government-appointed board, tighter disclosure expectations, and closer supervisory oversight of large NBFCs) addressed immediate liquidity and systemic concerns, the case underscores that legal rules alone cannot prevent earnings management unless coupled with more vigorous enforcement, independent auditing, transparent related-party reporting, and cultural changes in board-level accountability. In summary, IL&FS is widely cited in the literature as a cautionary example illustrating how EM techniques, combined with governance lapses, can transform localized corporate distress into a broader financial stability issue (Thoppan et al., 2021).

2.2.4 DHFL Fraud

The DHFL fraud, exposed between 2019 and 2020, represents one of India's most severe cases of corporate financial manipulation and governance breakdown. Once a leading NBFC, DHFL was accused of siphoning off approximately ₹31,000 crore through a network of shell companies and fraudulent loan disbursements. The scandal exposed how EM practices and weak CG mechanisms enabled the systemic misuse of public funds, resulting in substantial losses for investors, lenders, and regulatory bodies.

From an EM perspective, DHFL's management allegedly created fictitious loan accounts, overstated assets, and inflated income to project a robust financial position. Investigations by the Serious Fraud Investigation Office and the Enforcement Directorate found that the company

had sanctioned thousands of "dummy loans" to non-existent entities, which were later diverted to related parties controlled by the promoters, Kapil and Dheeraj Wadhawan. This manipulation of loan books and revenue recognition enabled DHFL to maintain its credit ratings and continue raising funds from the market, despite its underlying insolvency. Such accrual-based EM created an illusion of financial stability, delaying regulatory scrutiny and masking liquidity crises.

Equally critical were CG failures that permitted the prolonged continuation of fraudulent activities. The promoter-dominated board structure, lack of effective independent directors, and weak internal controls contributed to unchecked managerial discretion. External auditors failed to detect or report the misstatements, highlighting lapses in audit independence and oversight mechanisms (Tiwary & Sahay, 2021). The risk management and compliance frameworks were either absent or ignored, allowing large-scale related-party transactions to go unreported. Moreover, the board's inability to exercise fiduciary responsibility illustrated systemic governance failures common among Indian NBFCs with concentrated promoter control.

The DHFL crisis also exposed limitations in India's regulatory architecture. Despite early signs of financial distress and questionable asset quality, credit-rating agencies continued to assign high safety ratings to DHFL's instruments until shortly before its collapse. In 2021, DHFL became the first financial institution in India to undergo bankruptcy resolution under the Insolvency and Bankruptcy Code, marking a turning point in the regulatory approach toward NBFC governance and accountability. The case underscored that financial fraud in NBFCs is often intertwined with structural governance issues, including a lack of transparency, regulatory arbitrage, and delayed oversight interventions (Shreevastava et al., 2025).

The DHFL fraud highlights how EM and governance failures can coexist in financial institutions, particularly when promoter influence and operational opacity limit external monitoring. Following the incident, regulators have sought to tighten CG norms for NBFCs, mandating enhanced disclosure of related-party transactions, stricter auditor accountability, and stronger requirements for board composition. Nonetheless, the scandal remains a stark reminder of the vulnerability of India's financial system to managerial opportunism and weak corporate governance.

2.2.5 Punjab National Bank – Nirav Modi Scam (2018)

The PNB–Nirav Modi scam of 2018 represents one of the largest banking frauds in India's financial history, amounting to approximately ₹13,000 crore. The fraud, orchestrated primarily

through unauthorized Letters of Undertaking (hereafter referred to as LoUs) issued by PNB officials at the Brady House branch in Mumbai, exposed deep-rooted deficiencies in CG, internal controls, and risk management within the Indian banking system.

While the fraud was primarily operational in nature, scholars have highlighted its underlying connections to EM and financial misreporting practices that masked the true risk exposure and weakened transparency in financial statements (Rao & Babu, 2018). The fraudulent LoUs, which guaranteed foreign bank loans to Nirav Modi's firms without proper collateral or authorization, were kept off the bank's official records. This concealment of contingent liabilities effectively understated PNB's actual financial risk position and overstated profitability in earlier reporting periods. By failing to record these off-balance-sheet exposures, the bank's reported financial statements presented a distorted picture of stability, thereby misleading investors, regulators, and auditors (Mehrotra & Kolpula, 2024).

From a CG perspective, the PNB scam underscored severe lapses at multiple levels of board oversight, internal auditing, and regulatory compliance. The absence of adequate segregation of duties, inadequate audit trails, and the failure of internal and external auditors to identify unauthorized transactions indicated systemic governance weaknesses. Additionally, the dominance of bureaucratic management structures and the lack of accountability in state-owned banks created an environment conducive to collusion and fraud. The governance failures extended beyond PNB's internal management to include oversight deficiencies by the Reserve Bank of India and statutory auditors, who failed to detect anomalies in the LoU mechanism over several years.

In response to the scandal, multiple regulatory and institutional initiatives were introduced to strengthen the CG and financial reporting environment in India. The Reserve Bank of India (*hereafter referred to as* RBI) tightened norms around the issuance of LoUs and Letters of Credit, mandated stronger internal audits, and emphasized the implementation of technology-driven surveillance systems to enhance transparency[1]. Furthermore, the government initiated reforms under the Prompt Corrective Action framework and encouraged public sector banks to strengthen their risk governance and accountability mechanisms.

The PNB–Nirav Modi scam thus serves as a critical case in understanding how EM and CG failures intersect, especially within large public sector financial institutions. The concealment of risks and misrepresentation of financial stability reflect not only managerial misconduct but

[1] https://fidcindia.org.in/wp-content/uploads/2019/12/RBI-PRESS-RELEASE-24-12-19.pdf

also the failure of institutional governance mechanisms to prevent or detect financial fraud promptly (Mehrotra & Kolpula, 2024; Rao & Babu, 2018).

2.3 Conclusion

In summary, the examination of major Indian corporate frauds reveals that EM and governance failures are deeply intertwined, often stemming from weak oversight, promoter dominance, inadequate auditing, and ineffective regulatory enforcement. Despite significant reforms, including strengthened SEBI regulations, the Companies Act 2013, and tighter norms for financial institutions, the persistence of high-profile scandals indicates that formal rules alone cannot prevent manipulation without robust internal controls and a culture of ethical accountability. The cases of Satyam, Kingfisher, IL&FS, DHFL, and PNB collectively highlight the urgent need for sustained improvements in board effectiveness, auditor independence, transparency, and monitoring mechanisms. Together, these insights underscore that enhancing CG is essential not only for curbing EM but also for safeguarding the integrity and stability of India's financial and corporate systems.

CHAPTER – 3

LITERATURE REVIEW

3.1 Introduction

The literature reviewed in this chapter aims to identify gaps in existing research and develop an appropriate theoretical framework for the study. A brief outline of the chapter is as follows: Section 3.2 addresses the concept of EM, followed by Section 3.3, which examines the techniques employed. Next, Section 3.4 provides a theoretical framework for the study. The impact of Ind-AS adoption on EM is discussed in Section 3.5. Section 3.6 reviews the proxies used in the literature to measure various aspects of CG. Further, Section 3.7 discusses EM during the pandemic. Finally, Section 3.8 concludes.

3.2 Concept of Earnings Management

A substantial body of research has focused on EM, attracting considerable scholarly attention. It occupies a contentious space in financial reporting, often straddling the line between acceptable financial reporting practices and outright manipulation. The literature presents several definitions, reflecting the complex nature of the concept.

(Schipper, 1989) defines it as *"a purposeful intervention in the external financial reporting process to obtain some private gain"*.

(Levitt, 1998b) refers to it as*"a grey area"* where financial reports reflect the executives' desires rather than the actual financial performance. He highlights how the pressure to "*make the numbers*" is leading to a deterioration in the quality and reliability of financial reporting.

According to (Healy & Wahlen, 1999), *"Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead stakeholders about the underlying economic performance of the company or to influence contractual outcomes."*

The only persistence among these is the impression of managerial discretion and intent in accounting choices driven by their personal goals while preparing financial statements. Managers are often incentivized to manipulate earnings for a variety of reasons, including: *capital market incentives:* meeting or beating analyst forecasts, to influence stock prices (D. Burgstahler & Dichev, 1997), *contractual motivations:* achieving targets linked to executive compensation (Healy, 1985), *regulatory seasons:* smoothing income to avoid taxes, or to meet requirements during Initial Public Offerings (hereafter referred to as IPOs) (Teoh et al., 1998). EM is widespread across industries and is often influenced by the institutional environment, market expectations, and the internal governance structures of firms. Firms operating in environments characterized by weak investor protection and limited transparency are more prone to aggressive EM practices. In such contexts, managers exploit the discretion allowed under accounting standards to obscure actual economic performance, thereby reducing the quality of reported earnings (Leuz et al., 2003). Furthermore, (Graham et al., 2005), through a survey of CFOs, found that executives prefer real activities manipulation over accrual-based methods, primarily because REM is less likely to be detected by auditors or regulators. This aligns with the findings of (Gunny, 2010), who showed that REM may yield short-term performance gains but often results in lower future operating performance. In another dimension, high-quality auditors and effective board oversight have been shown to constrain EM behaviors (Becker et al., 1998). Also, the presence of independent directors and audit

committees tends to reduce opportunistic reporting (Xie et al., 2003). In highly scrutinized environments such as those involving regulatory reviews or post-scandal recovery, firms may shift from accrual manipulation to real activity manipulation as a defensive strategy (D. A. Cohen et al., 2008). This flexibility underscores the strategic nature of EM, as firms weigh short-term benefits against long-term costs in response to perceived regulatory and audit risks. Despite efforts to curb such practices, the ambiguity and flexibility in accounting standards continue to provide room for earnings manipulation, raising concerns over financial statement reliability and the role of ethical leadership.

3.3 Techniques of Earnings Management

EM is primarily executed through two key techniques: accrual-based EM and REM, each involving different mechanisms and implications for financial reporting.

3.3.1 Accrual Earnings Management

Accrual-based EM involves altering accounting estimates or applying judgment in recognizing revenues and expenses without changing the actual economic transactions. Techniques include manipulating provisions for bad debts, changes in depreciation methods, and timing of revenue recognition (P. M. Dechow et al., 1995; Jones, 1991). These adjustments exploit the flexibility within GAAP, allowing managers to shift reported earnings across periods. One of the foundational models used to detect AEM is the (Jones, 1991) model, which estimates normal accruals based on historical relationships between revenues, property, plant, and equipment changes. This model was later refined by (P. M. Dechow et al., 1995), who introduced a modified version that adjusts for discretionary revenue changes. Moreover, (Kothari et al., 2005) proposed improving earlier models by including performance-matched DA to better control for firm-specific factors.

Cross-country differences in legal systems, investor protections, cultural contexts, enforcement mechanisms, and accounting standards lead to substantial variation in EM practices. AEM tends to be more prevalent when firms have greater accounting discretion and less external monitoring, such as weak CG or low audit quality (Becker et al., 1998). Despite regulatory reforms such as the Sarbanes-Oxley Act aimed at increasing financial transparency, studies show that AEM remains a persistent tool for EM, though often complemented or substituted by REM under strict scrutiny (D. A. Cohen et al., 2008). (Leuz et al., 2003) conducted a

comprehensive cross-country study and found that firms in countries with weak investor protection, such as those following code-law traditions (e.g., Germany, France), engage in more aggressive EM than firms in common-law countries (e.g., the United States, the United Kingdom), where enforcement and investor rights are stronger. In many developing economies, such as China and India, EM is often influenced by state ownership, political connections, or regulatory oversight. In the U.S., the primary motivation for manipulating earnings is often to meet or exceed analyst forecasts, thereby maintaining or boosting stock prices (Graham et al., 2005). Additionally, (Capkun et al., 2016) show that adopting IFRS in Europe was associated with reduced EM, but only in countries with strong enforcement institutions—underscoring the importance of legal enforcement over merely harmonizing accounting standards.

Beyond legal frameworks, cultural factors also influence managerial behavior. (Han et al., 2010) found that cultures characterized by high uncertainty avoidance and low individualism (e.g., East Asian countries) tend to exhibit more significant earnings smoothing. This reflects a preference for stable earnings profiles and collective risk-sharing, which may not align with transparent reporting norms prevalent in Anglo-American contexts. Hofstede's cultural dimensions thus provide a valuable lens for understanding variations in reporting behavior. Further, ownership concentration also plays a vital role. In China, SOEs manipulate earnings to meet political targets, especially during listing events or leadership transitions (Chen et al., 2006). Thus, EM is a global phenomenon. Its expression and motivations vary significantly across jurisdictions.

3.3.2 Real Earnings Management

REM refers to manipulating real business activities rather than accounting entries to influence reported earnings (Roychowdhury, 2006). Unlike AEM, which relies on accounting discretion (e.g., adjusting provisions or deferring expenses), REM involves altering actual operations, such as overproducing inventory, cutting discretionary expenses, or accelerating sales, often at the expense of long-term firm value (Gunny, 2010).

(Roychowdhury, 2006) is widely credited with formalizing the concept of REM. In the seminal work, three primary REM techniques were examined: (1) accelerating sales via price discounts or relaxed credit policies, (2) engaging in overproduction to dilute fixed costs and reduce reported costs of goods sold, and (3) cutting discretionary expenses, including R&D (*hereafter referred to as* R&D), advertising, and maintenance. These activities are real because they

involve actual cash flows or changes in operational decisions rather than book entries. Still, they are opportunistic when driven by managerial intent to mislead stakeholders.

Following Roychowdhury's framework, (D. A. Cohen et al., 2008) found that after the implementation of the Sarbanes-Oxley Act (*hereafter referred to as* SOX) in the U.S., firms substituted away from accrual-based EM toward REM, suggesting that regulatory scrutiny may shift, not eliminate, manipulative behavior. This substitution effect demonstrates the dynamic nature of EM in response to regulatory changes. (Gunny, 2010) extended the understanding of REM by investigating its long-term consequences, finding that firms engaging in REM to meet short-term goals underperform in future periods. This aligns with the view that manipulating earnings through real activities compromises future profitability and may be value-destructive in the long run. (Chi et al., 2011) explored the role of audit quality in curbing REM and concluded that high-quality auditors, especially Big Four firms, are more effective in constraining accrual-based EM than REM. This is because REM is less visible to external auditors, making it harder to detect and prevent.

Across countries, capital market access is a strong motivator for REM. Firms preparing for IPOs often inflate earnings using real activities to attract investors. (Teoh et al., 1998) first reported this behavior in the U.S. Further, (Zang, 2012) showed that firms tend to trade off between REM and accrual-based EM based on relative costs, visibility, and constraints imposed by country-level regulations. This trade-off is particularly evident in countries undergoing accounting reforms, such as the post-SOX U.S. or post-IFRS Europe, where shifts in managerial behavior toward REM were observed (D. A. Cohen & Zarowin, 2010).

While REM is a global phenomenon, its use is shaped by regulatory frameworks, capital market pressures, tax policies, ownership concentration, and cultural values. REM is often used as a substitute for accrual manipulation in developed markets when regulatory scrutiny increases. It reflects a blend of strategic reporting and survival tactics in response to institutional pressures in emerging economies. Recognizing these cross-country differences is crucial for policymakers and investors seeking to assess earnings quality and the long-term value of firms operating in diverse institutional settings.

3.4 Theoretical Framework

CG has attracted significant scholarly attention, particularly concerning theories that provide a framework for understanding how corporations are directed, controlled, and held accountable. The major corporate governance theories are described below:

3.4.1. Agency Theory

Agency theory, first formalized by (Jensen & Meckling, 1976), posits that a corporation functions as a contract between principals (i.e., shareholders or owners) and agents (i.e., company executives or managers). The separation of ownership and control creates agency problems, as managers may prioritize personal interests over shareholder value (Fama & Jensen, 1983). Mechanisms such as board supervision, performance-linked executive pay, and regulatory controls aim to ensure that managerial actions are consistent with shareholder objectives. The effectiveness of CG structures in mitigating agency conflicts varies across organizations. Studies highlight that strong governance, characterized by independent boards and effective monitoring, reduces opportunistic managerial behavior (Shleifer & Vishny, 1997). Conversely, weak governance structures often enable managerial discretion, which can lead to earnings manipulation (Beasley, 1996).

53 Through the lens of agency theory, managerial exploitation of information asymmetry can be understood as a means of misrepresenting a firm's financial outcomes. The relevance of agency theory to EM has been widely investigated in prior research. Managers manage earnings for various agency-driven incentives, including *compensation contracts*: executive pay structures often link bonuses to financial performance, incentivizing managers to manipulate earnings (Murphy, 1999); *market expectations*: firms manipulate earnings to meet or exceed analysts' forecasts, maintaining stock price stability (P. M. Dechow et al., 1996); *debt covenants*: financial distress prompts managers to manipulate earnings to comply with loan agreements (Watts & Zimmerman, 1986); *regulatory avoidance*: firms manage earnings to evade taxation, regulatory scrutiny, or political costs (D. Burgstahler & Dichev, 1997). Thus, agency theory underscores the inherent conflicts in CG that drive EM. While governance mechanisms and regulatory interventions mitigate opportunistic behavior, firms with weak oversight remain susceptible to earnings manipulation.

2.4.1.1 Information Asymmetry

(Jensen & Meckling, 1976) first highlighted information asymmetry as a core challenge in the principal-agent relationship, where agents (i.e., managers or company executives) have more information than principals (i.e., shareholders or owners). Such asymmetry can hinder effective monitoring, leading to agency costs and opportunistic behaviors. It provides a fertile ground for manipulation as insiders exploit their informational advantage over external stakeholders.

Managers can manipulate accruals or real activities when information asymmetry is high, knowing that external users lack the necessary insights to detect such practices (P. M. Dechow et al., 1996). Empirical studies suggest that higher information asymmetry is correlated with increased earnings manipulation. Firms with higher opacity and limited voluntary disclosures exhibit more EM (Lang et al., 2012). Similarly, (Gul et al., 2003) showed that firms operating in weaker legal environments or with less analyst following are more prone to manipulation due to greater information asymmetry. Thus, it poses a significant challenge in CG by enabling managerial opportunism and reducing the effectiveness of external oversight. The role it plays in facilitating EM emphasizes the need for enhanced transparency, rigorous disclosure standards, and robust governance mechanisms. Policies and governance reforms designed to address information asymmetry, including stricter regulation and enhanced auditing, can reduce the likelihood of earnings manipulation and improve the reliability of financial reports.

3.4.2. Stewardship Theory

Stewardship theory, introduced by (Donaldson & Davis, 1991), posits that executives are inherently motivated to act in the best interests of shareholders and stakeholders, thereby reducing the need for extensive monitoring mechanisms. Unlike agency theory, which assumes potential conflicts of interest between owners and managers, stewardship theory offers an alternative perspective on the natural alignment of managerial and organizational goals (Davis et al., 1997). The theory highlights collaborative relationships and a long-term value orientation over short-term profit maximization. Previous studies indicate that firms with a stewardship-oriented governance model tend to have strong leadership commitment: managers prioritize organizational sustainability and ethical decision-making (Hernandez, 2012), reduced monitoring costs: given the alignment of interests, costly monitoring mechanisms (e.g., extensive board oversight) may be unnecessary (Muth & Donaldson, 1998), higher firm performance: firms with stewardship governance structures often outperform those reliant on control-based agency models (Davis et al., 2000).

Stewardship theory mitigates earnings management by promoting managerial integrity and emphasizing the importance of ethical financial reporting. Unlike agency-driven managers who may engage in EM for short-term incentives, stewards are committed to sustainable growth (Donaldson, 2008). Firms embracing stewardship governance foster an ethical culture within the boardroom, ensuring that financial reporting remains transparent and experiences lower levels of accrual-based EM (García-Meca & Sánchez-Ballesta, 2009). Consequently,

stewardship theory presents an alternative CG model that reduces the need for extensive monitoring by assuming the inherent trustworthiness of managers. Its emphasis on ethical behavior, long-term organizational success, and reduced managerial opportunism contributes to lower earnings management. As organizations increasingly adopt sustainable and stakeholder-oriented approaches, stewardship-based governance plays a crucial role in fostering transparency and integrity in financial reporting.

3.4.3. Stakeholder Theory

(Freeman, 1984) introduced stakeholder theory as a response to the limitations of shareholder-centric governance models. The theory argues that corporations are responsible for balancing the interests of all stakeholders, rather than prioritising shareholder wealth maximisation. Key principles of the stewards include *moral and social obligations:* business practices that are just and transparent and benefit all involved parties should only be undertaken (Clarkson, 1995); *sustainable development and growth*: emphasizing stakeholder engagement promotes ethical decision-making and long-term financial stability (Jensen, 2001); *inclusive decision-making*: governance frameworks should integrate input from various stakeholders to minimize conflicts and strengthen corporate legitimacy (Mitchell et al., 1997). Empirical research suggests that companies with strong stakeholder-oriented governance frameworks demonstrate greater corporate social responsibility and ethical decision-making (A. Hillman & Keim, 2001). This approach contrasts with agency theory, which assumes an inherent tension between shareholders and managers.

Stakeholder theory offers an alternative lens for analyzing EM practices, emphasizing ethical reporting and stakeholder accountability. Companies that adopt stakeholder governance principles tend to disclose more accurate financial statements and adhere more strictly to accounting standards, thereby limiting opportunistic managerial behavior and earnings manipulation risks (Boesso & Kumar, 2007; Brammer & Pavelin, 2006). Stakeholder-oriented firms prioritize CSR initiatives, reducing the likelihood of earnings manipulation to meet short-term financial targets (Yongtae Kim et al., 2012). Thus, stakeholder theory offers a governance model that prioritizes ethical considerations, transparency, and long-term value creation. Incorporating stakeholder perspectives into managerial decision-making reduces incentives for earnings management and strengthens the integrity of financial reporting.

3.4.4. Institutional Theory

Institutional theory offers a valuable lens for understanding how organizational behavior is shaped by efficiency considerations and the need to conform to norms, rules, and expectations within the broader institutional environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). According to this perspective, firms adopt formal structures and practices to enhance performance, gain legitimacy, ensure survival, and secure access to vital resources. Such conformity helps organizations align with societal expectations, regulatory requirements, and stakeholder pressures. (DiMaggio & Powell, 1983) describe three primary mechanisms by which institutional pressures operate: coercive, mimetic, and normative isomorphism. Statutory regulations and mandatory legal constraints drive coercive isomorphism; mimetic isomorphism arises when organizations imitate successful peers in conditions of uncertainty; and normative isomorphism reflects pressures from professional norms and standards. These forces collectively drive firms toward adopting similar governance structures and reporting practices, often for the sake of legitimacy rather than operational effectiveness.

In CG and EM, institutional theory suggests that firms may adopt formal governance structures (e.g., independent directors, audit committees, Big Four auditors) as symbolic measures to demonstrate compliance and accountability (Westphal & Zajac, 1994). However, these structures may not always translate into substantive oversight, especially when adapted to meet external expectations or regulatory requirements (Zajac & Westphal, 2004). (Meyer & Rowan, 1977) introduced the concept of decoupling, where formal structures (e.g., governance policies, board practices) exist primarily for external display and may not be tightly linked to actual managerial practices. This decoupling can result in scenarios where firms maintain the appearance of good governance while continuing opportunistic behaviors, including EM (J. R. Cohen et al., 2008).

Findings from empirical studies affirm the relevance of institutional theory in examining EM. For example, (Ding et al., 2007) find that in China, firms under varying ownership structures engage in EM to conform to institutional norms while adopting governance practices, such as independent boards or audit committees, to signal legitimacy. Similarly, (D. A. Cohen et al., 2008) highlight that despite the formal strengthening of governance post-Sarbanes-Oxley in the U.S., EM persisted, often shifting toward real activities manipulation that is less easily detected by traditional governance and audit mechanisms.

Overall, institutional theory underscores the importance of distinguishing between symbolic and substantive governance mechanisms. It cautions that the mere presence of formal structures

does not guarantee improved financial reporting quality, as firms may conform to external expectations without changing underlying practices (Suchman, 1995).

3.4.5. Resource Dependency Theory

Resource Dependency Theory, introduced by (Pfeffer & Salancik, 1978), provides a robust framework for understanding how organizations navigate external constraints and uncertainties. According to this theory, no firm operates in isolation; instead, firms are embedded within an environment where survival and success depend on acquiring critical resources that external actors control. These resources may include capital, information, legitimacy, raw materials, or technological capabilities. Because these external dependencies create vulnerability, firms strategically adapt their structures, particularly governance mechanisms, to manage and reduce such dependencies (A. J. Hillman et al., 2009).

The board of directors occupies a central boundary-spanning function in the resource dependence framework. Directors link the firm and critical external constituencies, helping the organization secure vital resources and legitimacy (A. J. Hillman et al., 2000). For instance, directors who hold political connections, financial expertise, or industry ties can provide access to financing, regulatory protection, or strategic alliances (Johnson et al., 1996; Pfeffer, 1972). The diversity, size, and composition of the board are thus viewed as strategic tools for mitigating environmental uncertainty and reducing dependency. In CG, the theory shifts the focus from internal control (as emphasized in agency theory) to external resource facilitation (A. J. Hillman & Dalziel, 2003). Firms can configure their boards to monitor management and gain access to critical external resources, thereby enhancing legitimacy and improving their competitive positioning. This perspective explains why firms in highly regulated or resource-scarce environments often appoint directors who can provide political influence, access to capital, or industry expertise (Zahra & Pearce, 1989).

However, while resource-rich boards can reduce dependency risks, resource dependence theory also cautions that excessive focus on external linkages may dilute the board's ability to monitor managerial behavior effectively (Daily et al., 2003). Moreover, the symbolic appointment of directors to signal legitimacy without leveraging their connections substantively may limit the board's actual resource dependency function (Westphal & Zajac, 1994).

Overall, the theory emphasizes the strategic significance of board structure and composition in enabling firms to manage external dependencies and navigate complex environments. By

aligning governance with environmental demands, firms can mitigate resource vulnerabilities and enhance organizational resilience.

3.5 Corporate Governance and Earnings Management

High-profile corporate failures, including Enron, WorldCom, Tyco, Lehman Brothers, Satyam, and Kingfisher, have triggered a worldwide emphasis on strengthening CG mechanisms to address opportunistic conduct and rebuild trust in financial information. The (Cadbury, 1992) describes CG as "the system by which companies are directed and controlled." It delineates the distribution of rights and responsibilities among different participants in the corporation, including the board, managers, shareholders, and other stakeholders (OECD, 2015). Essentially, it refers to the structure that governs the operations and promotes accountability and fairness for all company stakeholders. A fundamental objective is to ensure clear, transparent, and trustworthy financial reporting. However, financial reporting manipulation, such as EM and fraudulent accounting, can distort the proper financial health of a company. CG mechanisms are essential tools for mitigating such manipulation. These mechanisms function through monitoring, incentivizing appropriate behavior, and ensuring transparency.

3.5.1. Board Independence and Earnings Management

Board independence refers to the inclusion of directors who have no material affiliation with the firm, thereby minimizing conflicts of interest and enhancing monitoring effectiveness. It plays a vital role in ensuring effective oversight, especially with respect to financial reporting. Independent directors are presumed to act objectively, aligning decisions with shareholder interests and curbing opportunistic managerial behaviors (Fama & Jensen, 1983). Advocates of agency theory assert that an independent corporate board boosts investor confidence in financial reports and helps restrain EM practices (Kapoor & Goel, 2017; Suyono & Farooque, 2018). (Peasnell et al., 2005) supported this finding in the UK, showing that managers are less likely to use income-boosting abnormal accruals to avoid reporting losses or earnings declines when a higher proportion of board members are outsiders. Additionally, firms with more outside directors on their boards are significantly less likely to engage in accrual practices that shift financial results from a loss to a profit or prevent a drop in profits. (García-Meca & Sánchez-Ballesta, 2009), through a meta-analysis, confirmed that board independence generally leads to reduced earnings manipulation, particularly in common law countries. (Xie

et al., 2003) found that independent directors, particularly those with financial expertise, are better positioned to monitor accrual manipulation. Their study concluded that more active and independent boards were associated with lower DA. (Liu & Lu, 2007) provided evidence from China, indicating that the constraining effect of board independence on EM is also observable in emerging markets, although institutional contexts are significant.

Not all studies unequivocally support the deterrent effect of board independence on EM. For instance, (Park & Shin, 2004) found no significant relationship between board independence and EM in Canadian firms, suggesting that simply having independent directors may not be sufficient, board effectiveness also depends on director competence, incentives, and firm-specific governance mechanisms. (Davidson et al., 2005) reports that although board independence is essential, it must be coupled with effective audit committees and internal controls to be truly effective in mitigating earnings manipulation.

The relationship between board independence and REM is more complex and less consistent. It is more challenging for auditors and regulators to detect, as it can have a more detrimental long-term impact on firm value, as it distorts actual operations and can lead to suboptimal business decisions (D. A. Cohen et al., 2008). (Roychowdhury, 2006) provided the foundational methodology for detecting REM through abnormal cash flows, production costs, and discretionary expenses. It denotes the manipulation of actual business activities to influence reported financial outcomes. Unlike AEM, which manipulates accounting estimates, REM involves changes in real business decisions such as overproduction, reducing discretionary expenses (e.g., R&D, advertising), or offering deep price discounts to boost sales temporarily. (Alhadab et al., 2015) studied UK IPO firms and found that while board independence constrains accrual-based manipulation, it is less effective at curbing REM. They argued that REM is harder for directors to detect due to its operational nature, particularly in firms that lack transparent performance metrics. (Chi et al., 2011) show that CG mechanisms affect REM, it was found that while stronger governance (including board independence) reduces accrual manipulation, it may not significantly impact REM or even increase it as a substitution effect. Similarly, (García-Meca & Sánchez-Ballesta, 2009) performed a meta-analysis and reported mixed results. They concluded that board independence is generally associated with lower EM, but its effect on REM is weaker and more context-dependent. Further, (Zang, 2012) explored the trade-off between accrual and REM and concluded that managers often choose between the two based on cost-benefit analyses. Boards that effectively limit accrual manipulation may inadvertently encourage managers to use REM, which is more difficult to oversee.

The literature suggests that while board independence is critical in improving financial reporting quality, its effectiveness in curbing real earnings management is more limited than accrual manipulation. This is due to the inherent operational nature of REM and the limited visibility boards often have in day-to-day business decisions.

3.5.2. Board Meetings and Earnings Management

Board meetings are a key mechanism through which directors oversee management decisions, particularly those affecting financial reporting. The frequency of board meetings is often used as a proxy for the activity and diligence of the board (Vafeas, 1999). In the context of EM, particularly accrual-based EM, frequent board meetings can indicate a stronger monitoring role, potentially constraining opportunistic managerial behavior. Agency theory underpins the understanding of how board activity functions within CG, such as the number of meetings, which can mitigate EM. As proposed by Jensen & Meckling (1976), the separation of ownership and control in modern corporations can lead to information asymmetry and moral hazard, where managers may act in their own interests rather than in the interests of shareholders. Frequent board meetings are viewed as a means to mitigate agency conflicts through increased scrutiny and timely intervention (Fama & Jensen, 1983). Empirical studies have shown that active boards, characterized by a higher frequency of meetings, tend to be more effective in reducing earnings manipulation. (Xie et al., 2003) provided early empirical evidence that board activity negatively correlates with DA. Their findings suggest that when boards meet more frequently, they are better positioned to monitor financial reporting and constrain accrual-based EM. (Klein, 2002) found that not only board independence but also the structure and frequency of meetings of the audit committee, which is often linked to board activity, are critical in monitoring accrual decisions. Frequent meetings enable the board to identify and question financial anomalies, as well as challenge overly aggressive accounting practices.

However, some studies provide a nuanced view, suggesting that merely increasing the number of meetings is not a panacea. (Sharma et al., 2009) argued that the quality of meetings and the directors' expertise are equally important. They found that frequent meetings alone do not significantly reduce EM unless board members are financially literate and actively engaged. Similarly, (Jackling & Johl, 2009), studying Indian listed firms, found no significant association between board meeting frequency and EM, suggesting that cultural, institutional, and regulatory contexts can moderate this relationship. Moreover, (Karamanou & Vafeas, 2005) stressed the role of effective communication between the board and management,

suggesting that frequent but ineffective meetings might not lead to better oversight. Their study found that the positive effects of board activity are conditional on transparency and the flow of relevant information.

Regular board meetings provide a platform for oversight, information exchange, and monitoring of management behavior, which can reduce agency costs (Fama & Jensen, 1983). Several studies highlight that the relationship between board meeting frequency and REM is neither strong nor consistent. (D. A. Cohen et al., 2008) pointed out that following the implementation of the SOX, firms shifted from accrual to REM, and traditional governance mechanisms like board independence and meeting frequency were less effective at curbing REM. Their study suggested that REM requires more granular oversight, which typical board meetings may not be equipped to provide. (Zang, 2012) provided further evidence of a substitution effect, where managers facing constraints on AEM due to strong governance (e.g., active boards) may increase REM instead. This indicates that board meetings, while useful, may inadvertently encourage REM when other forms of manipulation are restricted. (Alhadab et al., 2015) studied UK IPO firms and found that although board independence and activity constrain accrual-based manipulation, they are less effective at controlling REM. They attributed this to the difficulty in evaluating operational decisions that constitute REM, particularly in high-growth and information-asymmetric environments such as IPOs.
The literature suggests that while frequent board meetings enhance oversight and help curb accrual-based earnings manipulation, their impact on REM is more nuanced. Detecting and deterring REM requires frequent meetings, deep expertise, access to timely operational data, and a proactive board culture.

3.5.3. Board Size and Earnings Management

As a corporate governance variable, board size has received considerable scholarly attention for its potential influence on managerial oversight and financial reporting quality. The relationship between board size and EM is both accrual-based, and REM remains a subject of empirical debate, with studies revealing mixed results. According to agency theory, smaller boards are often associated with improved financial performance compared to larger ones. As board size increases, the advantages of having additional members may be undermined by challenges in coordination and communication, ultimately reducing the effectiveness of the board (Jensen, 1993; Sáenz González & García-Meca, 2014). In line with this (Xie et al., 2003)

found that smaller boards are more effective at curbing DA, attributing this to improved communication and decision-making efficiency. They argued that huge boards may suffer from coordination problems and free-rider issues, which impair their monitoring function. (Rahman & Mohamed Ali, 2006), studying Malaysian firms, it was observed that a smaller board size signifies that the directors are more focused on solving any issues. A meta-analysis by (García-Meca & Sánchez-Ballesta, 2009) examined various governance characteristics across countries and found a negative and significant association between board size and discretionary accruals. However, huge boards may suffer from coordination problems and conflicting interests, reducing their ability to oversee management actions effectively. Conversely, an alternative perspective from resource dependence theory suggests that larger boards can be beneficial, especially in complex or heavily regulated industries where a wider pool of knowledge and specialization improves the board's effectiveness (Pfeffer & Salancik, 1978). (Klein, 2002) reported that board size alone does not significantly influence EM but may interact with board independence and audit committee composition to affect financial reporting outcomes.

With respect to REM, relatively few studies have explicitly examined the influence of board size. However, (D. A. Cohen et al., 2008) suggested that traditional governance mechanisms, including board size, may have limited REM effects. This is because REM involves operational decisions that are harder to scrutinize during typical board deliberations. Moreover, (Zang, 2012) provided evidence that when boards constrain accrual manipulation, managers may resort to REM instead, and board size may not be a significant deterrent in such cases. This further implies that larger boards may be less agile or poorly informed in detecting and countering subtle operational decisions associated with REM.

Research shows that the impact of board size on EM varies by context. Smaller boards are generally linked to enhanced monitoring and accountability, whereas larger boards can contribute additional expertise, potentially strengthening oversight in complex situations.

3.5.4. CEO duality and Earnings Management

The term Chief Executive Officer (*hereafter referred to as* CEO) duality denotes a governance structure in which the roles of CEO and Board Chair are held by the same person. Considerable academic interest has focused on this governance framework given its influence on board independence, oversight mechanisms, and the quality of financial disclosures.

From the lens of agency theory (Jensen & Meckling, 1976), CEO duality is perceived as a governance weakness because it reduces the board's ability to independently monitor

management, thereby increasing the risk of opportunistic behaviors such as earnings manipulation. When the CEO also chairs the board, the concentration of power may lead to entrenchment and reduced transparency in financial reporting (Finkelstein & D'aveni, 1994). In contrast, stewardship theory argues that CEO duality may facilitate more unified leadership, efficient decision-making, and better alignment of interests (Donaldson & Davis, 1991). Empirical studies consistently find that firms with CEO duality exhibit higher EM through accruals. When the same individual holds both positions, they may have greater discretion to manipulate accounting estimates and DA. (P. M. Dechow et al., 1996) found that weak governance structures, including CEO duality, are more likely to be present in firms engaging in earnings manipulation. (Xie et al., 2003) reported that firms with CEO duality exhibited higher DA due to weaker board oversight. (Alves, 2023) report findings consistent with agency theory suggest that CEO duality decreases earnings quality. Thus, CEO duality limits board independence and oversight, facilitating manipulation through discretionary accruals.

The relationship between CEO duality and REM is more nuanced and less explored; however, emerging research suggests that dual leadership may also facilitate REM. (D. A. Cohen et al., 2008) found that after the implementation of SOX, firms substituted AEM with REM, and traditional governance mechanisms, such as board independence and role separation, were less effective in controlling REM. (Zang, 2012) demonstrated that REM is often a managerial response to constraints on AEM, and in firms with CEO duality, the board's ability to detect or challenge operational decisions like cutting R&D or overproduction is limited. Thus, it can be inferred that CEO duality may allow managers to pursue REM strategies unchecked. REM involves subtle shifts in business operations that are harder for boards, especially those lacking independent leadership, to detect.

3.5.5. Foreign Auditors and Earnings Management

The function of external auditors in constraining EM remains a key focus within CG literature. Foreign auditors, especially those affiliated with international Big Four audit firms, are often presumed to offer higher audit quality due to their global reputation, standardized audit practices, and greater independence from client management (DeAngelo, 1981). Much empirical evidence suggests that foreign auditors, particularly Big Four affiliates, effectively constrain accrual-based EM. This effectiveness stems from their global standards, stringent audit procedures, and reputational concerns. (Kanagaretnam et al., 2010) conducted a study on

a sample from 29 countries and found that companies audited by Big Five auditors constrain income-increasing earnings management. The study further reports that Big Five auditors are more effective in constraining EM, particularly in environments with high demand for audit quality. (Francis & Wang, 2008) argued that the association between high audit quality and reduced EM is stronger in countries with strong legal systems, as foreign auditors tend to enforce compliance more rigorously in such environments. These studies consistently suggest that foreign auditors act as effective external governance mechanisms that deter accrual-based manipulation.

Compared to accrual manipulation, REM is more operational and challenging to detect using traditional audit techniques. As such, the role of foreign auditors in curbing REM is more ambiguous and less empirically established. (D. A. Cohen et al., 2008) examined the post-SOX environment and found that while accrual-based EM declined, REM increased as managers shifted to more difficult-to-detect techniques. Despite their high audit quality, foreign auditors could not constrain REM. (Zang, 2012) further demonstrated a substitution effect between AEM and REM. Managers constrained by high-quality auditors or governance mechanisms tend to increase REM as a fallback strategy, which is harder for auditors, including foreign ones, to detect. (Alhadab et al., 2015), analyzing UK IPO firms, found that Big Four auditors were effective in limiting AEM but not REM, especially in high-growth firms where operational discretion is more difficult to monitor. This research stream suggests that while effective in curbing accrual manipulation, foreign auditors may not significantly reduce REM, particularly in complex or rapidly evolving operational environments.

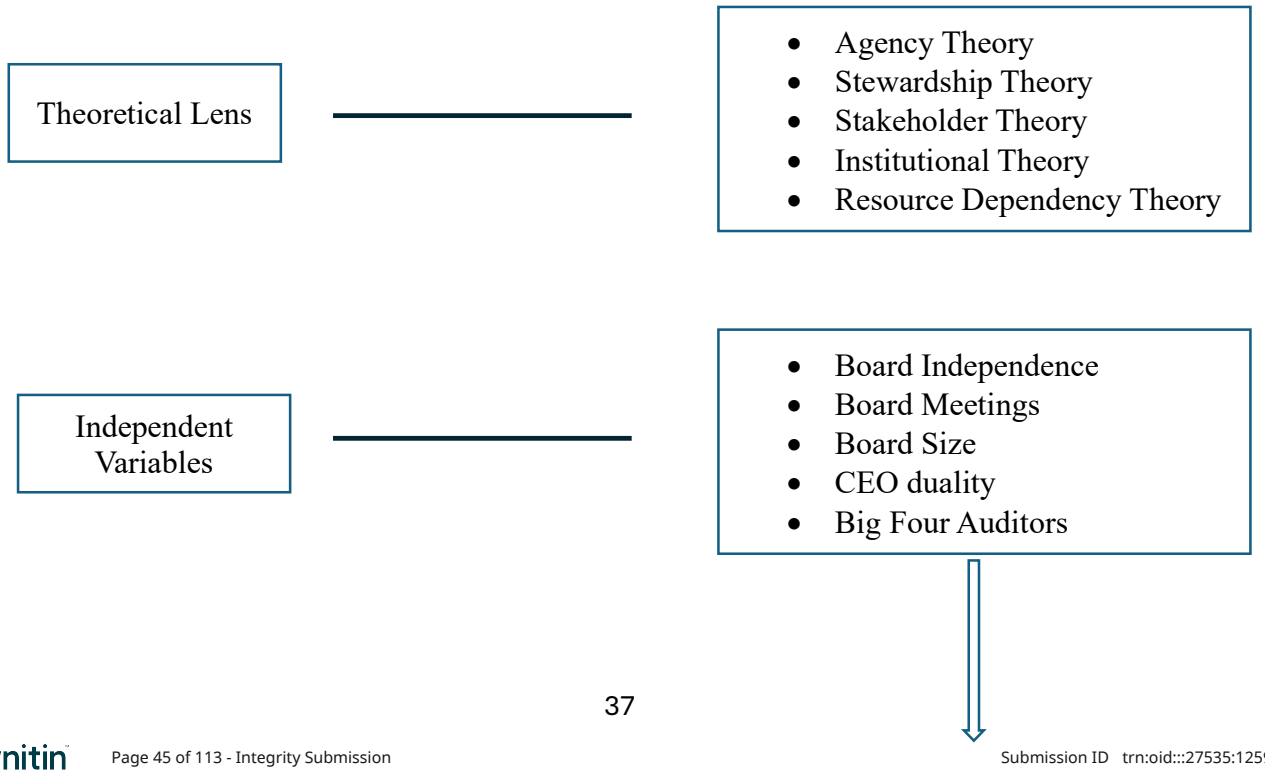

Figure 3.1: Conceptual Framework for the Impact of Governance Mechanisms on Earnings Management

3.6 Impact of Ind – AS Adoption on Earnings Management

The alignment of Ind-AS with IFRS constitutes a major transformation in the financial reporting framework in India, as Indian companies expand globally and foreign investors take a keen interest in Indian markets, making it necessary to adopt a universal financial reporting language. India's decision to converge with IFRS through Ind-AS was primarily motivated by the need to enhance transparency, comparability, and global acceptability of financial statements (R., 2017). Investors often prefer to invest in jurisdictions where financial reporting is reliable, consistent, and easily interpretable. The alignment with IFRS was regarded as an approach to strengthen the credibility of financial reporting in India, thereby making Indian firms more attractive to global investors. Studies have shown that IFRS adoption reduces the cost of capital, improves the information environment, and reduces information asymmetry (Ball, 2006). With the increase in cross-border mergers, acquisitions, and stock exchange listings, Indian firms require acceptable finanecial statements in international capital markets. IFRS-based reporting allows smoother due diligence, valuation, and financial analysis for cross-border deals. According to (Bhattacharjee & Islam, 2009), convergence with IFRS helps eliminate the need for multiple sets of financial statements, thereby reducing the burden on companies. As a result, it was anticipated that the scope for earnings management would reduce post-Ind AS adoption.

The move to principles-based standards, such as Ind-AS (in contrast to the more rules-based Indian GAAP), was theorized to improve accounting quality. According to (Barth et al., 2008), IFRS adoption leads to lower EM due to stricter recognition rules, enhanced disclosures, and fair value requirements. This logic has been extended to the Indian context, assuming that Ind-AS would similarly limit managerial discretion in earnings manipulation. The existing

empirical literature offers varied conclusions; however, it generally supports the view that the adoption of Ind-AS has had a beneficial impact on EM in India. For instance, (Gomes & Costa, 2024a) report the reduction of DA in Indian firms after converging with IFRS. (Opare et al., 2024) examined U.S. cross-listed firms and non-cross-listed firms covering 38 countries. The results indicate that REM is less prevalent among U.S. cross-listed firms that adopt IFRS and come from countries with strong domestic investor protection. Similarly, in South Africa (Mohamed Amer et al., 2024) analyzed 206 firms listed on the Johannesburg Securities Exchange from 2000 to 2010, findings show that the IFRS mandate significantly depresses earnings management practices. Furthermore, (Rehman et al., 2024) investigated EM practices of classification shifting of revenues in Chinese-listed firms. The results suggest that adopting IFRS reduces EM practices through the classification shifting of revenues. On the contrary, (Bansal et al., 2021) finds that Indian firms misclassify revenue and cash flow statement items to report inflated core earnings. The findings also indicate that the scope of classification shifting has increased after the adoption of Ind–AS. (Tiwari & Chatterjee, 2023) reports that managers prefer to employ AEM rather than REM in financially distressed firms, specifically during the COVID–19 pandemic period.

India's convergence with IFRS through the implementation of Ind-AS constitutes a substantial reform of the country's financial reporting system. Prior empirical research demonstrates that the adoption of Ind-AS is associated with lower levels of EM, notably by limiting the scope for accrual-based manipulations. However, concerns persist regarding the opportunities for managerial discretion in fair value estimates and the potential for manipulating real activities.

3.7 Earnings Management during the pandemic

The COVID-19 pandemic was unprecedented, unlike any other crisis in the past few decades (Kumari & Eguruze, 2021). It was triggered by non-economic factors, which had profound economic and social consequences on a global scale (Šušak, 2020). Extensive research has investigated EM during economic instability and downturns. Nonetheless, the findings are still inconclusive. Extensive empirical research indicates that firms tend to engage more heavily in EM during periods of financial and economic crisis. Such practices are motivated by the need to deliberately lower the reported earnings, aiming to showcase a necessity for government support in the private sector. This could involve reducing tax burdens or obtaining financial assistance on concessional terms. Alternatively, managers view crisis periods or exceptional circumstances as advantageous to rectify excessive DA made in prior years (Flores et al., 2016).

Prior findings provide strong evidence to back this association. For example, (Saleh & Ahmed, 2005) documented an increase in income-decreasing accruals by financially distressed firms during periods of significant financial strain. (Tahinakis, 2014) confirms proof of earnings manipulation by reducing investment in R&D to evade disclosing earnings losses or declines in Eurozone countries. Similarly, (Hsu & Yang, 2022) show that UK-listed companies have manipulated earnings through real activities throughout the pandemic to avoid adverse reactions from investors.

On the contrary, an alternative body of research suggests that the enhanced earnings quality during crisis periods can be attributed to greater market acceptance of lower profitability by firms and higher surveillance of stock exchanges, auditors, and government bodies (Türegün, 2020). Also, amid the crisis, firm performance often deviates significantly from the intended benchmark, making any attempts at earnings manipulation inadequate to rectify the unfavourable situation. Furthermore, the economic turmoil serves as a convenient justification for poor performance, diminishing managers' urgency and need to manipulate earnings (Chintrakarn et al., 2018). Empirically, (Dimitras et al., 2015) document that companies in Greece and Spain reduce their EM techniques during periods of economic recession. In a related context, (Filip & Raffournier, 2014), using a sample of European listed firms spanning 16 countries, suggest that the rise in litigation risk during a financial crisis dissuades insiders from manipulating earnings, thereby showing enhanced earnings quality.

3.8 Conclusion

The literature review reveals that EM remains a pervasive challenge in financial reporting, shaped by managerial incentives, corporate governance structures, regulatory environments, and cultural contexts. Accrual-based and REM serve as tools for managers to influence reported performance, with the choice often reflecting the relative costs, detection risks, and the strength of external monitoring. Theoretical perspectives, including agency theory, stewardship theory, and stakeholder theory, offer valuable insights into the motivations and constraints of EM, underscoring the importance of aligning managerial objectives with the interests of shareholders and other stakeholders. While CG mechanisms, including board independence, board size, meeting frequency, and CEO duality, demonstrate varying degrees of effectiveness in constraining earnings manipulation, their impact on REM is less consistent due to the operational subtleties involved. The adoption of Ind-AS has shown promise in curbing accrual-based manipulation by enhancing transparency and aligning with global standards. However,

concerns persist regarding classification shifting and the manipulation of real activity. Foreign auditors, particularly those affiliated with Big 4 firms, strengthen financial reporting quality by limiting accrual-based practices, though their role in detecting and preventing REM remains limited. These findings underscore the need for cohesive governance mechanisms, enhanced regulatory oversight, and ethical leadership to enhance the credibility and reliability of financial reporting.

CHAPTER – 4

RESEARCH METHODOLOGY

4.1 Introduction

Chapter 3 provides the groundwork for pinpointing gaps in the current body of literature, which in turn give rise to specific research questions. Building on these questions, the present chapter formulates research objectives designed to address the identified gaps. Additionally, it defines the scope of the study and explains the methodologies employed to achieve its various objectives.

The chapter is structured as follows. Section 4.2 discusses the research gaps identified in the literature review and outlines the research questions developed to address them. Section 4.3 then derives the research objectives from these questions and introduces the testable hypotheses aligned with the study's objectives. Section 4.4 outlines the scope of the research, while Section 4.5 describes the proxies and data sources employed for the empirical analysis. Section 4.6 provides the closing remarks for the chapter.

4.2 Research Gaps and Research Questions

The literature review identified the following research gaps.

i. *Empirical research focusing on developing economy contexts remains sparse:* As much of the existing literature primarily extrapolates conclusions from evidence drawn from developed economies.

ii. *There is limited and mixed evidence regarding the effectiveness of CG mechanisms in mitigating REM:* Although prior studies essentially document the role of governance attributes—such as board independence, board size, and meeting frequency—in restricting accrual-based earnings manipulation, their influence on real activities manipulation remains inconclusive and highly contingent on institutional and contextual factors.

iii. *Lack of empirical evidence on Ind-AS adoption and its influence on EM:* Although several studies report a decline in accrual-based EM post-IFRS adoption, evidence regarding Ind-AS convergence is sparse and contradictory.

iv. *Substitution between accrual and REM under regulatory reforms:* There is evidence that managers switch between AEM and REM in response to governance or regulatory constraints (e.g., post-SOX). However, the empirical evidence remains confined to developed economies only. There is a gap in longitudinal studies that track this substitution effect in emerging economies over time, providing a dynamic understanding of managerial behavior.

The key research questions emerging from research gaps driving this study are as follows:

RQ 1: How has the adoption of Ind–AS (IFRS converged) impacted EM practices?

RQ 2: How do governance mechanisms influence accrual-based EM in India?

RQ 3: How do governance mechanisms impact REM in India?

RQ 4: Are real and accrual EM techniques employed as substitutes/ complementary strategies by firms in India?

4.3 Research Objectives and Research Hypotheses

The study investigates how CG affects EM and further evaluates whether firms in India use different EM techniques as substitutes or in combination. In particular, it seeks to address the following research objectives:

Objective 1: To examine how Ind-AS adoption (IFRS converged) has affected EM.

The first objective focuses on empirically analyzing how the adoption of Ind-AS affects EM and identifying the primary parameters of the Beneish model that contribute to earnings manipulation, using AEM as a proxy. The sample period is split into two phases—pre-adoption (2014–15 to 2015–16) and post-adoption (2016–17 to 2021–22)—based on the timing of Ind-AS implementation. Consequently, the following hypothesis has been developed:

$H_0$1a: Adopting Ind-AS (IFRS converged) reduces firms' reliance on traditional accrual-based EM strategies.

Objective 2: To assess the role of governance mechanisms in accrual and REM.

The second objective examines how different governance mechanisms influence earnings manipulation through both accrual-based and real activities. Given the range of firm-level governance mechanisms considered in this study, the analysis is carried out in two distinct parts.

Part I

The first part examines the relationship between AEM and firm–level governance mechanisms. Aligned with this, the following null hypotheses have been formulated:

30 **$H_0$2a:** There is a negative association between board independence and AEM.

$H_0$3a: Increased frequency of board meetings is negatively associated with accrual-based EM.

$H_0$4a: Board size is negatively associated with accrual-based EM.

$H_0$5a: Firms with CEO duality are likelier to engage in accrual-based EM than firms with separate CEO and board chair positions.

61 **$H_0$6a:** Firms audited by foreign (particularly Big 4) auditors are less likely to engage in accrual-based EM.

Part II

The second part examines how firm-level governance mechanisms influence REM. In line with this, the following hypotheses are advanced:

$H_0$2b: Board independence is not significantly associated with REM.

$H_0$3b: The frequency of board meetings is not significantly associated with reduced REM.

$H_0$4b: Board size has no significant association with REM, as larger boards may lack the agility and detailed insight necessary to monitor operational decisions underlying REM.

$H_0$5b: CEO duality is positively associated with REM, as unified leadership may weaken the board's ability to scrutinize operational decisions.

$H_0$6b: The presence of foreign auditors has a limited or insignificant effect on constraining REM, as such practices involve operational decisions that are harder to detect through standard auditing procedures.

Objective 3: To examine whether EM techniques (real and accrual) are used as substitutes or complements by firms in India.

The third objective addresses the ongoing debate regarding the trade-off between real and accrual-based EM, considering their relative costliness. It also investigates whether the extent of promoters' ownership influences this relationship. For this purpose, the analysis is conducted in two separate parts:

Part I

The first part evaluates the trade-off between real and accrual-based EM in terms of their relative costliness. In line with this assessment, the following null hypotheses have been proposed:

$H_0$7: Ceteris paribus, the relative degree of AEM vis à-vis real activities manipulation is determined by the relative costs associated with each method.

$H_0$7a: Ceteris paribus, firms facing greater scrutiny from Big Four auditors have a higher level of manipulation of real activities.

$H_0$7b: Ceteris paribus, firms with poor financial health have higher AEM.

Part II

The second part evaluates the trade-off between real and accrual-based EM, taking into account their relative costliness and how promoters' ownership moderates this relationship. Based on this, the following null hypotheses have been formulated:

$H_0$8: Ceteris paribus, the relative degree of accrual-based EM vis-à-vis real activities manipulation is determined by the relative costs associated with each method, and the level of promoters' ownership moderates this relationship.

$H_0$8a: Ceteris paribus, firms facing greater scrutiny from Big Four auditors exhibit a higher level of manipulation of real activities, and the extent of promoters' ownership influences this relationship.

$H_0$8b: Ceteris paribus, firms with poor financial health engage in higher accrual-based EM, and promoters' ownership moderates this effect.

4.4 Scope of the Study

The present research examines the role of CG in influencing EM practices within the Indian context, representing a key emerging market economy. The scope is confined to firm-level data of non-financial firms listed on the NSE in India, examining both accrual-based and REM practices. This study is particularly relevant in light of India's evolving CG landscape, characterized by regulatory reforms and institutional transitions. The introduction of Ind-AS and the enforcement of the Companies Act 2013 have substantially transformed India's financial reporting and CG practices, positioning the country as a suitable context for examining how effectively CG curbs EM.

Emerging economies, such as India, offer a distinct environment for evaluating the role of CG, characterized by differences in institutional frameworks, market dynamics, and regulatory structures compared to developed nations (Porta et al., 1998). Firms in India witness the promoter-dominant shareholder model. Accordingly, the 'agency gap' exists between majority shareholders and other company stakeholders, rather than between management and owners, as is the case in the US and UK (Kapoor & Goel, 2017). Prior research suggests that firms in emerging markets often engage in EM due to weaker investor protection, concentrated ownership structures, and varying enforcement of regulations (Roychowdhury, 2006; Siregar & Utama, 2008). Furthermore, India's rapid economic growth and increasing global integration necessitate an examination of EM practices. Previous studies indicate that governance mechanisms can serve as either deterrents or enablers of EM, depending on the regulatory environment and firm-specific factors (Xie et al., 2003). Considering the ongoing regulatory reforms and the heightened emphasis on corporate transparency in India, this study adds to the extant body of literature by empirically examining the effectiveness of CG mechanisms in mitigating earnings manipulation. Moreover, it analyzes the strategic substitution between

accrual-based and REM, as well as the moderating effect of promoter ownership on this association.

This study, set within the Indian corporate landscape, empirically examines the interaction between governance mechanisms and EM in a developing economy. The findings will have broader implications for policymakers, investors, and regulators seeking to advance the quality of financial reporting and governance frameworks in developing markets.

4.5 Research Methodology

The study relies on secondary data for addressing its objectives, sourced from multiple databases in line with data accessibility and suitability.

4.5.1. Study Sample and Sources of Data Collection

This study draws its sample from the top 500 companies listed on the National Stock Exchange (*hereafter referred to as* NSE) of India as of March 31, 2022, representing about 96.1% of the free-float market capitalization as of March 29, 2019[2]. Banks and financial services firms are excluded, as their earnings behavior and cash flow patterns are not comparable with those of non-financial firms due to distinct regulatory and capital requirements (Abdou et al., 2021).

The Companies Act 2013 was passed in Parliament and received the President's consent on August 29, 2013, with effect from March 31, 2015 (Dharmapala & Khanna, 2018). Hence, 2015 was the starting point for the study. The World Health Organization officially declared COVID-19 a global pandemic on March 11, 2020 (WHO, 2020). This declaration triggered widespread policy responses, lockdowns, and economic restrictions globally. Hence, 2015–2019 are considered pre-pandemic years, and 2020–2022 are pandemic years. Additionally, firms with incomplete data were excluded, leading to a final sample of 2,848 observations. The sample description and sector-wise sample composition are stated in Tables 1 and 2, respectively. All continuous financial variables were adjusted through winsorization at the 1st and 99th percentiles for each fiscal year to minimize the influence of outliers.

Information on financial and accounting variables is extracted from the CMIE-maintained Prowess IQ database, while corporate board–related variables are derived from published annual reports and governance disclosures.

[2] https://www.nseindia.com/products/content/equities/indices/nifty_500.htm

Table 4.1: Sample description of the study sample

Sample description	
Total no. of firms	500
Less: Financial service firms and banks	94
Less: Firms with missing observations	50
Total firms included	356
Total firm-year observations (356*8)	2848
Pre–pandemic firm-year observations	1780
Pandemic firm-year observations	1068

Source: Author(s) compilation

Table 4.2: Sector-wise sample composition

S.No.	Sectors	No. of firms
1.	Financial Services	94
2.	Information Technology	22
3.	Oil, Gas & Consumable Fuels	18
4.	Automobile and Auto Components	34
5.	Fast Moving Consumer Goods	31
6.	Healthcare	46
7.	Capital Goods	61
8.	Power	12
9.	Metals & Mining	16
10.	Construction	13
11.	Consumer Durables	25
12.	Consumer Services	24
13.	Telecommunication	11
14.	Construction Materials	13
15.	Chemicals	34
16.	Services	16
17.	Realty	11
18.	Textiles	7
19.	Media, Entertainment & Publication	6
20.	Diversified	4
21.	Forest Materials	2
Total		500

Source: Author(s) compilation

4.5.2. Research Variables

The section details the proxies and formulations adopted to measure the key variables. In line with the research objectives, these variables are incorporated into the empirical analysis.

4.5.2.1 Dependent Variables

The section details the proxies and measurement approaches used to capture the variables of interest. Consistent with the research aims, the analysis utilizes the variables listed below.

i. Accrual Earnings Management

Building on prior literature, this study employs the modified Jones model, introduced by (P. M. Dechow et al., 1995), to estimate DA as an indicator of EM behavior. A substantial body of previous research has investigated EM using abnormal accruals as a proxy for earnings manipulation (P. M. Dechow et al., 1995; Defond & Subramanyam, 1998; Jones, 1991). In alignment with this, the study adopts the modified Jones model, as it has been proven to have the maximum power in estimating EM (P. M. Dechow et al., 1995). The approach is grounded in the difference between earnings and operating cash flows, which embodies the accrual accounting process. Accruals are decomposed into non-discretionary and discretionary elements, with the former reflecting standard accounting adjustments not subject to managerial influence. In contrast, DA reflects the use of managerial discretion to intentionally modify reported earnings (Abed et al., 2012).

To estimate EM, DA are estimated as the residuals of the modified Jones model (P. M. Dechow et al., 1995). In this framework, non-discretionary accruals are computed based on the following formulation:

$$\frac{T.A._t}{A_{t-1}} = \alpha_1\left(\frac{1}{A_{t-1}}\right) + \alpha_2\left(\frac{\Delta REV_t - \Delta REC_t}{A_{t-1}}\right) + \alpha_3\left(\frac{PPE_t}{A_{t-1}}\right) + \varepsilon_{i,t} \qquad (4.1)$$

Where, $T.A._t$ denotes total accruals measured as the difference between net earnings and operating cash flows from activities; A_{t-1} signifies total assets at the year-end *t-1*; ΔREV_t – variation in operating revenues in the years *t* and *t-1*; ΔREC_t – variation in net receivables in the years *t* and *t-1*; PPE_t – property, plant, and equipment at year-end *t*.

Since managers may manipulate earnings through income-increasing or decreasing accruals, the absolute value of DA is used to measure the extent of EM. This approach aligns with

previous studies that utilize absolute DA as a proxy for the combined effect of upward and downward earnings manipulation (Barth et al., 2008). To limit the effect of outliers, values are winsorized at both the upper and lower 1% thresholds.

ii. Real Earnings Management

Following prior literature (D. A. Cohen et al., 2008; D. A. Cohen & Zarowin, 2010; Roychowdhury, 2006), the current study estimates REM using abnormal operating cash flows, discretionary expenditures, and production costs.

Sales manipulation refers to advancing sales by offering 'limited-time' price discounts, longer credit terms, and other incentives. This often results in exceptionally low cash flow from operations. It is suspected to occur when actual operating cash flows deviate from typical operating cash flows. The residual term in Eqn (4.2) represents the abnormal operating cash flow.

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_0 + \alpha_1\left(\frac{1}{A_{it-1}}\right) + \beta_1\left(\frac{S_{it}}{A_{it-1}}\right) + \beta_2\left(\frac{\Delta S_t}{A_{it-1}}\right) + \varepsilon_{it} \qquad (4.2)$$

In the above Eqn, CFO_{it} refers to operating cash flows; A_{it-1} denotes one year lagged total assets; S_{it} refers to net sales and ΔS_{it} is a change in net sales.

Reducing discretionary expenses: Management can enhance reported earnings by reducing discretionary expenditures (*D.EXP*). It comprises advertising expenses, R&D expenses, and sales, as well as general and administrative expenses (Roychowdhury, 2006). It is based on past sales, and any deviation between actual and normal discretionary expenditure signifies abnormal discretionary expenditure. Eqn (4.3) models abnormal discretionary expenses:

$$\frac{D.EXP_{it}}{A_{it-1}} = \beta_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{S_{it-1}}{A_{it-1}}\right) + \varepsilon_{it} \qquad (4.3)$$

Over-production: Increased production can reduce the fixed cost per unit, thereby lowering the cost of goods sold (*hereafter,* COGS). This implies that earnings automatically increase when COGS is reduced. Production cost comprises COGS and inventory changes. Abnormal production costs are measured as the deviation between actual production costs and their normal levels, estimated using the following regression model:

$$\frac{PRO_{it}}{A_{it-1}} = \alpha_0 + \beta_1\left(\frac{1}{A_{it-1}}\right) + \beta_2\left(\frac{S_{it}}{A_{it-1}}\right) + \beta_3\left(\frac{\Delta S_{it}}{A_{it-1}}\right) + \beta_4\left(\frac{\Delta S_{it-1}}{A_{it-1}}\right) + \varepsilon_{it} \quad (4.4)$$

Aggregate REM measure: Extant literature suggests that firms prefer to employ different alternatives of REM (D. A. Cohen & Zarowin, 2010; Roychowdhury, 2006). Therefore, following (Aljughaiman et al., 2023), Eqn (4.5) estimates the overall level of REM. A higher value suggests greater use of EM through operational changes.

$$REM = -abCFO + abPROD - abDISX \quad (4.5)$$

This reflects the firm's overall level of real activity-based EM. Like AEM, higher REM suggests greater manipulation through operational adjustments.

4.5.2.2 Independent Variables

In line with the objectives of the thesis, the following independent variables have been used in the analysis.

i. Beneish M – Score

The Beneish M-Score is a financial forensic tool used to detect earnings manipulation in the financial statements of a company (Beneish, 1997). It is based on eight financial ratios.

$$Days' Sales\ in\ Receivables\ Index\ (DSRI) = \frac{\frac{Receivables_{(t)}}{Sales_{(t)}}}{\frac{Receivables_{(t-1)}}{Sales_{(t-1)}}} \quad (4.6)$$

$$Gross\ Margin\ Index\ (GMI) = \frac{\frac{Sales_{(t-1)} - Cos\ \ of\ goods\ sold_{(t-1)}}{Sales_{(t-1)}}}{\frac{Sales_{(t)} - Cost\ of\ goods\ sold_{(t)}}{Sales_{(t)}}} \quad (4.7)$$

$$Asset\ Quality\ Index\ (AQI) = \frac{\frac{1 - Current\ assets_{(t)} + PPE_{(t)}}{Total\ assets_{(t)}}}{\frac{1 - Curren\ \ assets_{(t-1)} + PPE_{(t-1)}}{Total\ assets_{(t-1)}}} \quad (4.8)$$

$$Sales\ Growth\ Index\ (SGI) = \frac{Sales_{(t)}}{Sales_{(t-1)}} \quad (4.9)$$

$$Depreciation\ Index\ (DEPI) = \frac{\frac{Depreciation_{(t-1)}}{Depreciation_{(t-1)} + PPE_{(t-1)}}}{\frac{Depreciation_{(t)}}{Depreciation_{(t)} + PPE_{(t)}}} \quad (4.10)$$

$$Sales, General\ and\ Administrative\ Expenses\ Index\ (SGAI) = \frac{\frac{SG\&A\ expenses_{(t)}}{Sales_{(t)}}}{\frac{SG\&A\ expenses_{(t-1)}}{Sales_{(t-1)}}} \quad (4.11)$$

$$Total\ Accruals\ to\ Total\ Assets\ (TATA) = \frac{Net\ Income\ from\ continuing\ operations_{(t)} - Cas\quad flows\ from\ operations_{(t)}}{Total\ assets_{(t)}} \quad (4.12)$$

$$Leverage\ Index\ (LVGI) = \frac{\frac{Long\ term\ debt_{(t)} + Current\ Liabilities_{(t)}}{Total\ assets_{(t)}}}{\frac{Long\ term\ debt_{(t-1)} + Current\ Liabilities_{(t-1)}}{Total\ assets_{(t-1)}}} \quad (4.13)$$

The Beneish M-score allows for the distinction between manipulators and non-manipulators. A company is identified as a manipulator if its M-score exceeds the threshold of −2.22. It is calculated as follows:

$$\text{M} - \text{score} = -4.84 + 0.92 * \text{DSRI} + 0.528 * \text{GMI} + 0.404 * \text{AQI} + 0.892 * \text{SGI} + 0.115 * \text{DEPI} - 0.172 * \text{SGAI} + 4.679 * \text{TATA} - 0.327 * \text{LVGI} \quad (4.14)$$

ii. Corporate Board

The board of directors is a crucial CG mechanism that reduces agency problems and restricts managerial opportunistic behavior (Fama & Jensen, 1983). The current study proxies the monitoring/advisory ability of a corporate board using the following variables:

a) Board Independence

Independent directors, free from personal interests and family affiliations in the ownership structure, are better positioned to provide unbiased oversight. They are more inclined to adhere to the objective of shareholders' wealth maximization (Saona et al., 2020). It is quantified as the proportion of independent directors on the board.

$$Board\ Independence = \frac{Number\ of\ independent\ directors}{Total\ number\ of\ directors\ on\ the\ board} * 100 \quad (4.15)$$

b) Board Meeting

Board meetings serve as a crucial element of board characteristics, reflecting the level of board activity (Vafeas, 1999). It is measured as the frequency of board meetings held annually.

c) Board Size

Board size is a critical component of CG. Its optimal configuration for mitigating EM remains context-dependent and warrants further investigation. It is computed as the total number of directors on the board (Abdou et al., 2021).

d) CEO duality

CEO-Chairman duality is represented as a binary variable, assigned a value of "1" when the same individual holds both the CEO and Chairman roles and "0" otherwise (Ramdani & Witteloostuijn, 2010).

iii. Foreign Auditors

The reputation of an auditor plays a significant role in mitigating EM, with reputable auditors being more effective in constraining such practices (Kanagaretnam et al., 2010). Therefore, the presence of well-established and reputable auditors contributes significantly to improving financial reporting quality and limiting earnings management. This is measured using a binary variable equal to one for firms audited by a Big Four auditor and zero for others.

iv. Z-Score

Empirical studies have demonstrated that financial distress can lead to increased REM practices, such as manipulating production costs and discretionary expenses while reducing accrual-based EM due to heightened scrutiny from auditors and regulators (Muljono & Suk, 2018). Conversely, some studies suggest that financially distressed firms may engage less in REM before and during crises, such as the COVID-19 pandemic, possibly due to resource constraints or increased external monitoring (Fajriati et al., 2023). Accordingly, financial distress is computed using the Z-score, proposed by (Altman, 1983). It is defined as a binary variable that assigns a value of 1 if the Z-score of the company is below 1.81 and 0 otherwise.

$$Z - score = 1.2\left(\frac{Working\ Capital}{Total\ Assets}\right) + 1.4\left(\frac{Retained\ Earnings}{Total\ Assets}\right) + 3.3\left(\frac{\text{Earnings Before Interest \& Taxes}}{Total\ Assets}\right) + 0.6\left(\frac{\text{Market Value of Equity}}{\text{Book Value of Total Liabilities}}\right) + 1.0\left(\frac{Sales}{Total\ Assets}\right) \quad (4.16)$$

4.5.2.3 Control Variables

This section explains the proxies used and the formulations deployed to measure the control variables.

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a) Firm leverage

The relationship between firm leverage and EM has been a significant focus in the corporate finance literature, yielding mixed findings. Some studies suggest that higher leverage constrains EM due to increased scrutiny from creditors and the need to comply with debt covenants, enhancing financial reporting quality. For instance, a study on Malaysian firms found a significant negative association between leverage and REM, indicating that leveraged firms are less likely to engage in such practices (Zamri et al., 2013). Conversely, other research suggests that high leverage may incentivize managers to manipulate earnings to meet financial obligations or present a healthier financial position to stakeholders. A study examining non-financial firms listed on the Korea Composite Stock Price Index revealed a significant positive relationship between leverage and REM in firms suspected of earnings manipulation (Tulcanaza-Prieto et al., 2020). These divergent findings underscore the complexity of the leverage-EM nexus, suggesting that the impact of leverage on earnings manipulation may depend on firm-specific characteristics, the regulatory environment, and the form of EM employed. Further research is necessary to disentangle these relationships and provide more definitive insights. In line with the previous studies, it is calculated as the ratio of total debt to total assets (Ali et al., 2022).

b) Firm Liquidity

Managers in firms with constrained liquidity may use EM practices to present a more favorable financial position to stakeholders. For instance, a study by (Trang & Linh, 2020) found that EM negatively impacts market liquidity, as measured by market depth. Conversely, firms with higher liquidity levels might have less incentive to manipulate earnings due to reduced financial pressures. Additionally, research by (D. Li & Xia, 2016) indicates that firms with more liquid

stocks tend to exhibit lower levels of real and accrual-based EM. These findings suggest that liquidity constraints can influence managerial decisions regarding earnings reporting, highlighting the importance of robust financial oversight and transparent reporting practices to mitigate potential manipulation. In line with the existing literature, this ratio is estimated as the current assets to current liabilities ratio (Abdou et al., 2021).

c) Firm Profitability

Managers in highly profitable firms may manage earnings to smooth income, aiming to present consistent performance and meet market expectations. Conversely, less profitable firms might manipulate earnings to mask poor performance or avoid breaching financial covenants. It has been observed that companies employ various EM mechanisms such as accruals, real activities, and classification shifting to influence reported profitability, with the choice of mechanism varying between Egyptian and Jordanian firms (El-moayed et al., 2024). This highlights the importance of robust CG and transparent financial reporting in mitigating the potential adverse effects of EM on firm performance. Following previous literature, it is estimated as the ratio of net income before interest and taxes to total assets (Ali et al., 2022).

d)Firm size

Research indicates that large-sized firms exhibit more aggressive EM to avoid reporting earnings decreases compared to their smaller counterparts (Yangseon Kim et al., 2003). Conversely, larger firms are subject to greater scrutiny from regulators, auditors, and the public, which may deter earnings manipulation. Based on the definitions of (Nagar & Raithatha, 2022; Saona et al., 2020), it is computed as the natural logarithm of total assets.

4.6 Conclusion

This chapter presents the research gaps, the research questions derived from these gaps, and the research objectives formulated to address these questions. Following this, research hypotheses have been presented in line with the research objectives. This chapter also delineates the scope of the study. The content of this chapter will serve as the foundation for the subsequent chapters of the study.

CHAPTER – 5

IMPACT OF IND-AS ADOPTION ON EARNINGS MANAGEMENT

5.1 Introduction

In Chapter 4, the research question and objective were developed to examine the influence of Ind-AS adoption on EM. This chapter examines the present topic to analyze how the adoption of Ind-AS has impacted EM in India's emerging economy.

Concerning Objective 1, the study employs the Two-Stage Least Squares (*hereafter*, 2SLS) estimation technique to address potential endogeneity in the relationship between DA and financial manipulation indicators. Endogeneity may arise due to simultaneity, omitted variable bias, or measurement error, which can bias Ordinary Least Squares (*hereafter,* OLS) estimates and lead to inconsistent inferences (Wooldridge, 2013). Within the framework of EM, DA can serve as both a determinant and an outcome of financial manipulation indicators, resulting in a reciprocal relationship that violates OLS assumptions. The 2SLS approach mitigates this concern by using instrumental variables correlated with the endogenous regressor (DA) but uncorrelated with the error term in the second-stage regression (Joshua D. Angrist & Pischke, 2008). This instrumental variable strategy enhances the reliability of causal inference by

isolating the exogenous variation in DA. Moreover, the Hausman test is conducted to justify the use of 2SLS over fixed or random effects models, yielding a statistically significant result that indicates endogeneity and validates the choice of this estimation method. Overall, the 2SLS technique provides a robust framework for uncovering the underlying determinants of earnings manipulation, particularly in settings prone to informational asymmetry and regulatory transitions, such as the shift from Indian GAAP to Ind-AS.

Regarding the sample period, the study is divided into two parts: before (2015–2016) and after (2017–2022) the adoption period. The Companies Act 2013 was passed and became effective on 31 March 2015 (Dharmapala & Khanna, 2018). Therefore, 2015 is the starting point for the study. Further, the Ind-AS was mandatorily applicable since FY 2016–17.

The chapter unfolds in the following manner: Section 5.2 details descriptive statistics for Beneish's M-score indicators, Section 5.3 introduces the correlation matrix, Section 5.4 elaborates on the results and discussion, and Section 5.5 concludes the chapter.

5.2 Descriptive Statistics

The descriptive statistics reveal notable variations in Beneish M-Score indices between manipulators and non-manipulators across pre- and post-Ind-AS adoption periods. Before the adoption of Ind-AS, manipulators exhibited a higher GMI (1.1067) than non-manipulators (0.9619). This trend continued and intensified after the adoption of Ind-AS, where manipulators recorded a GMI of 1.1543 compared to 0.7525 for non-manipulators, indicating heightened margin pressure or possible cost manipulation following the adoption of Ind-AS. Similarly, the SGI was consistently higher for manipulators in both periods (1.2029 before and 1.3335 after) relative to non-manipulators (1.1567 before and 1.1167 after), reflecting potentially aggressive sales growth strategies that might have been used to sustain earnings targets. The DSRI was higher among manipulators before (1.256) and after (1.3657) Ind-AS adoption compared to non-manipulators (0.9574 before, 0.9379 after), suggesting that manipulators were more likely to delay collections or inflate receivables, potentially to overstate revenues. For the AQI, manipulators showed a lower AQI before Ind-AS (1.0533) than non-manipulators (1.7845); however, this difference narrowed after Ind-AS (1.9745 for manipulators vs. 1.5038 for non-manipulators). This convergence could reflect adjustments to asset reporting and classification driven by Ind-AS accounting requirements. In terms of the DEPI, manipulators exhibited slightly higher values in both periods (1.0663 before and 1.0351 after) than non-manipulators (0.9163 before and 1.0322 after), indicating a modest inclination among manipulators to slow depreciation, thereby deferring expenses. The SGAI was consistently higher for non-

manipulators (1.7154 before, 1.4315 after) than for manipulators (1.0643 before, 1.0296 after), suggesting that non-manipulators experienced proportionally larger increases in SG&A costs, likely due to genuine operational factors rather than manipulation. The TATA for manipulators was low in both periods (0.0140 before and 0.0187 after), while non-manipulators reported a higher TATA before the implementation of Ind-AS (0.0720) and a negative TATA after Ind-AS (-0.0555). The negative post-Ind-AS TATA for non-manipulators may signal cleaner earnings quality or reversals of prior accruals under the revised standards. The LVGI was lower for manipulators both before (0.2069) and after (0.3155) the implementation of Ind-AS. At the same time, non-manipulators reported higher leverage, particularly before the implementation of Ind-AS (2.2424), with a subsequent reduction observed after its implementation (1.0070), possibly reflecting changes in debt classification or liability recognition resulting from the adoption of Ind-AS. Finally, the M-Score consistently showed that manipulators had higher (less negative) values (−1.1245 before, −1.0602 after), placing them closer to Beneish's manipulation threshold (−2.22) in both periods. In contrast, non-manipulators had significantly lower M-Scores (−2.8823 before and −2.7772 after), reinforcing the relative absence of manipulation signals in their financial reports. The slight increase in the M-Score for manipulators post-Ind-AS suggests that manipulative tendencies persisted or even marginally intensified, despite the adoption of more stringent reporting standards.

Table 5.1: Mean values of indices and M-score

Variables	**Before the Ind-AS adoption period**		**After the Ind-AS adoption period**	
	Manipulators (N=97)	**Non-Manipulators (N=259)**	**Manipulators (N=96)**	**Non-Manipulators (N=260)**
Gross Margin Index (GMI)	1.1067	0.9619	1.1543	0.7525
Sales Growth Index (SGI)	1.2029	1.1567	1.3335	1.1167
Days' Sales in Receivables Index (DSRI)	1.256	0.9574	1.3657	0.9379
Asset Quality Index (AQI)	1.0533	1.7845	1.9745	1.5038
Depreciation Index (DEPI)	1.0663	0.9163	1.0351	1.0322
Sales, General and Administrative Expenses Index (SGAI)	1.0643	1.7154	1.0296	1.4315
Total Accruals to Total Assets (TATA)	0.0140	0.0720	0.0187	-0.0555
Leverage Index (LVGI)	0.2069	2.2424	0.3155	1.007
MScore	-1.1245	-2.8823	-1.0602	-2.7772

Source: Author's compilation

5.3 Correlation Matrix

Tables 5.2 and 5.3 depict the relationship between DA and the components of the Beneish M-score in the periods preceding and following Ind-AS adoption. The analysis provides insights into how the alignment between accrual-based and forensic indicators of earnings manipulation evolved with the adoption of the new accounting framework.

Before the adoption of Ind-AS, the correlations between DA and the Beneish variables were weak, indicating limited linear associations. Among the parameters, the AQI and TATA exhibited a relatively stronger positive relationship (r = 0.5956), suggesting that firms with deteriorating asset quality tended to report higher total accruals. Negative correlations between DSRI and SGI (r = –0.3313) and between AQI and SGI (r = –0.4874) imply that firms with declining sales or asset efficiency may have adjusted revenue recognition practices. However, the negligible correlation between DA and individual Beneish indicators implies that DA and Beneish components largely captured distinct dimensions of EM under the pre-Ind-AS reporting framework.

After the adoption of Ind-AS, the correlation coefficients became even weaker, with most values approaching zero. This attenuation suggests a reduction in the linear association between DA and Beneish indicators. The modest correlation between AQI and TATA (r = 0.4386) remained, though at a lower magnitude than before. The overall pattern suggests that the implementation of Ind-AS may have introduced greater consistency and transparency in financial reporting, thereby reducing the co-movement between traditional accrual-based and ratio-based manipulation indicators.

In summary, the pre-Ind-AS period reflects relatively stronger interlinkages among Beneish variables, possibly due to heterogeneous accounting treatments and less stringent disclosure norms. Following the adoption of Ind-AS, the decline in correlations suggests an improvement in reporting discipline and a reduction in overlap between accrual manipulation and real activity-based EM dimensions.

Table 5.2: Correlation Matrix: Parameters of Beneish M-Score and discretionary accruals before Ind-AS adoption

Variables	DA	GMI	SGI	DSRI	AQI	DEPI	SGAI	TATA	LVGI
DA	1.00								
GMI	-0.0050	1.00							
SGI	0.0089	-0.0922	1.00						
DSRI	-0.0208	-0.0489	-0.3313	1.00					
AQI	0.0091	-0.0405	-0.4874	0.2706	1.00				
DEPI	-0.0015	-0.0031	-0.1174	-0.0588	0.0643	1.00			

SGAI	-0.0106	0.0178	-0.0063	-0.0328	-0.0138	-0.0113	1.00		
TATA	0.0170	-0.0083	-0.3441	0.2913	0.5956	0.0241	0.0173	1.00	
LVGI	-0.0053	-0.0086	0.0113	-0.0140	0.0062	-0.0076	-0.0111	0.0210	1.00

Source: Author's compilation

Table 5.3: Correlation Matrix: Parameters of Beneish M-Score and discretionary accruals after Ind-AS adoption

Variables	DA	GMI	SGI	DSRI	AQI	DEPI	SGAI	TATA	LVGI
DA	1.00								
GMI	0.0033	1.00							
SGI	-0.0026	-0.0596	1.00						
DSRI	-0.0098	-0.0172	0.1425	1.00					
AQI	0.0016	-0.0051	-0.2032	0.0232	1.00				
DEPI	0.0042	0.0171	-0.0431	-0.0091	-0.0064	1.00			
SGAI	-0.0045	0.0010	0.0000	0.0021	-0.0141	-0.0104	1.00		
TATA	-0.0052	0.0025	-0.0589	0.0423	0.4386	0.0050	0.0291	1.00	
LVGI	-0.0072	0.0039	-0.0042	-0.0033	0.0033	-0.0069	-0.0074	0.0237	1.00

Source: Author's compilation

5.4 Findings and Discussion

The 2SLS regression analysis examining the relationship between Beneish M-Score parameters and DA before the adoption of Ind-AS is presented in Table 5.4, which presents valuable insights into corporate financial reporting behavior under the earlier Indian GAAP framework. The model demonstrates substantial explanatory strength, as reflected by an R^2 of 0.7251, suggesting that nearly 72.5% of the variation in the dependent variable is accounted for by the included independent variables. The Hausman test ($p < 0.001$) confirms the preference for fixed effects over random effects, validating the application of 2SLS to address endogeneity concerns (Wooldridge, 2013). The Durbin-Watson statistic (1.9998) indicates no significant autocorrelation, while the Breusch-Pagan test ($p = 0.7878$) suggests no evidence of heteroskedasticity, reinforcing the model's statistical soundness.

The coefficient for TATA is 0.1662 and is statistically significant ($p = 0.0063$), indicating a positive association between DA and the likelihood of financial manipulation. This aligns with the broader literature on EM, which suggests that managers use accrual-based strategies to smooth earnings or meet performance targets (P. M. Dechow et al., 1995; Roychowdhury, 2006). Under Indian GAAP, firms had greater latitude in applying discretion to provisions, estimates, and revenue recognition, allowing accruals to serve as a primary mechanism for manipulation. This contrasts with Ind-AS, where fair value measurement (Ind-AS 109) and stricter revenue recognition rules (Ind-AS 115) limit such discretion. For GMI, the positive and significant coefficient (0.1431; $p = 0.0006$) suggests that a deteriorating gross margin was associated with an increased likelihood of earnings manipulation. This supports (Beneish,

1999) assertion that firms facing declining profitability are more inclined to misstate earnings. Under Indian GAAP, managers could reclassify the cost of goods sold or alter inventory methods to present more favourable margins. In contrast, Ind-AS 2 (Inventories) enforces more explicit cost formulas and prohibits the last-in, first-out (LIFO) method, thereby reducing room for margin manipulation. Moreover, SGI shows a positive and statistically significant association with DA (0.4409; p = 0.0003), indicating that firms with rapid sales growth are more susceptible to manipulation. High-growth firms often face pressure to sustain their performance, which increases their motivation to manage earnings (Beneish, 1999). Indian GAAP's flexible revenue recognition standards (AS-9) provided scope for early recognition or channel stuffing. However, under Ind-AS 115, revenue is recognized only when control is transferred, reducing premature recognition opportunities. Meanwhile, the coefficient for DSRI is positive but statistically insignificant (0.0824; p = 0.5757), indicating no robust relationship between changes in receivables and accrual manipulation in the pre-Ind-AS period. This finding contradicts Beneish's model but may reflect India's weak enforcement of receivables impairment and provisioning policies under Indian GAAP. In contrast, Ind-AS 109 mandates the use of an Expected Credit Loss (*hereafter,* ECL) model, thereby increasing the reliability of receivables data. AQI exhibits a marginally significant positive coefficient (0.0067; p = 0.0789), suggesting that increases in intangible or non-current assets were modestly associated with earnings manipulation. This result is consistent with concerns that firms under Indian GAAP could capitalize expenses or revalue assets without stringent impairment testing (Watts & Zimmerman, 1986). The adoption of Ind-AS 36 now mandates annual impairment tests for intangible assets, thereby reducing opportunities for manipulation. The DEPI coefficient is positive and significant (0.0327; p = 0.0047), indicating that firms that slow depreciation rates or increase asset useful life are more likely to manipulate earnings. Indian GAAP permitted considerable discretion in estimating depreciation schedules, which firms could exploit to understate expenses. Ind-AS 16 now requires depreciation methods to reflect the pattern of economic benefit consumption, enhancing reliability and comparability.

Interestingly, SGAI is negatively and significantly associated (−0.00164; p < 0.001) with manipulation. This finding suggests that rising SG&A expenses discouraged earnings manipulation, possibly because higher operational inefficiencies attracted scrutiny. It may also indicate that firms with poor cost control lacked the flexibility to manage earnings. Under Ind-AS 1, disclosures around expense classification and related-party transactions are more detailed, improving oversight in this area. LVGI is insignificant (−0.0007; p = 0.4873), implying that leverage levels did not significantly influence earnings manipulation in the pre-

Ind-AS context. This contradicts global literature (DeFond & Jiambalvo, 1994), but can be attributed to India's underdeveloped covenant-based lending market, where debt pressures were not systematically tied to accounting ratios. Ind-AS 107 has since improved the disclosure of financial liabilities and risk exposures, potentially changing this relationship post-transition.

Table 5.4: Panel regression analysis: Parameters of Beneish M-Score and discretionary accruals before Ind-AS adoption

Particulars	Coefficient	Std. Error	p-value
constant	0.1588	0.0282	<0.0001***
Gross Margin Index (GMI)	0.1431	0.1117	0.0006***
Sales Growth Index (SGI)	0.4409	0.1221	0.0003***
Days' Sales in Receivables Index (DSRI)	0.0824	0.1472	0.5757
Asset Quality Index (AQI)	0.0067	0.0891	0.0789*
Depreciation Index (DEPI)	0.0327	0.0462	0.0047***
Sales, General and Administrative Expenses Index (SGAI)	-0.00164	0.000358	0.000***
Total Accruals to Total Assets (TATA)	0.1662	0.3526	0.0063***
Leverage Index (LVGI)	−0.0007	0.0011	0.4873
N	2848		
R squared	0.7251		
Hausman test	0.000		
Durbin-Watson	1.9998		
Breusch-Pagan test	0.02334 (0.7878)		
P-value	0.000***		

Note: 10 per cent, 5 per cent, and 1 per cent significance levels are indicated by *, **, and ***, respectively.
Source: Author's compilation

Table 5.5 presents the empirical results from the 2SLS regression analysis assessing the relationship between discretionary accruals and financial manipulation indicators, as measured by Beneish M-score indices, in India's post-Ind-AS adoption era. The transition to Ind-AS, aligned with IFRS, introduced significant accounting reforms, including fair value measurement, enhanced impairment rules, and stricter revenue recognition principles (Gomes & Costa, 2024b), which are expected to influence the nature and detectability of earnings manipulation. These findings shed light on how shifts in accounting regulations influence the likelihood of earnings manipulation and the credibility of financial indicators within the revised reporting framework.

The regression model exhibits strong explanatory power with an R^2 of 0.7147, indicating that the independent variables account for approximately 71.5% of the variation in the dependent variable. The Hausman test ($p < 0.001$) confirms the appropriateness of using fixed effects in the 2SLS estimation, addressing potential endogeneity concerns (Wooldridge, 2013). The

Durbin-Watson statistic (1.8967) suggests no significant autocorrelation, and the Breusch-Pagan test indicates homoskedasticity (p = 0.8965), affirming the model's reliability.

The coefficient for TATA is positive and highly significant (0.2634; p = 0.0009), indicating that DA remains a significant channel of EM even under the Ind-AS regime. This reinforces earlier findings that accrual-based manipulation remains resilient to changes in accounting standards (P. M. Dechow et al., 1995; Roychowdhury, 2006). Despite enhanced reporting obligations, the subjective nature of accruals still allows managerial discretion, particularly in estimates and provisions, which are difficult to standardize even under fair value principles (Soderstrom & Sun, 2007). On the contrary, GMI exhibits a negative and significant coefficient (−0.0085; p = 0.0010), contrasting with the pre–Ind-AS positive association. This suggests that firms with deteriorating gross margins are less likely to manipulate earnings, possibly due to stricter inventory accounting and cost recognition standards under Ind-AS 2, which prohibit manipulative inventory reclassifications and enforce clearer valuation principles (Khan & Sangmi, 2024). Furthermore, SGI shows a negative and statistically significant relationship with DA (–0.0238; p = 0.0001), suggesting that high-growth firms exhibit a lower propensity for earnings manipulation following the adoption of Ind-AS. This represents a reversal from the pre–Ind-AS period, where rapid growth drove manipulation. The shift reflects the impact of Ind-AS 115, which mandates revenue recognition based on the transfer of control rather than the transfer of risk and reward, thereby reducing the scope for early or inflated revenue recognition (Potharla, 2025). Similarly, the negative and significant coefficient (−0.0022; p = 0.0007) for DSRI implies that an increase in receivables relative to sales is now associated with lower levels of accrual manipulation, contrary to Beneish's original model expectations. This can be attributed to the ECL model under Ind-AS 109, which requires early and transparent recognition of credit impairments, thereby constraining firms' ability to inflate receivables to misstate earnings (Nnadi et al., 2023; Resende et al., 2024). The marginally significant negative coefficient for AQI (−0.0009; p = 0.0608) suggests a weak inverse relationship with DA, contrasting with the pre–Ind-AS period, where AQI was positively related to manipulation. This shift aligns with the requirement of Ind-AS 36 for mandatory annual impairment testing of intangible and non-current assets, which imposes stricter recognition and disclosure rules that limit opportunities to reclassify assets opportunistically (D'Alauro, 2013).

The coefficients for DEPI (–0.0024; p = 0.5272) and SGAI (–0.0023; p = 0.5797) are statistically insignificant, suggesting that manipulation through depreciation and SG&A reclassification has reduced post–Ind-AS. Ind-AS 16 (Property, Plant and Equipment) requires that depreciation schedules "reflect the pattern in which the asset's future economic benefits

are expected to be consumed" and mandates annual reviews of depreciation policies, thereby limiting opportunistic depreciation changes (KPMG, 2020). Similarly, enhanced presentation and disclosure norms under Ind-AS 1 (Presentation of Financial Statements) increase transparency in SG&A classification, thereby discouraging arbitrary expense shifting. Similarly, the coefficient for LVGI displays a positive but statistically insignificant coefficient (0.0008; p = 0.6574) in the regression results. Suggesting that during the post–Ind-AS period, changes in leverage are not significantly associated with DA, implying that firms are not predominantly using accrual-based EM to meet debt covenants or conceal leverage-driven financial stress. This finding diverges from the earlier empirical literature, which frequently linked leverage with upward EM, particularly under financial reporting frameworks with less stringent disclosure and fair valuation standards (DeFond & Jiambalvo, 1994).

The post–Ind-AS results reflect a noticeable shift in the nature and drivers of earnings manipulation in India. Several Beneish M-Score indices, previously positively associated with discretionary accruals (e.g., GMI, SGI, DSRI), now exhibit significant negative coefficients, indicating a decline in manipulation via traditional accrual-based techniques. This shift validates the regulatory intent behind Ind-AS adoption: to bring transparency, comparability, and investor confidence through principles-based reporting and tighter recognition criteria (Soderstrom & Sun, 2007).

Nevertheless, the persistent significance of TATA suggests that DA remain an important vehicle for EM, even under a stricter regime. This echoes international evidence that accrual manipulation often adapts to new standards rather than disappearing (D. C. Burgstahler et al., 2006). It underscores the need for enhanced enforcement, audit quality, and forensic tools, in addition to regulatory reforms, to effectively deter opportunistic reporting.

Table 5.5: Panel regression analysis: Parameters of Beneish M-Score and discretionary accruals after Ind-AS adoption

Particulars	*Coefficient*	*Std. Error*	*p-value*
constant	0.1392	0.0071	<0.0001***
Gross Margin Index (GMI)	−0.0085	0.0025	0.0010***
Sales Growth Index (SGI)	−0.0238	0.0061	0.0001***
Days' Sales in Receivables Index (DSRI)	−0.0022	0.0006	0.0007***
Asset Quality Index (AQI)	−0.0009	0.0004	0.0608*
Depreciation Index (DEPI)	−0.0024	0.0038	0.5272
Sales, General and Administrative Expenses Index (SGAI)	−0.0023	0.0042	0.5797
Total Accruals to Total Assets (TATA)	0.2634	0.0791	0.0009***
Leverage Index (LVGI)	0.0008	0.000	0.6574
N	2848		

R squared	0.7147
Hausman test	0.000***
Durbin-Watson	1.8967
Breusch-Pagan test	0.06743 (0.8965)
P-value	0.000***

Note: 10 per cent, 5 per cent, and 1 per cent significance levels are indicated by *, **, and ***, respectively.

Source: Author's compilation

5.5 Conclusion

The empirical analysis highlights a significant shift in EM practices following the adoption of Ind-AS in India. The findings indicate that traditional triggers of accrual-based earnings manipulation, such as deteriorating gross margins and aggressive sales growth, which were positively associated with DA under Indian GAAP, exhibit negative relationships after the implementation of Ind-AS. This suggests that the stricter revenue recognition, fair value measurement, and disclosure requirements under Ind-AS have effectively curtailed opportunities for manipulation through these channels. However, the persistent significance of total accruals to total assets in both periods reflects that while Ind-AS has limited certain forms of accrual-based EM, it has not eliminated managerial discretion in financial reporting. Moreover, some avenues, such as manipulation through receivables and asset classifications, although weakened, still exhibit marginal associations with DA. These findings emphasize the importance of strong accounting standards in improving earnings quality, while also pointing to the need for ongoing regulatory oversight and supporting governance mechanisms to curb remaining EM practices.

CHAPTER – 6

ROLE OF GOVERNANCE MECHANISMS IN ACCRUAL AND REAL EARNINGS MANAGEMENT

6.1 Introduction

The growing incidence of major corporate scandals such as Enron, WorldCom, Satyam, and Kingfisher has underscored the crucial role of robust CG in safeguarding the integrity of financial reporting. Governance mechanisms, such as board independence, board size, board meeting frequency, CEO duality, and the presence of high-quality foreign auditors, are designed to monitor management behavior, promote transparency, and mitigate opportunistic earnings manipulation (Cadbury, 1992; OECD, 2015). Prior research provides substantial evidence that these mechanisms are effective in constraining AEM, as they enhance oversight over accounting estimates and DA (Fama & Jensen, 1983; García-Meca & Sánchez-Ballesta, 2009; Xie et al., 2003). However, the effectiveness of governance mechanisms in constraining REM, which involves altering actual business operations to achieve earnings targets, remains less clear and more contested in the literature. Many studies suggest that while strong governance and high audit quality restrict accrual manipulation, they may inadvertently encourage managers to substitute AEM with REM, given its operational nature and lower detectability (D. A. Cohen et al., 2008; Zang, 2012). Furthermore, the moderating influence of institutional setting and the interaction among governance variables on REM remain underexplored, particularly in emerging markets. This chapter addresses these gaps by systematically examining how key governance mechanisms jointly influence AEM and REM and whether their effectiveness varies across institutional and firm-specific settings.

This chapter is structured as follows: Section 6.2 outlines the estimation model employed to examine the relationship between corporate governance variables and both accrual-based and

real earnings management. Section 6.3 then presents and discusses the empirical results, followed by the concluding remarks in Section 6.4.

6.2 Estimation Model

This chapter examines whether changes in firm-level governance mechanisms signal potential shifts in accrual-based and REM. The analysis utilizes a dataset combining cross-sectional and time-series observations, enabling the construction of panel data. Endogeneity and unobservable heterogeneity are two significant econometric limitations in panel data structures (Baltagi, 2013). The problem of endogeneity arises when alterations in the EM drive change in CG measures (Leuz et al., 2003), and as a result, the direction of causality is not definitively established, leading to the anticipation that this simultaneous relationship may introduce biases in the predictions (Baltagi, 2013). On the other hand, unobservable heterogeneity refers to the unique attributes of each firm that remain consistent over time, such as managerial style, risk attitude, internal policies, organizational structure, or the firm's business strategy (Saona et al., 2020). Hence, such firm-specific fixed effects can be managed using econometric methods. Therefore, the current study proceeds with the Generalized Method of Moments (*hereafter,* GMM) – System Estimator (*hereafter*, SE) as propounded by (Blundell & Bond, 1998; Bond, 2002). A notable characteristic of GMM is its capacity to handle potential endogeneity and heterogeneity issues by using lagged variables from the model as instruments on the right side of the Eqn. The present study incorporates all such variables with lags from *t–1* to *t–3* in the estimations. Additionally, the reliability of the estimations is verified using two specification tests. Initially, the validity of the instruments, particularly in terms of over-identified restrictions and correct model specification, is suggested by an insignificant p-value in the Sargan test. Secondly, a serial correlation test is performed: the p-value for AR-1 (testing for the absence of first-order serial correlation) should be significant, whereas the p-value for AR-2 (testing for the absence of second-order serial correlation) should be insignificant. All these conditions were met in each model examined in the study, demonstrating that the obtained results are unbiased and consistent.

Therefore, the following generic model specification has been devised to test the proposed hypotheses:

$$REM_{i,t} = \alpha_0 + \sum_{k=1}^{K} \beta_k CG_{i,t} + \sum_{j=1}^{J} \delta_j CV_{i,t} + \eta_i + \mu_t + \varepsilon_{i,t} \quad (6.1)$$

$$AEM_{i,t} = \alpha_0 + \sum_{k=1}^{K} \beta_k CG_{i,t} + \sum_{j=1}^{J} \delta_j CV_{i,t} + \eta_i + \mu_t + \varepsilon_{i,t} \quad (6.2)$$

Where REM represents an aggregate measure of REM for the firm i during time t; AEM refers to accrual earnings management, proxied by the absolute value of discretionary accruals; CG refers to a vector comprising a collection of K, where K = 5 firm-level corporate governance variables, viz., b_indep, b_size, c_dual, b_meet and big_4; CV refers to a vector comprising J = 4 firm-level control variables, viz., f_size, f_liq, f_lev, and f_prof; η_i refers to firm-specific effect; μ_t signify time effect and ε_t refers to the error term.

6.3 Results and Discussion

This section empirically investigates the proposed hypotheses using the GMM, which employs the SE.

6.3.1 Descriptive statistics

Table 6.1 reports the descriptive statistics across three panels: the pooled sample (2015-2022), the pre-pandemic period (2015-2019), and the pandemic period (2020-2022). The mean (median) value of REM is -0.214 (-0.149) for the pooled sample, juxtaposed to -0.212 (-0.145) for pre-pandemic and -0.216 (-0.152) during the pandemic. This indicates that firms are more likely to resort to EM during periods of crisis. This aligns with previously documented in earlier research (Hsu & Yang, 2022; Lassoued & Khanchel, 2021; Šušak, 2020). The mean AEM is higher during the pandemic (0.167) compared to the pre-pandemic period (0.132), indicating that firms relied more on accrual-based techniques during the pandemic, possibly due to operational disruptions that limited the manipulation of real activity. With respect to foreign auditors, 31% of the pooled sample engaged one of the Big 4 audit firms, compared to 50% in the pre-pandemic period and 24% during the pandemic, suggesting a decline in firms' preference for foreign auditors amid the pandemic. In terms of board composition, independent directors constituted 46% of the pooled sample, 44% before the pandemic, and 48% during it. On average, each of the three panels has 10 members. Board meetings present a mean of about six across three periods. Concerning control variables, firm size averages about eight throughout the sample. Firm liquidity averages 2.423 for the combined sample and 2.346 for the pre-pandemic period, with a slight rise to 2.554 during the pandemic, reflecting adequate liquidity levels. Firms exhibit an average profitability of 12% for both the combined and pre-pandemic samples, with a minor decline to 11.8% during the pandemic. The average firm

leverage equals 15% during the crisis, compared to 16.9% and 17.5% in the combined and pre-pandemic period, respectively. The evidence implies that the pandemic period was the most challenging for firms.

6.3.2 Correlation analysis

Table 6.2 compares correlation matrices between the pre-pandemic and the pandemic period to analyze the probable impact of the crisis. The results consistently show negative correlations of REM and AEM with board composition, as well as foreign auditors. Similarly, firm-specific control variables, such as leverage and liquidity, also exhibit an inverse association. Notably, profitability shows a positive correlation, indicating that profitable firms are more likely to engage in earnings manipulation. The findings indicate the absence of major multicollinearity issues, a conclusion further reinforced by the unreported low variance inflation factor (*hereafter*, VIF) values.

Table 6.1: Descriptive statistics

Variables	Mean	S.D.	Min.	Max.	P50th	P25th	P75th
Panel A: Pooled sample (2015-2022)							
REM	-0.214	0.157	0.000	0.457	-0.149	-0.418	-0.115
AEM	0.211	0.147	0.000	1.669	0.135	0.114	0.142
b_indep	0.461	0.162	0.000	1.333	0.500	0.40	0.555
b_size	10.359	3.403	1.000	28.000	10.000	8.000	12.000
c_dual	0.0067	0.0821	0.000	1.000	0.000	0.000	0.000
b_meet	6.554	3.012	1.000	41.000	6.000	5.000	7.000
big_4	0.314	0.464	0.000	1.000	0.000	0.000	1.000
f_size	8.338	1.540	4.373	12.510	8.278	7.336	9.204
f_liq	2.423	2.273	0.106	15.101	1.716	1.165	2.839
f_lev	0.169	0.176	0.000	0.791	0.118	0.013	0.274
f_prof	0.121	0.103	-0.261	0.461	0.109	0.065	0.171
Panel B: Pre-pandemic sample (2015-2019)							
REM	-0.212	0.169	0.000	0.457	-0.145	-0.421	-0.105
AEM	0.132	0.138	0.000	1.568	0.113	0.112	0.165
b_indep	0.445	0.176	0.000	1.333	0.500	0.375	0.555
b_size	10.212	3.499	0.000	28.000	10.000	8.000	12.000
c_dual	0.0064	0.079	0.000	1.000	0.000	0.000	0.000
b_meet	6.526	3.175	0.000	41.000	6.000	5.000	7.000

big_4	0.502	0.501	0.000	1.000	1.000	0.000	1.000
f_size	8.157	1.593	4.373	12.510	8.114	7.093	9.061
f_liq	2.346	2.229	0.106	15.101	1.649	1.128	2.734
f_lev	0.175	0.181	0.000	0.791	0.130	0.009	0.292
f_prof	0.122	0.106	-0.261	0.461	0.110	0.067	0.172
Panel C: Pandemic sample (2020-2022)							
REM	-0.216	0.134	0.000	0.457	-0.152	-0.408	-0.124
AEM	0.167	0.178	0.000	1.657	0.153	0.109	0.124
b_indep	0.484	0.132	0.000	0.857	0.500	0.428	0.555
b_size	10.604	3.224	1.000	24.000	10.000	8.000	12.000
c_dual	0.007	0.086	0.000	1.000	0.000	0.000	0.000
b_meet	6.602	2.721	0.000	24.000	6.000	5.000	7.000
big_4	0.243	0.496	0.000	1.000	0.000	0.000	0.000
f_size	8.639	1.397	4.373	12.510	8.5213	7.665	9.3867
f_liq	2.554	2.3401	0.10627	15.101	1.8284	1.2474	3.0477
f_lev	0.1598	0.1687	0.000	0.79062	0.10184	0.0195	0.2556
f_prof	0.1187	0.0985	-0.2608	0.4603	0.10914	0.0607	0.169

Note: The variables are defined as follows: real earnings management (REM); Board independence (b_indep); Board size (b_size*)*; CEO-duality (c_dual); Board meetings (b_meet); Foreign auditor (big_4); Firm size (f_size); Liquidity (f_liq); Financial leverage (f_lev); Firm profitability (f_prof).
Source: Author(s) compilation

Table 6.2: Correlation matrix

Variables	AEM	REM	b_indep	b_size	c_dual	b_meet	big_4	f_size	f_liq	f_lev	f_prof
Panel A: Pooled sample (2015-2022)											
AEM	1.00										
REM	0.0301	1.00									
b_indep	-0.206	-0.0342	1.00								
b_size	-0.186	-0.0831	0.1644	1.00							
c_dual	0.156	0.0521	0.0244	-0.0259	1.00						
b_meet	0.127	-0.0491	-0.2347	0.0830	-0.0289	1.00					
big_4	-0.094	-0.0061	0.0280	-0.0175	-0.0399	-0.1007	1.00				
f_size	-0.244	-0.0279	0.2002	0.5133	-0.0061	0.1128	-0.0215	1.00			
f_liq	-0.025	-0.0901	-0.0036	-0.0634	-0.0143	0.0007	0.0321	-0.1450	1.00		
f_lev	0.104	-0.0137	-0.0672	-0.0605	-0.0221	0.0861	-0.0925	0.1370	-0.3785	1.00	
f_prof	-0.066	0.0782	0.0937	0.0304	0.0092	-0.0748	0.0550	-0.0888	0.2067	-0.3329	1.00
Panel B: Pre-pandemic sample (2015-2019)											
AEM	1.00										
REM	0.067	1.00									

b_indep	-0.078	-0.011	1.00								
b_size	-0.451	-0.066	0.2481	1.00							
c_dual	0.056	0.0508	0.0263	-0.0054	1.00						
b_meet	0.052	-0.0208	-0.2545	0.0350	-0.0270	1.00					
big_4	-0.023	-0.0141	0.1208	0.0172	-0.0561	-0.1311	1.00				
f_size	-0.371	-0.0082	0.2564	0.5444	-0.0106	0.0686	0.0858	1.00			
f_liq	-0.067	-0.0663	0.0013	-0.0557	-0.0143	-0.0354	0.0854	-0.1309	1.00		
f_lev	0.921	-0.0059	-0.0765	-0.0795	-0.0216	0.0877	-0.1649	0.1310	-0.3775	1.00	
f_prof	-0.581	0.0484	0.1331	0.0392	0.0204	-0.0668	0.0707	-0.0560	0.2085	-0.3269	1.00
Panel C: Pandemic sample (2020-2022)											
AEM	1.00										
REM	0.005	1.00									
b_indep	0.081	0.0798	1.00								
b_size	-0.601	-0.105	-0.0534	1.00							
c_dual	-0.031	0.0580	0.0198	-0.0615	1.00						
b_meet	-0.045	-0.1028	-0.1955	0.1827	-0.0332	1.00					
big_4	-0.004	-0.0784	-0.0050	-0.0199	-0.0043	-0.0415	1.00				
f_size	-0.389	-0.0652	0.0086	0.4447	-0.0010	0.2089	-0.0665	1.00			
f_liq	0.092	-0.1407	-0.0310	-0.0843	-0.0149	0.0665	-0.0204	-0.1966	1.00		
f_lev	-0.089	-0.0685	-0.0307	-0.0169	-0.0225	0.0848	-0.0456	0.1751	-0.3783	1.00	
f_prof	-0.067	0.1425	0.0091	0.0159	-0.0091	-0.0912	-0.0406	-0.1517	0.2070	-0.3472	1.00

Source: Author(s) compilation

6.3.3 Regression analysis

The study employs the GMM–SE approach. Table 6.3 presents panels A, B, and C. The parameters correspond to the estimation model (6.1). A second-order AR(2) test is conducted to check for serial correlation, with the null hypothesis assuming normal distribution, indicating no serial correlation in the random error term. The success of this approach depends on two key assumptions: that the independent variables serve as valid instruments and that the error term exhibits no serial correlation. Additionally, the Hansen-Sargan test is used to verify instrument validity and assess over-identifying restrictions. When the instruments are valid, the test statistic follows a chi-squared distribution. Estimates are conducted using robust standard errors. Further, the VIF determines the absence of autocorrelation issues in the estimations.

Table 6.3: Association of board composition with REM

Variables	Panel A: Pooled sample	Panel B: Pre-pandemic sample	Panel C: Pandemic sample

	(2015-2022)	(2015-2019)	(2020-2022)
b_indep	−0.077**(0.03)	−2.239*(0.07)	0.5128 (0.559)
b_size	-0.064**(0.03)	−0.0392 (0.58)	−0.0515 (0.74)
c_dual	−0.4466* (0.10)	-0.7426 (0.25)	−0.7132 (0.509)
b_meet	0.001 (0.97)	-0.1669 ***(0.00)	−0.0155 (0.721)
big_4	−0.3908***(0.00)	−0.8207*(0.08)	−0.00583 (0.789)
f_size	−1.051***(0.00)	4.185 ***(0.00)	−0.4204 (0.3618)
f_liq	0.076**(0.04)	0.052 (0.611)	0.0685 (0.5208)
f_lev	2.806***(0.00)	−4.875**(0.01)	−5.282**(0.028)
f_prof	0.8757 (0.237)	−1.4245 (0.657)	−5.289**(0.038)
C	0.109***(0.00)	−0.3661***(0.00)	0.1911 (0.5139)
N	2835	1620	810
AR(1) test	2.9559***(0.00)	2.2860***(0.00)	0.1750***(0.00)
AR(2) test	-1.0508 (0.2933)	1.2258 (0.2203)	0.1157 (0.1102)
Over-identification test	284.663 (0.277)	224.787 (0.388)	8.492 (0.291)
Wald test	574.668***(0.000)	340.95***(0.00)	15.309*(0.082)
VIF	1.48	1.25	1.19

Note: 10 per cent, 5 per cent, and 1 per cent significance levels are indicated by *, **, and ***, respectively.

Source: Author(s) compilation

GMM outputs are exhibited in panels A, B, and C of Table 6.3, examining the monitoring propensity of corporate boards in curbing REM. The empirical findings indicate that board independence was significantly associated with reduced earnings manipulation in the pre-pandemic period; however, this association diminished during the COVID-19 pandemic. This time-varying effectiveness of independent directors as a governance mechanism can be theoretically explained using insights from Stewardship theory and Institutional theory.

Stewardship theory provides a compelling framework for understanding pre-pandemic observations. According to (Davis et al., 1997), stewardship theory posits that corporate managers and directors, when entrusted with responsibility, will act in the best interest of the organization rather than pursuing opportunistic personal goals. Independent directors, particularly those without familial or ownership ties, will likely view themselves as stewards of corporate integrity and long-term value creation. Their objectivity enables them to resist managerial pressure to manipulate earnings and prioritize ethical financial reporting. This theoretical lens aligns with the negative and significant association between board independence and earnings manipulation prior to the pandemic, suggesting that truly independent board members enhance governance quality and organizational accountability.

Conversely, the Institutional Theory perspective offers a more suitable explanation for the pandemic-era results. Institutional theory posits that organizations often adopt formal structures and practices not necessarily to improve efficiency but to conform to societal norms and gain legitimacy (Meyer & Rowan, 1977). During the COVID-19 crisis, firms may have appointed individuals with existing affiliations to senior management as "independent" directors to formally meet regulatory and governance standards without ensuring their independence or efficacy. Such appointments likely resulted in directors who lacked the vigilance or authority to act as effective overseers, thereby neutralizing the previously observed benefits of board independence.

The findings highlight that increased involvement of independent directors was associated with reduced EM before the pandemic. As a governance mechanism, board independence offers unbiased opinions, and an absence of familial connections within the ownership structure enhances its tendency towards more objective decision-making. However, during the pandemic, the phenomenon aligns with institutional theory, which posits that organizations often adopt formal structures and practices to gain legitimacy, especially during times of uncertainty (DiMaggio & Powell, 1983). In this context, nominating familiar or aligned individuals as independent directors symbolically fulfils governance norms, even if their ability to challenge management is limited.

The finding that firms with larger boards tend to exhibit lower levels of REM is consistent with resource dependence theory, which conceptualizes the board of directors as a key channel for securing and integrating external expertise, legitimacy, and information. According to (Pfeffer & Salancik, 1978), organizations depend on their environment for essential resources, and boards are strategically positioned to help secure them. Larger boards are more likely to comprise members with specialized financial knowledge, diverse professional experiences, and external connections, all of which contribute to more effective monitoring and advisory functions. As (Xie et al., 2003) noted, larger boards tend to include financially savvy independent directors who can mitigate aggressive financial reporting practices. Thus, in line with this theory, board size is a control mechanism and a resource-enriching body that enhances organizational decision-making and integrity.

Unlike agency theory, which views CEO duality as a concentration of power that undermines board independence, stewardship theory suggests that unified leadership can promote stronger accountability, long-term orientation, and organizational alignment (Donaldson & Davis, 1991). This theory posits that when entrusted with leadership responsibility, executives often act as stewards of organizational interests rather than self-serving agents. The negative and

insignificant finding corroborates stewardship theory and resonates with the results of (Chee & Tham, 2020).

However, the COVID-19 pandemic fundamentally disrupted this governance mechanism, rendering board meetings less effective in deterring EM. The board's inability to mitigate it during the pandemic reflects a symbolic adherence to governance norms rather than substantive oversight. This transition is explained by Institutional Theory, particularly the concept of decoupling, where formal structures (i.e., board meetings) persist for the sake of symbolic legitimacy but are no longer tightly coupled to organizational outcomes (Meyer & Rowan, 1977). In periods of institutional upheaval, such as a pandemic, boards may fulfil the formal requirement of convening but withdraw from active intervention, allowing managerial discretion to go unchecked.

Through the lens of resource dependence theory (Pfeffer & Salancik, 1978), this study demonstrates that the presence of foreign auditors, as proxied by affiliation with the Big Four, has a negative and significant impact on REM in both the pooled and pre-pandemic periods. This supports the assertion that foreign auditors are critical external resources that firms depend on for legitimacy, enhanced oversight, and reduced informational uncertainty. Their superior expertise, access to global auditing standards, and reputation concerns contribute to improved financial reporting quality (DeAngelo, 1981; Kent et al., 2010). From a resource dependence theory perspective, engaging these auditors is a strategic move by firms to secure essential external resources and signal credibility to stakeholders. However, during the pandemic period, the association between foreign auditors and REM becomes insignificant, suggesting a diminished capacity of these firms to enforce governance due to logistical constraints and disruptions in audit processes (Lassoued & Khanchel, 2021). This shift highlights the conditional nature of external resource effectiveness in times of systemic crisis.

Concerning control variables, the firm size coefficient is positive and significant during the pre-pandemic period. This result is consistent with prior research, which suggests that larger firms typically employ more accounting strategies for managing transactions. Consequently, they might be more capable of manipulating earnings than smaller firms, mainly when they intend to reduce political expenses (Aljughaiman et al., 2023; Chee & Tham, 2020). The estimated coefficient for firm liquidity is statistically insignificant, thus indicating no substantial impact on EM. Firm leverage shows a negative and significant association for both the pre- and during-pandemic samples, while firm profitability exhibits a significantly inverse association in the pandemic sample. This supports the notion that firms with higher profitability and leverage tend to be less inclined to manipulate accounting data to meet their earnings

targets (Aljughaiman et al., 2023; Orazalin, 2020).

Table 6.4: Association of board composition with AEM

Variables	Panel A: Pooled sample (2015-2022)	Panel B: Pre-pandemic sample (2015-2019)	Panel C: Pandemic sample (2020-2022)
b_indep	-0.0056 *** (0.000)	-0.0007 *** (0.000)	0.3126 (0.6687)
b_size	-0.0337 ** (0.0489)	-0.0020 ** (0.0732)	-0.0617 (0.7854)
c_dual	-0.5588 * (0.1098)	0.0892 (0.3862)	-0.7623 (0.6531)
b_meet	0.0841 (0.5981)	0.0023 ** (0.0400)	-0.0143 (0.3582)
big_4	-0.0921 *** (0.000)	-0.0427*** (0.0004)	-0.0351 (0.2649)
f_size	-1.876 ** (0.0316)	-0.0188 ** (0.0354)	-0.764 (0.4130)
f_liq	0.0891 *** (0.000)	-0.0033* (0.0783)	0.6542 (0.371)
f_lev	2.915 *** (0.000)	0.0190 (0.6442)	-4.173*** (0.000)
f_prof	0.0126 (0.7634)	-0.0155** (0.0398)	-2.062*** (0.000)
C	0.208 *** (0.000)	0.3133*** (0.000)	0.2811 (0.6154)
N	2835	1620	810
AR(1) test	2.8759***(0.000)	2.1750***(0.00)	0.1640***(0.00)
AR(2) test	-1.0409 (0.2844)	1.2347 (0.2102)	0.1068 (0.1201)
Over-identification test	273.552 (0.388)	235.678 (0.399)	7.382 (0.281)
Wald test	685.779***(0.000)	453.93***(0.000)	17.208*(0.091)
VIF	1.37	1.15	1.03

Note: 10 per cent, 5 per cent, and 1 per cent significance levels are indicated by *, **, and ***, respectively.

Source: Author(s) compilation

The results reported in Table 6.4 highlight significant differences in the ability of governance mechanisms to restrain DA (a proxy for accrual-based EM) across distinct time periods, carrying important theoretical implications.

In the pooled sample (2015–2022) and pre-pandemic period (2015–2019), board independence shows a significant negative association with discretionary accruals (pooled: -0.0056***, pre-pandemic: -0.0007***). This supports agency theory (Fama & Jensen, 1983; Jensen & Meckling, 1976), which posits that independent directors reduce agency costs by monitoring managers and curbing opportunistic financial reporting. It also aligns with institutional theory, as firms conform to governance norms emphasizing independence to gain legitimacy (Meyer & Rowan, 1977). However, in the pandemic period (2020–2022), board independence loses significance (0.3126, $p > 0.05$), implying that during times of crisis, external directors may have had limited visibility or capacity to monitor complex, rapidly evolving decisions,

consistent with resource dependency theory's view that boards may struggle to provide adequate oversight without sufficient real-time information (Pfeffer & Salancik, 1978).

Board size is negatively and significantly related to DA in the pooled (-0.0337**) and marginally in the pre-pandemic period (-0.0020**). This is consistent with resource dependence theory, which posits that while larger boards can offer a broader range of skills, they may also be prone to inefficiencies. In the pandemic, the relationship is insignificant (-0.0617), suggesting that crisis dynamics overrode the potential advantages of either small or large boards.

Surprisingly, CEO duality is negatively associated with DA in the pooled sample (-0.5588*) and during the pandemic (-0.7623), although this association is not statistically significant during the pandemic period. This contradicts classic agency theory, which views CEO duality as weakening oversight. Instead, this finding could align with stewardship theory (Donaldson & Davis, 1991), which suggests that concentrated leadership during uncertain times may have enabled unified, swift decision-making and reduced manipulative behavior. The non-significant result in the pre-pandemic period (0.0892) suggests that the effect of CEO duality monitoring may vary based on environmental stability.

The pre-pandemic period exhibits a small but significant positive association (0.0023**), indicating that frequent meetings may reflect boards' reactions to emerging concerns, but not effectively constrain EM. This pattern reflects the possibility of form over substance, where boards often meet to demonstrate compliance with governance norms, aligning with institutional theory, but without translating these efforts into effective oversight. In both the pooled and pandemic periods, the absence of a significant association indicates that the mere frequency of meetings does not guarantee robust monitoring. From a resource dependency perspective, this underscores the fact that boards may lack access to timely, detailed operational information or external expertise during heightened uncertainty, such as the pandemic, thereby limiting their ability to provide meaningful guidance and control.

Foreign auditors significantly reduce DA in the pooled (-0.0921***) and pre-pandemic (-0.0427***) periods, consistent with agency theory and institutional theory, as high-quality external auditors enforce stricter reporting and enhance legitimacy. However, the pandemic period shows an insignificant result (-0.0351), suggesting that even strong external auditors faced challenges detecting or constraining managerial manipulation amid unprecedented operational disruptions.

Concerning control variables, firm size shows a significant negative association with pooled (-1.876**) and pre-pandemic (-0.0188**) data, indicating that larger firms faced more scrutiny,

which aligns with institutional pressures for transparency. The pandemic nullifies this effect, perhaps as stakeholders were more tolerant of reporting flexibility during crises. Firm liquidity exhibits a significant positive association in the pooled sample (0.0891***), possibly indicating that firms with higher liquidity manipulate earnings to smooth their performance. Leverage has contrasting effects: a positive association in pooled data and a negative one in the pandemic (-4.173***), where highly leveraged firms may have reduced manipulation, fearing greater scrutiny from creditors during the crisis (agency theory). Furthermore, firm profitability shows an insignificant change in the pooled sample but a significantly negative trend during the pandemic (-2.062***), implying that profitable firms had less incentive to manage earnings under crisis conditions.

6.4 Conclusion

The empirical findings of this study underscore the context-dependent role of corporate governance mechanisms in constraining both accrual-based and REM in Indian firms. Before the pandemic, board independence, board size, and the presence of foreign auditors significantly contributed to limiting earnings manipulation, aligning with agency theory and resource dependence theory, which emphasize the importance of independent oversight and external expertise. However, during the pandemic, these governance mechanisms essentially lost their effectiveness, reflecting how crisis conditions can diminish the capacity of boards and auditors to monitor managerial behavior effectively. This outcome is consistent with institutional theory's notion of symbolic compliance over substantive control during periods of uncertainty. While CEO duality, contrary to agency theory expectations, did not consistently promote earnings manipulation, this may reflect the benefits of unified leadership in crisis contexts, as posited by stewardship theory. Despite enhanced governance structures on paper, the shift toward greater accrual-based manipulation during the pandemic underscores the need for adaptive, resilient governance practices that extend beyond formal compliance to ensure genuine accountability, particularly during periods of institutional upheaval. These findings emphasize that governance mechanisms are not universally effective, and their monitoring strength is contingent on firm-level characteristics.

CHAPTER – 7

SUBSTITUTABILITY/COMPLEMENTARITY OF EARNINGS MANAGEMENT TECHNIQUES (REAL AND ACCRUAL)

7.1 Introduction

This chapter examines whether firms in India employ REM and AEM as substitutes or complements in their pursuit of earnings targets and how the ownership of promoters moderates this association. The analysis seeks to address Objective 3 of the study by examining how firms strategically choose between these techniques in response to their respective cost environments and monitoring mechanisms. The chapter draws on agency theory to explore how managers balance the trade-offs between detection risk, operational costs, and reporting goals while considering institutional and resource dependence perspectives. Using panel data regression with a fixed effects model, the analysis evaluates whether firms shift between REM and AEM based on cost determinants, such as financial distress (measured by the z-score) and audit quality (proxied by the presence of a Big Four auditor), as well as the influence of firm-level control variables.

16 The structure of this chapter is as follows: Section 7.2 outlines the estimation model used to analyze the substitutive or complementary nature of EM techniques, followed by the 41 presentation and discussion of results in Section 7.3. The chapter concludes with Section 7.4.

7.2 Estimation Model

This chapter examines whether EM techniques (both real and accrual) are used as substitutes or complements by firms in India. Concerning Objective 3, the study employs panel data regression, particularly the fixed effects model. Accordingly, the following generic model specification has been devised to test the proposed hypotheses:

$$REM_{i,t} = \beta_0 + \beta_{1,k} Cost\ of\ REM_{k,t} + \beta_{2,l} Cost\ of\ AEM_{l,t} + \sum_m \beta_{3,m}\ Control_{m,t} + \mu_t \quad (7.1)$$

$$AEM_{i,t} = \gamma_0 + \gamma_{1,k} Cost\ of\ AEM_{k,t} + \gamma_{2,l} Cost\ of\ REM_{l,t} + \gamma_3 Unexpected\ REM_t + \sum_m \gamma_{4,m}\ Control_{m,t} + \vartheta_t \quad (7.2)$$

$$REM_{i,t} = \beta_0 + \beta_{1,k} Cost\ of\ REM_{k,t} + \beta_{2,k} Cost\ of\ REM_{k,t} * Promoters'Ownership + \beta_{3,l} Cost\ of\ AEM_{l,t} + \beta_{4,l} Cost\ of\ AEM_{l,t} * Promoters'Ownership + \sum_m \beta_{5,m}\ Control_{m,t} + \mu_t \quad (7.3)$$

$$AEM_{i,t} = \gamma_0 + \gamma_{1,k} Cost\ of\ AEM_{k,t} + \gamma_{2,k} Cost\ of\ AEM_{k,t} * Promoters'Ownership + \gamma_{3,l} Cost\ of\ REM_{l,t} + \gamma_{4,l} Cost\ of\ REM_{l,t} * Promoters'Ownership + \gamma_5 Unexpected\ REM_t + \sum_m \gamma_{6,m}\ Control_{m,t} + \vartheta_t \quad (7.4)$$

Where REM represents an aggregate measure of REM for the firm i during time t; AEM refers to accrual earnings management, measured by the absolute value of DA; Cost of REM signifies the financial distress measured by z_score; Cost of AEM refers to firms audited by big_4 auditors; Unexpected REM in Eqn (7.2) is the residuals of Eqn (7.1); Cost of AEM*Promoters' ownership refers to firms audited by big_4 auditors moderated by promoters' ownership; Cost of REM*Promoters' ownership signifies the financial distress measured by z_score moderated by promoters' ownership; Control refers to firm-level control variables, viz., f_size, f_liq, f_lev, and f_prof; η_i refers to firm-specific effect; μ_t signify time effect and ε_t refers to the error term.

7.3 Results and Discussion

This section empirically examines the hypotheses formulated under Objective 3, using panel data regression with a fixed-effects specification.

7.3.1 Descriptive Statistics

Table 7.1 presents the descriptive statistics of the sample. The mean accrual-based AEM is 0.211, ranging from 0.000 to 0.457 with a standard deviation of 0.147. This indicates moderate

use of accrual strategies across firms, with some variation but no extreme outliers. In contrast, REM exhibits a negative mean value of −0.214, indicating that, on average, firms employ real activity manipulation strategies that reduce reported earnings, such as cutting discretionary expenses or overproducing to lower the cost of goods sold. The z-score, with a mean of 1.521 (ranging from −1.054 to 3.289), indicates that most firms are financially stable. However, a few approach distress thresholds, which may motivate EM to avoid covenant breaches or reputational damage. Approximately 58% of the sample firms are audited by Big 4 auditors, highlighting a significant reliance on reputable external auditors, which, according to agency theory, should enhance financial reporting quality and deter earnings manipulation, and average promoters' ownership stands at 58.05%. However, the wide range (0–100%) signals considerable heterogeneity in ownership concentration. Firm liquidity and size indicate that the sample predominantly consists of reasonably large and liquid firms, although variations suggest differences in financial flexibility across entities. The mean leverage is low at 0.169, consistent with generally conservative capital structures, yet the range reveals some firms with unusual debt positions. Firm profitability averages 0.986, but with variation that may reflect differing operational efficiencies or sectoral differences. These descriptive results collectively set the stage for understanding how CG and firm-level factors might influence EM behaviors, especially in firms with greater financial flexibility and external monitoring.

Table 7.1: Descriptive Statistics

Particulars	Mean	Min	Max	S. D.	5% Perc.	95% Perc.
AEM	0.211	0.000	0.457	0.147	-0.148	0.524
REM	-0.214	0.000	1.669	0.591	-1.4187	0.000
z_score	1.521	-1.054	3.289	0.961	0.122	3.195
big_4	0.581	0.000	1.000	0.518	0.000	1.000
promoters' ownership	58.050	0.000	100.0	18.494	28.963	90.00
f_liq	2.423	0.106	15.101	1.240	0.334	7.531
f_size	8.338	4.373	12.510	1.040	5.979	11.273
f_lev	0.169	-2.203	0.791	0.176	-0.002	0.306
f_prof	0.986	-0.261	0.461	0.836	0.133	2.247

Source: Author's compilation

7.3.2 Correlation Matrix

Table 7.2 presents the correlation analysis. The positive correlation between AEM and REM (0.150) suggests that rather than substituting one form for the other, some firms may engage in both types of manipulation simultaneously, possibly to reinforce earnings targets. AEM shows only weak correlations with most firm characteristics, including z-score (0.0105), liquidity

(−0.0232), firm size (0.0603), leverage (−0.0068), and profitability (−0.0268), implying that accrual manipulation is not systematically associated with financial health or size in this sample. Notably, the negative correlation between AEM and Big 4 auditor presence (−0.0729) provides preliminary support for the role of high-quality external auditors in curbing accrual-based EM, consistent with agency theory. In contrast, REM displays a slight positive correlation with z-score (0.1686), suggesting that financially stronger firms may have greater scope or incentive to engage in operational manipulations. Promoters' ownership is positively correlated with AEM (0.0691) and REM (0.0263), though the relationships are weak. Its relationships with other firm-level variables, including liquidity (0.0393), size (−0.0198), and leverage (−0.0218), remain weak, indicating no strong firm characteristic consistently drives REM. The generally low correlations among the independent variables also suggest the absence of multicollinearity concerns, supporting the appropriateness of these variables for further multivariate regression analysis.

Table 7.2: Correlation Matrix

Variables	AEM	REM	Z_score	Big_4	promoters' ownership	f_liq	f_size	f_lev	f_prof
AEM	1.00								
REM	0.150	1.00							
Z_score	0.0105	0.1686	1.00						
Big_4	-0.0729	0.0033	-0.0229	1.00					
promoters' ownership	0.0691	0.0263	0.0056	-0.1741	1.00				
f_liq	-0.0232	0.0393	0.0159	0.0491	-0.0406	1.00			
f_size	0.0603	-0.0198	-0.0421	0.0177	-0.1078	-0.1271	1.00		
f_lev	-0.0068	-0.0218	-0.0231	-0.1043	0.0161	-0.2150	0.1699	1.00	
f_prof	-0.0268	0.0190	-0.0187	-0.0004	0.0224	-0.0521	-0.2386	-0.1483	1.00

Source: Author's compilation

7.3.3 Regression Analysis

This study examines the substitutive and complementary relationship between REM and accrual-based EM while considering the role of cost determinants. According to agency theory (Jensen & Meckling, 1976), managers act opportunistically to maximize their utility by choosing between REM and AEM based on cost-benefit trade-offs. Consistent with this view, the results highlight the strategic interplay between these two forms of earnings manipulation. Table 7.3 reports the empirical findings from the system GMM estimation, highlighting distinct patterns in the trade-off between real and accrual-based earnings management across the pre-

pandemic and pandemic periods. In the pre-pandemic phase, REM exhibits a significantly negative intercept ($\beta = -0.320$, $p < 0.001$), suggesting that firms, on average, refrain from real activities manipulation without cost or incentive structures. Conversely, the AEM intercept remains statistically insignificant, implying no systemic accrual manipulation. However, during the pandemic, a shift is observed: the REM intercept, though still negative, is reduced in magnitude ($\beta = -0.105$, $p < 0.05$), while the AEM intercept becomes strongly positive and highly significant ($\beta = 0.999$, $p < 0.001$). This pattern indicates an increased reliance on accrual-based techniques during periods of economic uncertainty, possibly due to constraints on real operations and heightened scrutiny over visible cash-flow-based manipulations (Roychowdhury, 2006; Zang, 2012).

Furthermore, the relationship between REM and AEM appears context-dependent. While no significant substitution is observed pre-pandemic, the positive and significant association between unexpected REM and AEM during the pandemic ($\beta = 0.226$, $p < 0.05$) suggests a complementary relationship under crisis conditions. This aligns with findings from (D. A. Cohen & Zarowin, 2010), who argue that firms may simultaneously deploy both forms of manipulation when financial pressures intensify.

Cost determinants play a pivotal role in shaping these strategies. The Z-score, which proxies for financial distress risk, is statistically insignificant during pre-pandemic but turns significantly negative during the pandemic for both REM ($\beta = -1.226$, $p < 0.001$) and AEM ($\beta = -0.150$, $p < 0.001$). This result supports the cost-based framework of EM, as firms tend to limit manipulation when financial fragility increases (P. Dechow et al., 2010). Additionally, the presence of Big Four auditors is positively associated with REM in the pre-pandemic period ($\beta = 2.883$, $p < 0.001$), consistent with the notion that higher audit quality may lead firms to shift from accrual-based to REM in order to avoid detection (Chi et al., 2011). Notably, during the pandemic, Big Four affiliation exerts a strong and negative influence on AEM ($\beta = -12.443$, $p < 0.01$), reaffirming the deterrent effect of superior audit monitoring on discretionary accruals (Becker et al., 1998).

Control variables such as firm size and profitability exert mixed influences. Firm profitability significantly reduces REM in the pre-pandemic period ($\beta = -1.725$, $p < 0.05$), suggesting that less profitable firms may engage more aggressively in real activity manipulation to meet performance targets, a pattern supported by (DeFond & Park, 1997). However, its influence dissipates during the pandemic. Liquidity was weakly positive in both REM and AEM models during the pandemic, indicating that cash-rich firms may have greater operational flexibility in managing earnings. Leverage only negatively affects AEM in the pre-pandemic phase ($\beta =$

−0.719, $p < 0.05$), consistent with prior evidence that debt covenants discourage accrual manipulation (Press & Weintrop, 1990).

Model diagnostics confirm the robustness of the findings. The Arellano-Bond AR(2) test is insignificant across all specifications, affirming the absence of second-order serial correlation. Hansen's J-statistic validates the instrument's relevance, and VIF values remain below the standard threshold, indicating no concerns about multicollinearity. The results substantiate the theoretical expectation that firms trade off earnings management techniques in response to shifting cost constraints, especially under external economic shocks (Zang, 2012).

Table 7.3: The Trade-Off Between Real Activities Manipulation and Accrual-Based Earnings Management

Particulars	Pre-pandemic		Pandemic	
	REM Eqn	**AEM Eqn**	**REM Eqn**	**AEM Eqn**
Intercept	−0.320304 *** (0.0000)	0.109587 (0.2391)	−0.104559 ** (0.0149)	0.999387 *** (0.0000)
Unexpected REM	--	0.134253 (0.2758)	--	0.22558 ** (0.0183)
Costs associated with real activities manipulation: Z score	0.294085 (0.1118)	−0.0378112 (0.3243)	−1.22622 *** (0.0007)	−0.149583 *** (0.0008)
Costs associated with accrual-based earnings management: Big 4	2.88294 *** (0.0000)	0.0876204 (0.4546)	18.5191 (0.4217)	−12.4429 *** (0.0027)
Control variables: Firm size	−0.735789 (0.1138)	−0.15818 (0.1296)	0.261113 (0.1792)	0.0160107 (0.3426)
Firm liquidity	0.0656672 (0.6116)	0.0158098 (0.3618)	0.04375 * (0.0912)	0.00341447 * (0.0965)
Firm profitability	−1.72509 ** (0.0199)	−0.126754 (0.3817)	−0.11834 (0.1802)	0.0012546 (0.8838)
Firm leverage	−1.54818 (0.2533)	−0.718946 ** (0.0139)	0.02819 (0.9249)	−0.0228028 (0.5542)
N	1780	1780	1068	1068
AR(1) test	2.0564 *** (0.000)	2.1506 *** (0.000)	2.3786 *** (0.000)	2.6753 *** (0.000)
AR(2) test	1.5136 (0.1301)	0.7425 (0.4578)	1.9853 (0.7621)	0.8412 (0.5761)
Over-identification test	230.715	66.7172	0.0638	0.00132

	(0.2675)	(0.3838)	(0.3654)	(0.1897)
Wald test	101.207 *** (0.000)	152.3828 *** (0.000)	119.3416 *** (0.0002)	187.427 *** (0.0000)
VIF	1.563	1.254	1.189	1.092

Note: 10 percent, 5 percent, and 1 percent significance levels are indicated by *, **, and ***, respectively.
Source: Author's compilation

Table 7.4 reports the results obtained from the system GMM estimation, providing meaningful insights into the dynamics of accrual-based and REM across the pre-pandemic and pandemic periods, with promoters' ownership serving as a moderating factor. The intercept in the AEM Eqn is statistically significant and positive only during the pandemic period ($\beta = 0.8663$, $p < 0.01$), indicating an elevated tendency toward accrual manipulation during economic disruptions, likely driven by the flexibility and discretion afforded by accrual accounting (D. A. Cohen & Zarowin, 2010; Roychowdhury, 2006). In contrast, REM did not show a significant intercept in either period, suggesting a less prevalent reliance on real activity manipulation, possibly due to its operational costliness (Zang, 2012).

Evidence of a complementary relationship between AEM and REM is seen during the pandemic, where unexpected REM is positively and significantly associated with AEM ($\beta = 0.1227$, $p < 0.01$). This implies that firms under financial distress may employ both techniques concurrently rather than substituting between them, a pattern consistent with prior literature emphasizing coordinated use of EM tools under high-stakes conditions (D. A. Cohen et al., 2008).

Regarding the cost determinants, the Z-score, which proxies financial stability and distress risk, exhibits a significant positive association with REM pre-pandemic ($\beta = 0.2238$, $p < 0.001$) and a negative association during the pandemic ($\beta = -0.2452$, $p < 0.05$). This reflects a shift in managerial behavior: during the pre-pandemic period, financially distressed firms were more likely to manipulate real activities, whereas in the pandemic, these costs deter such manipulation (P. Dechow et al., 2010). On the other hand, the cost of AEM, proxied by Big 4 auditor affiliation, is significantly negative only during the pandemic ($\beta = -0.1262$, $p < 0.01$), confirming that higher audit quality imposes stricter constraints on accrual manipulation when external monitoring intensifies (Becker et al., 1998; Chi et al., 2011).

The moderating role of promoters' ownership is especially pronounced in its interaction with the Z-score. The interaction effect is negative and statistically significant for REM in the pre-pandemic period ($\beta = -0.0317$, $p < 0.001$) and for AEM during the pandemic ($\beta = -0.0014$, $p < 0.001$). This implies that in promoter-dominated firms, the relationship between financial

health and earnings manipulation weakens, possibly due to long-term reputational concerns or reduced pressure from external shareholders (Joseph P.H. Fan & Wong, 2002). Notably, the interaction terms between Big Four auditors and promoter ownership are statistically insignificant across all models, suggesting that promoter ownership does not moderate the relationship between audit quality and EM.

Among the control variables, firm size has a negative influence on REM before the pandemic ($\beta = -1.0663$, $p < 0.05$), suggesting that larger firms may face more scrutiny or rely less on operational earnings manipulation. Similarly, firm profitability significantly deters REM in the pre-pandemic period ($\beta = -1.7162$, $p < 0.05$), in line with evidence that poorly performing firms are more motivated to manage earnings to meet performance benchmarks (DeFond & Park, 1997). Leverage negatively affects AEM pre-pandemic ($\beta = -0.5725$, $p < 0.05$), indicating that firms with higher debt may refrain from accrual manipulation due to covenant constraints or lender oversight (Press & Weintrop, 1990).

All diagnostic tests validate the robustness of the model. The AR(2) test results are insignificant, confirming the absence of second-order serial correlation. The Hansen over-identification tests also support the appropriateness of instruments. VIFs are well below the critical threshold of 10, confirming no concerns about multicollinearity. These findings support the cost-based trade-off theory of earnings management (Zang, 2012), suggesting that firms adjust their manipulation strategies in response to the relative costs, ownership structure, and macroeconomic environment.

Table 7.4: The Moderating Association of Promoters' Ownership in the Trade-Off Between Real Activities Manipulation and Accrual-Based Earnings Management

Particulars	Pre-pandemic		Pandemic	
	REM Eqn	AEM Eqn	REM Eqn	AEM Eqn
Intercept	0.5816 (0.2156)	0.2004 (0.1195)	−0.1046 (0.3247)	0.8663 *** (0.0014)
Unexpected REM	--	0.1497 (0.1883)	--	0.1227*** (0.0153)
Costs associated with real activities manipulation: Z score	0.2238*** (0.000)	0.1218 (0.2796)	−0.2452 ** (0.0475)	0.0160 (0.3200)
Costs associated with accrual-based earnings management: Big 4	0.2350 (0.2118)	0.0714 (0.8128)	0.1115 (0.4835)	−0.1262 *** (0.0026)
Costs associated with real activities	−0.0317***	−0.0026	0.0293	−0.0014***

manipulation: Zscore*promoters' ownership	(0.0002)	(0.1849)	(0.1965)	(0.0001)
Costs associated with accrual-based earnings management: Big4*promoters' ownership	0.0058 (0.8341)	−0.0009 (0.8456)	0.0320 (0.2854)	0.0003 (0.7229)
Control variables: Firm size	−1.0663 ** (0.0290)	−0.1635 (0.1493)	0.1036 (0.5786)	−0.0030 (0.7388)
Firm liquidity	0.0138 (0.9215)	0.0004 (0.9701)	0.0254 (0.3603)	0.0015 (0.1211)
Firm profitability	−1.7162 ** (0.0335)	−0.0631 (0.5211)	−0.0540 (0.6154)	−0.0029 (0.5524)
Firm leverage	−0.6638 (0.6445)	−0.5725** (0.0389)	0.2952 (0.3181)	−0.0361 (0.2846)
N	1780	1780	1068	1068
AR(1) test	2.5923 *** (0.000)	2.7566 *** (0.0058)	2.6433 *** (0.000)	2.8753 *** (0.000)
AR(2) test	1.8141 (0.6971)	0.7451 (0.4563)	1.7643 (0.7423)	0.6743 (0.2457)
Over-identification test	187.228 (0.3561)	83.4301 (0.3745)	0.1138 (0.6521)	0.0003 (0.3849)
Wald test	105.436 *** (0.000)	480.9244 *** (0.000)	170.3291*** (0.000)	102.5329 *** (0.000)
VIF	1.02	1.17	1.16	1.52

Note: 10 percent, 5 percent, and 1 percent significance levels are indicated by *, **, and ***, respectively.

Source: Author's compilation

7.4 Conclusion

This chapter examines the substitutability and complementarity between REM and AEM in Indian firms, with a particular emphasis on how cost determinants and promoters' ownership influence these strategic reporting choices. Drawing on agency theory and cost-based models of EM, the analysis provides comprehensive evidence that firms do not uniformly employ REM and AEM; instead, their use varies significantly across different economic conditions and institutional environments.

The findings reveal that the interplay between REM and AEM is context-dependent rather than universal. During the pre-pandemic period, neither technique emerged as a dominant nor systematic choice, indicating that firms employ EM selectively and in response to specific incentives. However, during the pandemic, AEM became substantially more prominent,

suggesting that firms gravitate toward accrual-based manipulation when operational adjustments become costly or challenging to implement. Moreover, the positive association between unexpected REM and AEM during the pandemic provides strong evidence of complementarity, supporting the notion that firms may simultaneously deploy both strategies when faced with heightened financial pressure or uncertainty.

Cost determinants play a pivotal role in this decision-making landscape. The Z-score, as a proxy for financial distress, is insignificant in regular periods but highly influential during the pandemic, where financial fragility significantly discourages both REM and AEM. This reinforces the argument that the feasibility of earnings manipulation is constrained by firms' financial health, especially in turbulent conditions. Audit quality, proxied by Big Four affiliation, also demonstrates asymmetric effects: while it appears to push firms toward REM pre-pandemic, it strongly deters AEM during the pandemic, confirming the heightened monitoring role of high-quality auditors during crisis periods.

Promoters' ownership introduces an additional layer of complexity. The moderation analysis reveals that promoter-dominated firms mitigate the impact of financial distress on EM, indicating more conservative manipulation practices, possibly driven by reputational considerations or the alignment of long-term interests. Although promoters' ownership significantly moderates the cost of REM and AEM through the Z-score interactions, it does not alter the relationship between audit quality and EM, highlighting that ownership structure matters more for internal cost–benefit evaluations than for auditor-driven constraints.

Overall, the results affirm the cost-based trade-off theory of EM and highlight the dynamic nature of firms' reporting behavior under varying economic, monitoring, and ownership conditions. By demonstrating that REM and AEM can operate as both substitutes and complements, depending on contextual pressures, this chapter adds to a nuanced understanding of EM strategies in emerging markets. The findings offer valuable implications for regulators, auditors, and other stakeholders seeking to enhance the transparency and credibility of financial reporting, particularly in contexts characterized by concentrated ownership and varying degrees of institutional oversight.

CHAPTER – 8

CONCLUSION, FUTURE SCOPE, AND SOCIAL IMPACT

8.1 Introduction

This study sought to investigate the dynamics of EM in the context of Indian firms, focusing on both accrual-based and REM practices. Motivated by significant corporate collapses, evolving regulatory frameworks, and the convergence of Ind-AS with IFRS, the research aimed to assess how these factors influence managerial discretion in financial reporting. The study explored whether Indian firms use accrual-based and REM as substitute or complementary strategies and examined the role of CG mechanisms, including board independence, board size, board meetings, CEO duality, and foreign auditor presence, in constraining opportunistic managerial behavior. By addressing these objectives, the research contributes to understanding how emerging market firms respond to regulatory reforms and governance structures in their pursuit of earnings targets, offering valuable insights for policymakers, regulators, investors, and corporate boards.

The chapter is organized as follows: Section 8.1 presents a brief thesis background. Section 8.2 presents an objective-wise summary of the findings. The future scope of the study is outlined in Section 8.3, followed by the social impact and recommendations of the study in Sections 8.4 and 8.5, respectively.

8.2 Major Findings of the Study

This section presents the research findings reported in the previous chapters, aligning with the study's objectives.

Objective 1. To examine how Ind-AS adoption has affected EM.

The study offers several important insights into EM practices among Indian firms before and after the adoption of Ind-AS. First, during the pre-Ind-AS period, the analysis revealed that firms with deteriorating gross margins and aggressive sales growth were significantly more likely to engage in accrual-based EM. Specifically, the GMI and SGI demonstrated positive

and highly significant associations with DA, suggesting that firms under financial performance pressure may manipulate earnings to meet targets. The DEPI and TATA also emerged as significant predictors of accrual-based manipulation. At the same time, other indices, such as DSRI and LVGI, showed no significant relationship with discretionary accruals during this period.

In contrast, the post-Ind-AS period displayed a marked shift in EM dynamics. The study found that both GMI and SGI exhibited significant negative associations with DA, suggesting that introducing stricter revenue recognition (Ind-AS 115) and enhanced disclosure requirements curtailed the scope for manipulating earnings through these avenues. This reflects the positive impact of Ind-AS adoption in improving the integrity of financial reporting and reducing traditional triggers of accrual-based EM. However, the continued significant and positive association of TATA with DA highlights that while Ind-AS has tightened certain manipulative pathways, opportunities for accrual-based EM persist. Additionally, marginal associations of DSRI and AQI in the post-Ind-AS period suggest that while manipulation through receivables and asset quality has weakened, these avenues have not been entirely closed.

Overall, the findings indicate that Ind-AS adoption has effectively limited several key forms of accrual manipulation. Still, firms explore other discretionary accounting mechanisms to influence reported earnings. The results underscore the need for sustained regulatory vigilance, effective enforcement, and complementary governance measures to further enhance the quality of financial reporting in India.

Objective 2: To assess the role of governance mechanisms in accrual and REM.

This study provides comprehensive evidence on the dynamics of AEM and REM in Indian firms, particularly before and during the COVID-19 pandemic. The findings demonstrate that both AEM and REM increased during the pandemic, suggesting that firms turned to EM as a strategic response to the crisis's heightened uncertainty and operational disruptions.

Regarding CG, board independence, and size, these factors significantly reduced EM in the pre-pandemic period. Independent directors played a critical role in curbing AEM and REM, which is consistent with agency theory, highlighting the importance of external oversight in limiting managerial opportunism. However, this monitoring role of independent directors diminished during the pandemic, aligning with institutional theory's view that formal governance mechanisms often serve symbolic legitimacy rather than substantive control during periods of institutional upheaval.

Board size was negatively associated with EM in the pooled and pre-pandemic periods, suggesting that larger boards provided diverse expertise and resources that enhanced oversight. Yet, this effect disappeared during the pandemic, reflecting boards' challenges in exercising meaningful control under crisis conditions. Similarly, CEO duality was negatively associated with AEM and REM in the pooled sample, hinting at possible benefits of unified leadership in specific contexts, which aligns with stewardship theory. This effect was inconsistent across all periods, suggesting that the impact of CEO duality varies with environmental stability.

The frequency of board meetings had mixed significance, with some evidence of a positive association in the pre-pandemic period, potentially indicating reactive rather than proactive governance. During the pandemic, the frequency of meetings had no significant effect on EM, supporting the view that formal compliance alone is insufficient for effective oversight.

The presence of Big 4 auditors significantly reduced AEM and REM in the pooled and pre-pandemic periods, reinforcing their role as high-quality monitors of financial reporting. However, this effect weakened during the pandemic, likely due to logistical and operational challenges that limited the effectiveness of audits.

Regarding firm characteristics, firms exhibited a higher tendency toward EM in the pre-pandemic period; however, this relationship weakened during the pandemic, possibly reflecting increased public and stakeholder scrutiny during crisis times. Leverage was negatively associated with EM during the pandemic, as highly leveraged firms may have been more cautious to avoid breaching covenants or attracting creditor attention. Similarly, profitability was negatively associated with EM during the pandemic, suggesting that more profitable firms felt less pressure to manipulate earnings.

Objective 3: To examine whether EM techniques (real and accrual) are used as substitutes or complements by firms in India.

The current objective provides a comprehensive assessment of whether Indian firms employ REM and accrual-based EM as substitutes or complements, while also evaluating the role of cost determinants and the ownership of promoters. The results consistently show that EM behavior is not uniform; instead, it adapts to economic conditions, monitoring environments, and ownership structures.

The analysis reveals a context-dependent relationship between REM and AEM. Prior to the pandemic, neither form of manipulation dominated, suggesting that firms used these strategies selectively and based on situational incentives. However, during the pandemic, firms relied

more heavily on accrual-based techniques, likely because real activity manipulation became operationally costly or infeasible. The emergence of a positive and significant link between unexpected REM and AEM in this period indicates that firms may deploy both techniques simultaneously under heightened uncertainty, supporting the view that REM and AEM can function as complementary tools when financial pressures intensify.

The findings also underscore the central role of cost determinants. Financial distress, captured by the Z-score, becomes a crucial limiting factor during crisis periods, significantly reducing the use of both REM and AEM. Audit quality exerts an asymmetric influence: while Big Four auditors appear to deter firms from accrual manipulation during the pandemic, their monitoring role is less pronounced in stable periods. This highlights how external scrutiny becomes more binding during periods of economic disruption.

Promoters' ownership further shapes these dynamics. The moderating effects show that higher promoter concentration weakens the relationship between financial distress and EM, suggesting more restrained use of both REM and AEM in promoter-controlled firms. This may reflect longer-term reputational concerns or reduced external pressure. However, promoter ownership does not significantly alter the influence of audit quality, indicating that ownership structure matters more for internal cost–benefit considerations than for auditor-driven constraints.

In summary, the findings support the cost-based trade-off theory, indicating that firms strategically adjust their EM choices in response to economic conditions, monitoring intensity, and ownership characteristics. The evidence that REM and AEM can act as both substitutes and complements, depending on contextual pressures, adds a nuanced perspective to EM research in emerging markets. These insights have significant implications for regulators, auditors, and policymakers seeking to enhance financial reporting quality, particularly in environments characterized by concentrated ownership and varying institutional safeguards.

8.3 Future Scope of the Study

While the present study provides comprehensive evidence on the role of CG mechanisms in constraining accrual-based and REM in Indian firms, several avenues for future research remain open. First, the study is confined to non-financial firms listed in the NIFTY 500 index. Future research may extend the analysis to financial institutions, particularly banks and non-banking financial companies, where governance structures, regulatory oversight, and EM

incentives differ significantly. Given the recurrence of governance failures in the Indian financial sector, such an extension would yield valuable insights.

Second, the study primarily focuses on traditional governance mechanisms such as board characteristics, audit quality, and promoter ownership. Future studies may incorporate emerging governance dimensions, including board gender diversity, director expertise, ESG-linked governance indicators, executive compensation structures, and ownership by institutional investors. These factors may play an increasingly important role in influencing managerial reporting behavior, particularly in the post-pandemic and sustainability-oriented regulatory environment.

Third, although this research examines the impact of Ind-AS adoption, future studies may explore firm-level heterogeneity in the quality of Ind-AS implementation. Differences in enforcement intensity, auditor expertise, and managerial familiarity with complex accounting standards may lead to uneven reporting outcomes. A more granular firm- or industry-specific analysis could provide deeper insights into how accounting reforms interact with governance quality to influence EM.

Fourth, the study employs Beneish M-score, DA models, and Roychowdhury-based proxies to capture earnings manipulation. Future research may enhance detection accuracy by integrating machine learning techniques, textual analysis of annual reports, earnings call transcripts, and forensic accounting indicators. The use of big data analytics could help identify subtle and evolving forms of manipulation that traditional models may not fully capture.

Finally, the pandemic period is treated as a uniform crisis phase. Future research could adopt a multi-crisis framework by comparing COVID-19 with other economic or systemic shocks, such as financial crises, regulatory shocks, or geopolitical disruptions. Cross-country comparative studies between India and other emerging economies would further strengthen the generalizability of the findings and contribute to the global literature on earnings management.

8.4 Social Impact of the Study

The present study holds significant social and economic relevance, particularly in the context of investor protection, corporate accountability, and financial market integrity in emerging economies like India. By empirically demonstrating how weaknesses in CG enable earnings manipulation, the study highlights the broader societal costs of distorted financial reporting, including misallocation of capital, erosion of investor confidence, and systemic financial instability.

First, the findings are highly relevant for investors, especially retail and minority shareholders, who rely on transparent and reliable financial information for decision-making. By identifying the conditions under which accrual-based and REM intensify, particularly during crises, the study contributes to a greater awareness of financial reporting risks and promotes informed investment behavior.

Second, the study provides valuable insights for regulators and policymakers, including SEBI, the Ministry of Corporate Affairs, and standard-setting bodies. The evidence that governance mechanisms may lose effectiveness during crisis periods underscores the need for crisis-responsive governance frameworks, enhanced enforcement, and technology-driven monitoring tools. Strengthening such mechanisms can help prevent large-scale corporate failures that impose social costs through job losses, reduced public trust, and financial contagion.

Third, the research has implications for auditors and board members by emphasizing the limitations of traditional oversight in detecting REM. By highlighting the complementary use of accrual and real manipulation strategies, the study encourages auditors and directors to adopt a more holistic and forward-looking approach to monitoring managerial behavior, thereby strengthening ethical corporate conduct.

Fourth, at a broader societal level, the study supports the goal of sustainable economic development. Transparent financial reporting and robust governance practices are crucial for attracting long-term investment, promoting entrepreneurship, and ensuring equitable stakeholder treatment. By contributing to improved reporting quality, the study indirectly supports economic stability, employment generation, and public confidence in corporate institutions.

Overall, the study reinforces the view that EM is not merely an accounting issue but a governance and societal concern with far-reaching consequences. By offering evidence-based recommendations for strengthening governance structures and regulatory oversight, the research contributes to building a more transparent, accountable, and resilient corporate ecosystem in India.

8.5 Recommendations of the Study

Based on the study's empirical findings, several policy-oriented and practice-based recommendations are proposed to strengthen CG frameworks and enhance the quality of financial reporting in India.

i. Strengthening Substantive Board Independence

The study finds that while board independence is effective in constraining accrual-based EM under normal economic conditions, its monitoring effectiveness weakens during periods of crisis. Therefore, regulators and firms should move beyond a compliance-driven approach and focus on enhancing the substantive independence of boards. This may be achieved by appointing directors with strong financial expertise, limiting long tenures that may compromise objectivity, and reducing promoter influence over the selection of independent directors. Periodic performance evaluations of independent directors, along with enhanced accountability mechanisms, would further improve board effectiveness.

ii. Enhancing Board Oversight of Operational Decisions

Given that REM involves operational decisions that are difficult to detect through conventional board oversight, boards should be encouraged to adopt a more data-driven and forward-looking approach to monitoring. Firms may establish specialized board subcommittees or strengthen existing audit and risk committees to review key operational metrics, abnormal cost behavior, and deviations from normal business practices. Integrating internal audit functions more closely with board deliberations can help detect real activity manipulation at an early stage.

iii. Reforming Audit Practices to Address REM

The findings indicate that while Big Four auditors are effective in constraining accrual-based manipulation, their influence on REM is limited. Accordingly, audit regulators and firms should expand the scope of audit procedures beyond traditional financial statement verification to include operational risk assessments and analytical reviews of real activities. The adoption of continuous auditing tools, forensic analytics, and industry-specific benchmarks can enhance auditors' ability to identify abnormal operational patterns associated with REM.

iv. Crisis-Responsive CG Frameworks

The pandemic-period evidence suggests that governance mechanisms tend to lose their effectiveness during systemic disruptions. Regulators should therefore consider designing

crisis-responsive governance guidelines that ensure continuity and effectiveness of oversight during emergencies. These may include mandatory disclosure of crisis-related accounting judgments, enhanced virtual board meeting protocols, stricter review of management estimates during periods of uncertainty, and temporary regulatory surveillance measures to curb opportunistic reporting behaviour.

v. Strengthening Enforcement of Ind-AS Implementation

Although the adoption of Ind-AS has reduced certain forms of accrual-based EM, the persistence of manipulation indicates the need for more vigorous enforcement. Regulatory authorities should focus on improving the consistency and rigor of Ind-AS implementation through targeted inspections, sector-specific guidance, and penalties for non-compliance. Capacity-building initiatives for preparers, auditors, and regulators would further improve understanding and application of complex accounting standards, thereby reducing discretionary misuse.

vi. Addressing Promoter Dominance in CG

The study highlights the moderating role of promoter ownership in shaping EM behaviour. While concentrated ownership may align long-term interests in specific contexts, excessive promoter dominance can undermine the protection of minority shareholders. Regulators should strengthen mechanisms that limit promoter entrenchment, such as stricter norms on related-party transactions, enhanced disclosure of promoter control rights, and greater voting power for minority shareholders on key governance matters.

vii. Encouraging Integrated Use of Forensic and Predictive Indicators

The continued significance of manipulation indicators, such as the DA and Beneish M-score parameters, suggests that regulators, analysts, and investors should adopt a composite approach to assessing earnings quality. The integration of forensic accounting tools, financial distress indicators, and governance metrics into routine monitoring frameworks can improve early detection of earnings manipulation and reduce reliance on ex-post regulatory intervention.

viii. Investor Awareness and Market Discipline

Finally, the study recommends strengthening investor education initiatives to improve awareness of EM practices and governance risks. Informed investors are better equipped to critically evaluate financial disclosures and exercise market discipline on firms that engage in

aggressive reporting. Enhanced transparency and informed investor participation can collectively contribute to improved corporate accountability and financial market stability

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