



THE ROLE OF INTERNAL AUDIT QUALITY IN MITIGATING EARNINGS MANAGEMENT

K.V.A. Shantha^{a*}, C.A. Kankanamge^b

^aDepartment of Accounting and Finance, Faculty of Management Studies, The Open University of Sri Lanka.

^b The Institute of Chartered Accounts of Sri Lanka

ABSTRACT

Received: 15th August 2024

Revised: 4th September 2024

Accepted: 3rd December 2024

Published: 5th December 2024

Keywords:

Colombo Stock Exchange

Earnings management

Internal audit quality

Sustainable development goals

The attributes that enhance the effectiveness of the internal audit function in mitigating earnings management still remains as a topic of ongoing debate. This study aims to examine this phenomenon within the context of a developing country, where the risk of earnings management is notably higher. The data window consists of 30 banks and diversified financial companies listed on the Colombo Stock Exchange from 2018 to 2021. Panel data analysis with fixed effects is employed to examine the impact of internal audit function attributes on earnings management. The findings reveal that larger, more independent, and financially knowledgeable internal audit functions significantly reduce the tendency of management to engage in earnings management. Conversely, the frequency of internal audit meetings alone does not significantly impact earnings management, which implies that the quality and substance of audit activities are more important than mere frequency. Therefore, it is concluded that an internal audit function characterized by greater staff size with their higher independence and financial expertise is crucial in reducing earnings management in banks and diversified financial companies. These findings have significant theoretical and practical implications. Theoretically, the findings extend the understanding of agency theory, stakeholder theory, the resource-based view, and institutional theory by providing evidence that supports their theoretical predictions. Practically, they offer clear guidance for regulators, corporate governance practitioners, company management in establishing frameworks and policies for internal audit function, which, in turn, promote ethical financial practices and strong corporate governance, supporting the achievement of the Sustainable Development Goals.

*Corresponding kvsha@ou.ac.lk

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1. Introduction

Internal auditing plays a crucial role in the reliability of financial reporting processes by providing oversight and monitoring over management actions (Christopher, 2019; Roussy & Perron, 2018). From this perspective, one of the significant benefits of internal auditing is its potential to mitigate earnings management. It is a practice where management manipulates financial reports to present a desired image of an organization's financial health. Such manipulation can distort financial statements and thereby mislead stakeholders, posing significant risks to the integrity of financial markets and investor confidence (Flayyih et al., 2020). Therefore, the effectiveness of internal audit function in mitigating earnings management is critical for an organization to ensure financial transparency in its endeavor to enhance its value.

Sri Lanka, as a developing country, has faced numerous challenges in maintaining financial reporting integrity, with earnings management and stock market manipulation being persistent concerns. Common methods of earnings management include inflating revenue through fictitious sales, deferring expenses, manipulating provisions, and aggressive valuation of assets. These practices not only distort financial statements but also contribute to broader issues such as insider trading and market manipulation (Zweig, 2019). For instance, in the aftermath of the collapses of Vanik Incorporation in the early 2000s, Pramuka Bank in 2002, Golden Key in 2008, Sriram Finance in 2010, the Central Investment and Finance Company in 2012, and Touchwood PLC in 2013, investigations revealed instances of overstated profits and concealed financial weaknesses, which had misled investors and regulators.

Stock market manipulation has further exacerbated the problem, with cases involving pump-and-dump schemes, where stocks are artificially inflated to attract unsuspecting investors before their value plummets. The weak enforcement of financial regulations and the lack of transparency in disclosures have allowed such practices to persist, eroding investor confidence in the Colombo Stock Exchange. These issues underline the critical need for robust internal audit functions to detect and prevent financial malpractice. The agency problem is particularly pronounced in this context. With concentrated ownership structures and weaker corporate governance mechanisms, there is a significant misalignment between the interests of management and shareholders, creating opportunities for earnings management. Financial oversight bodies in Sri Lanka often face resource and capacity constraints, making it challenging to identify and address such practices effectively.

Previous studies have extensively examined the role of internal auditors and its impact on financial reporting quality. They have typically found that high-quality internal audit functions are associated with reduced earnings management and improved financial reporting quality (Cohen & Sayag, 2010; Ghaleb et al., 2020; Prawitt et al., 2009; Sierra García et al., 2012). However, there are ongoing debates regarding the specific attributes that make internal auditors more effective in mitigating earnings management (Ghaleb et al., 2020). For instance, independence and expertise of internal auditors are often cited as critical factors in their ability

to detect and prevent earnings management (Abbott et al., 2012; Alyaarubi et al., 2021). Nonetheless, Ismael & Kamel (2021) found that the expertise of internal auditors has a more significant impact on reducing earnings management when compared to their independence. This divergence in findings highlights the need for further research to reveal the specific attributes of internal audit function that are more effective in reducing earnings management practices.

To address this research gap, this study aims to examine the attributes of internal audit function that can effectively mitigate earnings management practices. It focuses specifically on the banks and diversified financial industry sectors in Sri Lanka, a context that has not been extensively explored in prior research (Ismael & Kamel, 2021). Despite comprehensive internal audit practices, these sectors have experienced several high-profile corporate governance failures, raising concerns about the effectiveness of internal audit function in detecting and preventing earnings management (Almarayeh et al., 2022). By addressing this significant gap in the literature, this study provides a broader understanding on attributes of internal audit function that effectively constrain earnings management practices, thereby enhancing financial reporting quality of banks and diversified financial companies in a developing country context.

The findings of this study have significant implications for both theory and practice. Theoretically, the findings enhance several established theoretical frameworks, namely the agency theory, stakeholder theory, resource-based view, and institutional theory, by providing empirical support for their predictions. The study also contributes to the literature on corporate governance and earnings management by providing evidence on the attributes of an internal audit function that effectively mitigates earnings management practices, thereby enhancing the financial reporting quality of banking and diversified financial companies in a developing country context. Practically, the findings of the study can improve the practices of internal auditors and the policies of regulatory bodies, leading to enhanced financial reporting quality. This, in turn, can foster greater investor confidence and stability in financial markets. The insights from this study can also improve stakeholder decision-making and the functioning of financial markets by helping to prevent the collapse of financial institutions. Eventually, it contributes to achieving Sustainable Development Goals (SDGs), particularly those related to economic growth and institutional integrity (SDG 8 and 16).

The remainder of the paper is organized as follows. The second section reviews the literature, followed by the discussion of the research design, including sample and data collection, variables measurement and empirical model in the third section. The fourth section describes the study data and discusses the empirical results. The fifth section concludes the study with the theoretical and practical implications of its findings.

2. Literature Review

Earnings management refers to the practice of using accounting techniques or operational decisions to influence a company's reported financial performance. Ronen et al. (2008, pp.27) defined earnings management as "a collection of managerial decisions that result in not reporting the true short-term, value-

maximizing earnings as known to management". According to the agency theory, earnings management is viewed as a practice that carries significant costs, as it diminishes a firm's value and growth potential which negatively impact future cash flows (Kothari et al., 2016; Gao et al., 2017; Md Nasir et al., 2018). This theory suggests that managers engage in earnings management opportunistically, placing their personal interests above the long-term value of the firm. The following sections summarize the role of internal audit function in mitigating earnings management from various theoretical perspectives, along with a review of previous empirical findings related to this phenomenon.

Theoretical Review

Agency Theory serves as a foundational framework for understanding the relationship between internal auditing and earnings management. The theory is formalized by Jensen and Meckling (1976) to address conflicts of interest between principals (owners or shareholders) and agents (managers). This principal-agent relationship is characterized by information asymmetry, where managers often have more information about the company's operations than shareholders, and may act in self-interest rather than prioritizing shareholders' goals. Jensen and Meckling (1976) argue that such conflicts, known as agency problems, arise due to differing objectives and risk preferences. For instance, managers may engage in earnings management to achieve short-term performance targets, secure bonuses, or maintain job security, often at the expense of long-term organizational health and transparency. Beaver (1966) highlighted early concerns about managerial discretion in financial reporting, emphasizing that unchecked discretion can distort financial statements and mislead investors. Fama and Jensen (1983) expanded this argument by identifying internal monitoring mechanisms, such as internal auditing, as critical in mitigating agency problems. According to them, an effective internal audit function can act as a monitoring tool, ensuring alignment between managerial actions and shareholder interests by providing oversight and improving the quality of financial reporting.

Accordingly, from the perspective of agency theory, an effective internal audit function is crucial in reducing the conflicts of interest between principals (shareholders) and agents (management). Managers might engage in earnings management to meet performance targets or for personal gain, thereby misaligning their interests with those of the shareholders. The internal audit function acts as a monitoring mechanism, providing independent and objective assessments of financial reporting and internal controls. This oversight helps ensure that management's actions are in line with shareholders' interests, thus mitigating the agency problem by reducing information asymmetry and potential earnings manipulation. Stakeholder theory expands the focus from just shareholders to include all stakeholders such as employees, customers, suppliers, and the community. Earnings management can negatively impact these stakeholders by presenting a distorted picture of the company's financial health. The internal audit function plays a vital role in protecting stakeholder interests by ensuring the accuracy and reliability of financial information. Through rigorous audits and evaluations, internal auditors maintain transparency and accountability, which are essential for building trust and confidence among stakeholders. This enhanced trust contributes to the company's reputation and long-term sustainability, aligning with the broader responsibilities outlined in stakeholder theory.

As highlighted by Ahmad (2015), from the resource-based view, an effective internal audit function is seen as a valuable organizational resource that can provide a competitive advantage. A strong internal audit team equipped with the necessary skills and independence can effectively identify and prevent earnings management. The expertise of internal auditors strengthens the firm's internal controls and risk management processes, improving the integrity of financial reporting. This capability not only deters financial manipulation but also enhances the firm's overall governance and operational efficiency, contributing to its competitive edge. Institutional theory examines the influence of social and institutional pressures on organizational practices. Companies must adhere to norms, regulations, and expectations from regulators, professional bodies, and the market. The internal audit function helps organizations comply with these external pressures by ensuring adherence to regulatory requirements and industry standards. Internal auditors foster a culture of compliance and ethical behavior, which mitigates earnings management and enhances organizational legitimacy. Aligning with institutional expectations not only protects the company from regulatory penalties but also bolsters its social license to operate.

Empirical Review

Previous studies recognize the internal audit function as a crucial governance mechanism in controlling managers' tendency to earnings management. The studies by Abbott et al. (2016), Al-Rassas & Kamardin (2016), Alzoubi (2019), and Prawitt et al. (2009) suggest that the internal audit function plays a significant role in reducing earnings management practices and enhancing the quality of financial reporting. Al-Thuneibat et al. (2016) emphasize that the internal audit function, as a monitoring function, is closely linked to internal control components, which is capable of overseeing activities across various management levels. Johl et al. (2013) provide evidence that the internal audit function reduces abnormal accruals in Malaysian companies, supporting the notion that increased investment in the internal audit function strengthens its ability to limit managers' opportunistic behavior. Furthermore, Al-Rassas & Kamardin (2016) find a negative relationship between the internal audit function and earnings quality, as indicated by discretionary accruals. Zakaria et al. (2016), in a case study of an oil and gas company in Malaysia, report that weaknesses in internal controls, including inadequate internal auditing, contribute to fraudulent activities.

Accordingly, the literature, as cited above, suggests that internal audit function plays an essential role in enhancing reliability of financial reporting quality by reducing earnings management. As highlighted by Ege (2015), a well-funded internal audit function proves more effective in overseeing management. More resource allocation towards IAF allows companies to attract more skilled internal auditors and enhance the overall quality of the internal audit function. This, in turn, elevates the quality of financial reporting by reducing managerial tendency for earnings management (Abbott et al., 2016; Lin et al., 2011). Sarens & Abdolmohammadi (2011) also reveal that investing more in internal audit function indicates more staff in internal audit and, hence, more monitoring to reduce earnings management. It suggests that the quality of internal audit function plays an essential role in enhancing financial reporting quality by mitigating

management’s tendency to earnings management. However, there are ongoing debates regarding the factors determining the quality of internal audit function, which means specific attributes that make internal auditors more effective in mitigating earnings management (Ghaleb et al., 2020). For instance, independence and expertise of internal auditors are often cited as critical factors in their ability to detect and prevent earnings management (Abbott et al., 2012; Alyaarubi et al., 2021). Nonetheless, Ismael & Kamel (2021) found that internal audit competence has a more significant impact on reducing earnings management when compared to internal audit independence. This divergence in findings highlights the need for further research to reveal the specific attributes of internal audit function that are most effective in reducing earnings management practices. This study intends to address this research gap.

3. Research Methodology

Sample and data collection

The sample consisted of 30 companies listed under the banks and diversified financial industry groups on the CSE. Though comprehensive internal audit functions (IAF) are in place with the companies in these industry groups, they were chosen since these industry groups have experienced several high-profile corporate governance failures, which raise concerns about the effectiveness of IAF. The final sample included 90 company-year observations from 2018 to 2021. The study used information available from the financial statements of companies published in their annual reports.

Measurement of variables

The variables of the study were operationalized based on the prior literature. The dependent variable is earnings management which is estimated through discretionary accruals (DA) based on the model developed by Kothari et al. (2005). The standardized residuals, obtained from the running the regression as given in Equation 1, were used as proxy for the DA. The residuals are represented by the error term of the Equation 1.

$$\frac{TA_{i,t}}{A_{i,t-1}} = \beta_0 + \beta_1 \left(\frac{1}{A_{i,t-1}} \right) + \beta_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \beta_4 (ROA_{i,t \text{ or } i,t-1}) + \varepsilon_{i,t} \dots \dots \dots (1)$$

Where:

$TA_{i,t}$ = Total accruals of firm i in year t $TA_{i,t} = NI_{i,t} - CFO_{i,t}$

$A_{i,t-1}$ = Total assets of firm i in year t-1

$\Delta REV_{i,t}$ = Change in revenue of firm i in year t

$\Delta REC_{i,t}$ = change in receivables of firm i in year t

$PPE_{i,t}$ = Gross property, plant and equipment of firm i in year t

$ROA_{i,t}$ = Return of assets of firm i in year t

NI_{it} = Net profit after tax of firm i in year t

CFO_{it} = Cash flow from operation of firm i in year t

$\varepsilon_{i,t}$ = Residuals of firm i in year t

Four attributes of IAF – size (IAFS), independence (IAFI), financial expertise (IAFE) and frequency of meetings (IAFM) were used as the independent variables of the study. The total number of members involved in IAF is used as a proxy for IAFS. IAFI is a dummy variable which takes a value of one if IAF includes at least two independent non-executive directors or such number equivalent to one third of total number of directors, and zero otherwise. IAFE is also a dummy variable which is given a value of one if the majority of the directors are financial experts, and zero otherwise (Almarayeh et al., 2022). Financial expertise includes academic or professional qualifications in finance and at least 5 years of experience dealing with the financial matters in the industry (Almarayeh et al., 2022). Total number of meetings held within a particular financial year is used to measure IAFM. Further, following prior studies (Zang, 2012; Sitanggang et al., 2020), firm size (FSIZE) and financial leverage (FLEV) were included in the regression model to control firm characteristics.

Empirical model

The impact of IAF attributes on earnings management was modeled using the regression model, as given in Equation 2:

$$DA_{it} = \beta_0 + \beta_1 IAFS_{it} + \beta_2 IAFI_{it} + \beta_3 IAFE_{it} + \beta_4 IAFM_{it} + \beta_5 FSIZE_{it} + \beta_6 FLEV_{it} + \varepsilon_{it} \quad \dots\dots\dots(2)$$

In the data analysis, it is first determined whether the model should be estimated using the ordinary least squares (OLS) method or the panel data approach based on the F-Limer test (Chow test). Following this, the Hausman test is applied to distinguish between fixed-effects and random-effects in the panel data to be used. In addition, White's Test is employed to assess heteroscedasticity, while the Variance Inflation Factor (VIF) is used to evaluate the extent of multicollinearity. Serial correlation is checked using the Durbin-Watson test.

4. Analysis and Discussion

Descriptive statistics

The descriptive statistics of the research variables are summarized in Table 1. Referring to mean values of variables, the average number of members in IAF is four (as given by IAFS), while the numbers of audit

meetings held within a financial year is on average three (as given by IAFM). Further, the mean values of IAFI and IAFE are respectively 0.83 and 0.85, which indicates that about 83% of firms have independent IAF while about 85% of firms have IAF with appropriate financial expertise. When considering the correlation values, as presented in Table 2, it appears that the size of the IAF is positively correlated with its independence and financial expertise, while no association with the frequency of meetings. The financial expertise of IAF is positively associated with its size and independence, whereas negatively associated with the frequency of meetings. The correlation matrix also shows that correlation coefficients between independent variables are less than 0.7, which therefore does not pose a threat to the variable estimation (Ghaleb et al., 2020).

Table 1: Descriptive Statistics

Variable	Mean	Median	Standard Deviation	Absolute Residuals	25 th Quartile	75 th Quartile
IAF Size	4.08	8	2.39	0.093	5.35	10.65
IAF Independence	0.83	1	0.38	0.030	0.57	1.00
IAF Frequency of Meetings	2.95	5	2.97	-0.112	3.62	6.38
IAF Financial Expertise	0.85	1	0.91	-0.012	0.24	1.00

Table 2: Correlation Coefficients

Variable	IAFI	IAFM	IAFE	FSIZE	FLEV
IAF Size	0.045*	-0.057	0.652*	0.630*	0.393*
IAF Independence		0.341	0.445*	0.591*	0.258*
IAF Frequency of Meetings			-0.315*	0.224*	0.442*
IAF Financial Expertise				0.341*	0.352*
Firm Size					0.462*

Note: ** and * indicate significant at 0.01 and 0.05 levels respectively.

Estimation method

The F-Limer test, conducted to examine whether the model is estimated based on OLS method or the panel data method, rejected the null hypothesis that there is no difference between the estimated coefficients in both methods, which indicates that there is no necessity to estimate the model by using the panel data. Thus, the OLS method is not preferred over the panel data method. This confirmed the use of the panel data method in the analysis. Then, the Hausman test was employed to identify whether panel data with fixed-effects or random-effects should be used. According to the test results, the calculated chi-square statistic is greater than the critical value, which indicates that the fixed-effects model is superior to the random-effects model.

Heteroskedasticity, Multicollinearity, and Autocorrelation

The results of the White's Test indicate that there is no heteroskedasticity problem. In addition, to measure the severity of multicollinearity in a regression analysis was measured by VIFs. The VIFs for all independent variables in the model are below five, indicating that multicollinearity is not a concern. Further, the Durbin-Watson test was conducted to check for serial autocorrelation among the residuals. Since the test statistics are between 1.5 and 2.5, it confirms that the error terms are free from serial autocorrelation. Thus, there is no serial autocorrelation issue in the model.

Regression results

This study examines the impact of the IAF attributes on earnings management within banks and diversified financial companies listed on the CSE. Four indicators - IAFS, IAFI, IAFE, and IAFM are used to represent the IAF attributes. The regression results presented in Table 3 reveal significant insights into the influence of these IAF attributes on earnings management. The model diagnostics supports the robustness of the findings. The adjusted R^2 of 0.519 indicates that approximately 52% of the variability in earnings management can be explained by the model, which is a reasonable level of explanatory power for cross-sectional financial data. The F -statistic of 5.087 with a p-value of 0.000 indicates that the overall model is statistically significant, suggesting that the independent variables collectively explain a significant portion of the variation in the dependent variable.

Table 3: Regression Analysis Results and VIFs

Variable	Coefficient	t-statistic	p-value	VIF
Constant	-10.421**	-2.838	0.005	1.659
IAFS	-0.576**	-3.610	0.000	1.736
IAFI	-1.672**	-4.516	0.000	1.479
IAFE	-0.494*	-2.244	0.025	1.078
IAFM	-0.796	-0.371	0.711	2.199
FSIZ	-1.156	-1.169	0.243	1.587
FLEV	0.061**	11.317	0.000	1.659

Adjusted R^2 : 0.519

F -statistic: 5.087 (Prob 0.000)

Durbin-Watson statistic: 1.772

Note: This table presents the panel data regression results of the model given in Equation 2. ** and * indicate significant at 0.01 and 0.05 levels respectively.

The findings indicate that IAFS, IAFI, and IAFE have negative and statistically significant impacts on earnings management. Specifically, the coefficient for IAFS is -0.576 with a p-value of 0.000, which indicates that larger IAFs are associated with reduced earnings management. This implies that employing more staff in IAF enables more thorough oversight and scrutiny, which helps in reducing practices that manipulate earnings.

Similarly, the coefficient for IAFI is negative (-1.672) and significant ($p\text{-value} < 0.01$), indicating that greater independence of IAF is linked to lower levels of earnings management. This finding highlights the importance of internal auditors operating without undue influence from management, which consequently enhances their ability to detect and prevent earnings manipulation. The coefficient for IAFE is also negative (-0.494) and significant ($p\text{-value} < 0.05$), which reveals that internal audit staff with higher expertise in finance is associated with reduced earnings management. Auditors with specialized financial knowledge are better equipped to identify and address complex financial manipulations, thereby enhancing the integrity of financial reporting. On the other hand, the coefficient for IAFM is insignificant ($p\text{-value} > 0.05$), which indicates that the frequency of internal audit meetings does not have a significant impact on earnings management. This finding implies that merely increasing the number of meetings is insufficient to prevent earnings management. Accordingly, the results suggest that size, independence, and financial expertise of IAF can minimize management's tendency to involve in earnings management.

The findings of this study align with key theoretical frameworks and previous empirical studies. Consistent with the Agency theory's emphasis on monitoring mechanisms like internal auditing to mitigate the agency problem, the study's results confirm that IAF attributes such as size, independence, and financial expertise significantly reduce earnings management. Further, the negative coefficient for IAFS supports Fama and Jensen's (1983) argument that larger IAFs provide stronger oversight and reduce the risk of opportunistic behavior. Similarly, the significant impact of IAFI aligns with the notion that independence enables auditors to act impartially, enhancing the integrity of financial reporting. The resource-based view further corroborates these findings, highlighting internal audit expertise as a valuable organizational resource that strengthens governance and provides a competitive edge. The role of IAFE in reducing earnings management demonstrates the importance of specialized financial knowledge, supporting Ismael and Kamel's (2021) emphasis on auditor competence over independence. The insignificant effect of the frequency of internal audit meetings highlights that such structural factors may not inherently enhance IAF effectiveness, which emphasizes the importance of quality over quantity. These findings are also consistent with empirical evidence from Abbott et al. (2016) and Alzoubi (2019), which emphasize that the quality of IAF, including size and independence, is critical in reducing managerial manipulation. However, the divergence in the significance of IAFM suggests that the factors determining IAF effectiveness require further exploration, especially in different institutional contexts. Overall, this study reinforces the critical role of robust IAF attributes in mitigating earnings management, extending theoretical perspectives and contributing to the broader literature on corporate governance.

5. Conclusion

This study explores what makes an internal audit function effective in preventing earnings manipulation. The findings show that larger audit teams with greater independence and strong financial expertise significantly reduce the likelihood of earnings manipulation. However, merely increasing the frequency of audit meetings does not have a notable impact. This highlights that the quality and depth of audit activities matter more than

how often they take place. Overall, the study highlights the importance of well-resourced and skilled internal audit teams in ensuring accurate financial reporting in banks and diversified financial institutions.

When concerning the study's practical significance, the study provides insights for various stakeholders, as follows. Regulators and policymakers can use these findings to develop frameworks that mandate minimum requirements for of an internal audit function's staffing, independence, and qualifications to enhance its effectiveness. Boards of directors and corporate leaders should prioritize building strong internal audit teams, ensuring sufficient personnel and offering ongoing training to enhance expertise and maintain independence. For company management, investing in an internal audit function is a strategic priority, as it improves financial reporting quality and reduces risks associated with earnings manipulation. Investors and financial analysts can evaluate the strength of a company's internal audit function as an indicator of governance quality and financial reliability. Finally, internal auditors are encouraged to maintain independence and continually enhance their skills to effectively prevent financial misreporting.

Competing internet : The authors declare no competing interests.

Acknowledgements: The authors would like to acknowledge peer reviewers for their useful comments on the earlier version of the paper.

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