Earnings Management in Banking Sector: Pre-Post Analysis of NFRS

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Abstract

The study examines the impact of the implementation of Nepal Financial Reporting Standards (NFRS) on earnings management practices in Nepalese commercial banks. Drawing on agency theory, it investigates whether the adoption of NFRS has effectively enhanced financial transparency and reduced earnings manipulation, particularly through discretionary loan loss provisions (DLLP). The research utilizes a two-stage regression model on panel data covering 331 bank-year observations from 2010/11 to 2023/24. The findings indicate that earnings management significantly declined following NFRS implementation, suggesting improved transparency in financial reporting. Moreover, while higher earnings before interest and tax (EBIT) reduce DLLP, greater total loans and Tier 1 capital ratios are associated with increased earnings management. Macroeconomic factors like GDP and credit growth show no significant impact. Diagnostic testing supports the use of a random effects model, which confirms the robustness of the results. The study contributes to the literature on financial reporting in emerging economies by providing empirical evidence that principle-based standards like NFRS can enhance the quality of financial disclosures in the banking sector.

Keywords: *Discretionary loan loss provisions, Nepal financial reporting standards, Commercial banks,*

1. Introduction

The banking sector plays a vital role in economic development by providing essential financial services, especially to small and medium-sized enterprises (SMEs), which are the backbone of most economies. However, banks are susceptible to various risks, including credit, market, and operational risks, which may compromise financial stability. Notably, systemic banking crises can result in economic recessions, requiring government intervention that burdens public finance. Transparency in financial reporting is essential for stakeholders to make informed decisions. However, the presence of information asymmetry between agents (management) and principals (shareholders) often leads to earnings manipulation. Such manipulation, whether through impression management or opportunistic behavior, undermines transparency. High-profile corporate scandals like Enron and WorldCom exemplify the severe consequences of poor disclosure practices. International Financial Reporting Standards (IFRS) have been promoted to standardize financial reporting globally, aiming to improve transparency, accountability, and comparability. Despite this, the effectiveness of IFRS in curbing earnings management remains inconclusive, with some studies reporting a reduction in manipulation while others suggest it persists or even worsens due to the principle-based nature of IFRS, which can increase ambiguity in financial interpretation. Nepal's accounting environment evolved significantly with the establishment of the Nepal Accounting Standards Board (ASB) in 2002. Initially, Nepal adopted a mix of local standards influenced by IFRS. By 2013, Nepal adopted the Nepal Financial Reporting Standards (NFRS), closely aligned with IFRS, promoting a shift from rule-based to principle-based standards. The Institute of Chartered Accountants of Nepal (ICAN) mandated the implementation of NFRS for 'A' class banks from the fiscal year 2015/16. During the transition, inconsistencies in reporting, particularly concerning Loan Loss Provisions (LLPs), raised concerns about potential earnings management. Previously, banks reported incurred losses, but under NFRS, they must now report expected credit losses, introducing room for judgment and discretion. This discretionary leeway may allow banks to manage earnings to present a favorable financial position, especially during the transitional period.

While NFRS was introduced to improve transparency, its real impact on reducing earnings management in Nepal remains unexplored. International research on IFRS has yielded mixed outcomes: some find reduced manipulation post-adoption (Cadot et al., 2020; Amer et al., 2024), others find no significant change or even increased manipulation (Tohara, 2024; Capkun et al., 2016). Given Nepal's unique regulatory and economic context, examining whether the implementation of NFRS has effectively reduced earnings management in Nepalese banks is critical. This study aims to assess whether the transition to NFRS has led to a decrease in earnings management practices in Nepalese banks. It focuses on evaluating pre- and post-implementation effects, drawing upon agency theory and utilizing 14 years of data — more comprehensive than previous studies from other emerging nations. This research fills a critical gap in the literature by focusing specifically on the banking sector in an emerging economy. It extends prior studies by offering a contextualized analysis of NFRS's effectiveness in promoting financial transparency and curbing earnings management. Furthermore, it contributes to ongoing discussions around the role of accounting standards in enhancing governance and stakeholder trust in financial institutions.

2. Literature Review

Earnings management has been widely examined within the framework of agency theory, which posits that divergent interests between principals (shareholders) and agents (managers) may incentivize opportunistic financial reporting (Diri, 2017; Merkl-Davies & Brennan, 2007). This study adopts agency theory as its theoretical foundation to explore the influence of the Nepal Financial Reporting Standards (NFRS) on earnings management practices within Nepalese banking and financial institutions. Initially formulated by Jensen and Meckling (1976) and later refined by Holmstrom and Milgrom (1987), agency theory addresses the structural separation between ownership and managerial control in modern corporations. A central belief of the theory is the presence of information asymmetry, whereby managers hold privileged access to firm-specific information that is not equally available to shareholders. Such asymmetries can give rise to agency problems—most notably adverse selection and moral hazard—which may create conditions under which managers manipulate financial reports to advance their own or their organization's interests at the expense of shareholders. Merkl-Davies and Brennan (2007) highlighted that people take advantage of opportunities to increase their wealth. Therefore, companies put in place systems, such contracts, to match managers' and shareholders' interests (Deegan & Unerman, 2011). These measures, however, sometimes fail to stop earnings manipulation. Because of the agency problem, managers can deflate or inflate results without investors or stakeholders noticing (Merkl-Davies & Brennan, 2007).

Earning management refers to management making a judgement in financial reporting to manipulate financial reports to mislead stakeholders about the fundamental performance of the firm or to influence contractual outcomes (Healy & Wahlen, 1999). De George (2016) highlighted that earning management and earning quality constitute a more comprehensive concept that extends beyond the quantitative aspect of profits as a company tries to beat earnings forecasts from analysts. Companies with higher earning quality tend to get more attention from analysts which leads to more accurate forecasts and facilitating investment decisions (Eliwa et al., 2020). However, firms with lower earning quality need a higher cost of capital as compared to other firms (Baschieri et al., 2016).

Many factors like auditor type, firm size, profitability, and growth rate may affect earnings management and earning quality as prior studies suggest. De George (2016) found a Big 4 auditor has a better ability to deter earning management practices. Similarly, in that study author found the large-size firm’s operation complexity makes detecting discretionary judgements more challenging which may lead to more earnings management as compared to small-size firms. Doukakis (2014) found firms with lower profitability have an incentive to employ earning management. Besides the firm's specific characteristic, companies with better corporate social responsibility do not tend to practice earnings management compared with lower corporate social responsibility firms, and they have more accurate cash flow projections (Rezaee et al., 2019). Types of adoption (voluntary or mandatory) of accounting also affect earnings management. Voluntary adoption of integrated reporting is positively correlated with earning manipulation (Tohara,2024).

De George et al. (2016) mention that a lot of prior studies find adopting IFRS provides many benefits to firms that adopt IFRS. The benefits mentioned are improvement of transparency, decreasing the costs of capital, increasing cross-country investments, improvement of comparability of financial reports, and increase in analysts following from overseas. However, there is no clear picture regarding IFRS adoption and earning management that is accounting manipulation as many prior studies reported mixed results. Some papers indicate that IFRS adoption leads to less earning management or accounting manipulation (Amer et al., 2024). However, some authors argue that there is no significant relationship between IFRS adoption and earning management or accounting manipulation (Doukais, 2014; Trimble,2018). To sum up, mixed results are reported by previous studies. A little clarity on the mechanism of how IFRS affects earnings management, although several other factors impact earnings management, including differences in accounting standards, motivation of firms, and national regulatory system. Tohara (2024) mentioned that when switching from one accounting standard to another accounting standard, there is room for earning management as it creates ambiguity and companies may be involved in earnings management to compensate for the cost of adopting new accounting standards.

Many studies ((Diri, 2017; Merkl-Davies & Brenan, 2007) suggest that earnings management exists because of a conflict of interest between the agent and the principal. Therefore, many prior studies try to explain earnings management through agency theory. This study examines the impact of NFRS implementation before and after on earnings management practice through agency theory as foundational lens. Agency theory was based on Jensen and Meckling (1976) which was established by Holmstrom and Milgrom (1987). This theory highlights that in public organizations, there is a conflict of interest because of the separation of ownership of control. The main problem is information asymmetry between the agent and the principal. Moral hazard and adverse selection are the source of information asymmetry. As managers are more informed about the company rather than shareholders, a condition of information asymmetry arises which gives a chance for adverse selection by management. Both the agent and principal want to maximize their utility rather than others. Since the management has the upper hand in information may lead to accounting manipulation to get higher utility.

Merkl, Davies, and Brenan (2007) highlighted that individuals will always act opportunistically and that actions try to increase their wealth. Because of the opportunistic behavior of individuals, organizations try to use various mechanisms that align with the interests of the agent and the principal. For example, the contract will be used to ensure that all parties, acting in their own self-interest, are at the same time motivated towards maximizing the value of the organization (Deegan & Unerman, 2011). These mechanisms, however, will not always be effective in avoiding earnings management by managers. The agency problem will allow the management to offer a false earnings figure, either positively or negatively, without giving stockholders and others a chance to see through (Merkl, Davies, & Brenan, 2007).

Information asymmetry will be reduced when the agent provides fair and valuable information to stakeholders. The main objective of NFRS is to improve transparency through uniform accounting standards. In NFRS, a detailed loan loss provision is required report for banks. NFRS also aims to limit the scope for managerial discretion in financial statements. However, adopting IFRS may not guarantee transparency as discussed above. So, the opportunistic behavior of the agent may lead to managing earnings to meet the target and previous studies (Tohara,2024; Capkun et al., 2016) IFRS provides flexibility and a lack of guidance may create information asymmetry. Therefore, this study is examined under the agency theory.

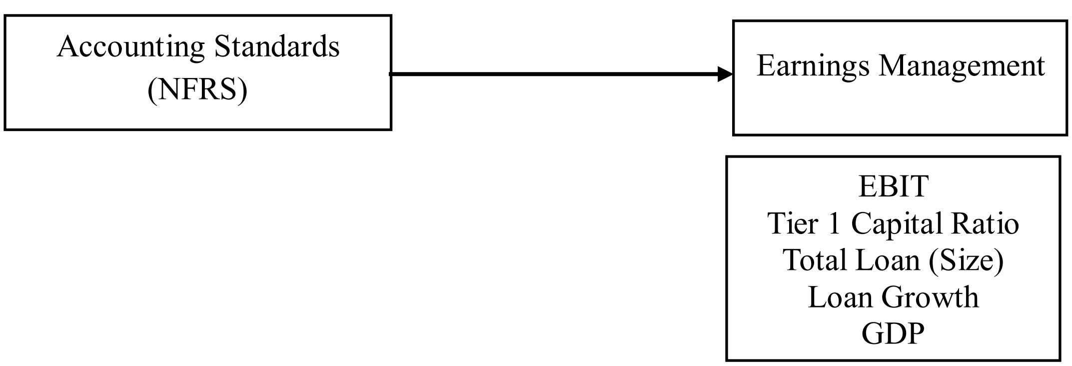

Figure 1: Conceptual Framework

3. Methodology

This study adopts a quantitative, explanatory research design to explore the impact of NFRS implementation on earnings management in Nepalese commercial banks. The primary focus is to determine whether banks engage in earnings management before and after the implementation of NFRS. To achieve this, the study uses the discretionary components of loan loss provisions as a proxy for earnings management. The loan loss provisions are decomposed into discretionary and non-discretionary components in the first stage. The residual from this model serves as the dependent variable (proxy for earnings management) in the second stage of the analysis, similar to the approach used by Alhadab & Al-Own (2019). The study analyzes data from Nepalese commercial banks spanning from 2010/11 to 2023/24. Commercial banks were the first to implement NFRS in Nepal, and this period is chosen due to the assumption that the economy stabilized following the global financial crisis. Data for the variables, except for GDP, are sourced from the Nepal Rastra Bank's published information, with GDP data obtained from the World Bank. Panel data regression models, including pooled ordinary least squares (OLS), fixed effects models, and random effects models, are employed for analysis. The study uses the entire population of commercial banks, resulting in 383 bank-year observations initially. However, 331 observations are used due to missing values of non-performing loans and adjustments made for lagged variables and changes. The data is unbalanced due to mergers and acquisitions during the sampling period. Both descriptive and inferential statistical methods are utilized for data analysis. Descriptive statistics summarize the dataset, and correlation analysis is conducted to examine the strength and direction of relationships between variables.

Model Specification: First Stage Regression

The first regression model estimates loan loss provision (LLP) using the lagged value of non-performing loans (NPL), the change in the non-performing loan, and the change in total loans (TL). All variables that are LLP, lagged of NPL, change in NPL, and change in TL are divided by total loan. This method is adopted from Alhadab & Al-Own (2019). The model is given below:

$$LLP_{it} = \alpha_{it} + \beta_1 NPL_{it-1} + \beta_2 \Delta NPL_{it} + \beta_3 \Delta TL_{it} + \varepsilon_{it} \ldots\ldots\ldots (i)$$

Where LLP_{it} denotes loan loss provisions for bank *i* at period *t,* NPL_{it-1} is lagged value of NPL bank *i* at period *t-1*, ΔNPL_{it} represents the change in NPL bank *i* at period *t,* ΔTL_{it} represents the change in the total loan for bank *i* at period *t* and ε_{it} denotes residual of the model. The residuals (ε_{it}) from this regression serve as a proxy of earnings management or discretionary loan loss provisions (DLLP). DLLP will be used as the dependent variable in the second-stage regression model.

Second-Stage Regression

The second-stage regression investigates the impact of before and after implementation of NFRS on earnings management. The model is given below:

$$DLLP_{it}= \alpha_{it}+\beta_1 NFRS_{it}+\beta_2 EBIT_{it}+ \beta_3 TL_{it}+ \beta_4 CapT_{it} + \beta_5 CGR_{it}+ \beta_6 GDP+\varepsilon_{it} \ldots\ldots(ii)$$

Where DLLPit denotes residuals from model (i) and also discretionary loan loss provisions for bank *i* at period *t,* NFRSit represents dummy variable indicating the adoption of Nepalese Financial Reporting Standards (0 assigned for before 2015/16 and 1 assigned to after 2015/16) for bank *i* at period *t*, EBITit is earning before tax for bank *i* at period *t,* TLit is total loan for bank *i* at period *t,* CapTit represents Tier 1 capital ratio for bank *i* at period *t,* CGRit represents credit growth rate for bank *i* at period *t,* GDP is gross domestic product and μ_{it} is error terms of the model. $EBIT_{it}$, TL_{it}, $CapT_{it}$, CGR_{it} and GDP_{it} are control variables. This model is estimated using pooled OLS and further tested using fixed effects model and random effects model to address potential endogeneity concerns.

4. Results and Discussion

The research adopts a quantitative, explanatory design to assess whether banks have altered their earnings management behavior before and after NFRS adoption, with a particular focus on discretionary loan loss provisions (DLLP) as the proxy for earnings management. The methodology involves a two-stage regression model, where the first stage decomposes total loan loss provisions into discretionary and non-discretionary components using lagged non-performing loans (NPL), changes in NPL, and changes in total loans. The residuals from this model represent DLLP and are used as the dependent variable in the second-stage regression, which includes various bank-specific and macroeconomic variables such as earnings before interest and tax (EBIT), Tier 1 capital ratio, total loans, credit growth rate, and gross domestic product (GDP). Data for this analysis was gathered from Nepal Rastra Bank and the World Bank for the period 2010/11 to 2023/24, comprising 331 usable bank-year observations after adjustments for missing data and structural changes like mergers and acquisitions.

Descriptive statistics reveal that the average loan loss provision is relatively low, while key variables such as Tier 1 capital ratio, credit growth, and GDP show moderate variation across the dataset. Correlation analysis confirms significant relationships between key variables; for instance, both lagged and current NPLs are positively and significantly correlated with loan loss provisions, suggesting that past and present loan performance strongly influence provisioning behavior.

Conversely, changes in total loans show a negative correlation with both NPL and LLP, indicating a potential inverse relationship between loan growth and risk exposure. The pooled Ordinary Least Squares (OLS) regression results in the first stage support these findings, revealing statistically significant positive effects of both lagged and changed NPLs on LLP, while changes in total loans do not significantly affect provisioning. This suggests that banks adjust their provisions primarily in response to asset quality rather than loan expansion.

In the second-stage regression, the study assesses whether the transition to NFRS has had a measurable impact on DLLP. Results show a statistically significant negative relationship between NFRS implementation and DLLP, implying that earnings management through provisioning declined after the adoption of NFRS. This finding supports the claim that NFRS has enhanced transparency in financial reporting among Nepalese banks. Additionally, EBIT is found to have a negative and significant effect on DLLP, meaning more profitable banks are less likely to engage in earnings management. In contrast, total loans and Tier 1 capital ratio are positively associated with DLLP, suggesting that larger and better-capitalized banks may have more room—or possibly incentive—to manipulate provisions for strategic purposes. On the other hand, credit growth and GDP do not show any statistically significant impact on DLLP, implying that broader economic conditions do not directly influence earnings management behavior within the studied context.

The study includes several diagnostic tests to verify the reliability of its models. The Breusch-Pagan test indicates the presence of heteroscedasticity, and the Shapiro-Wilk test suggests a violation of the normality assumption, necessitating more robust analysis methods. However, no autocorrelation is detected based on the Breusch-Godfrey test. To address these issues and ensure robust inference, both fixed effects and random effects models are estimated. The Hausman test suggests that the random effects model is more appropriate for this dataset, although the model's explanatory power remains limited ($R^2 = 0.05$), which is not uncommon in financial behavior studies that use firm-level panel data. Despite these limitations, the key conclusion remains consistent: the implementation of NFRS has contributed to a reduction in earnings management in Nepalese commercial banks. This finding aligns with international studies, such as those by De George et al. (2016), Cadot et al. (2020), and Amer et al. (2024), which emphasize the role of standardized reporting frameworks in enhancing financial transparency.

However, it is worth noting that these findings contrast with others, such as Bruggeman et al. (2013) and Tohara (2024), who argue that transitions between accounting frameworks can introduce ambiguity and encourage opportunistic reporting. Interestingly, while Nepal's transition from Nepal Accounting Standards (NAS) to NFRS could have offered scope for earnings management due to interpretational uncertainty, this study finds no evidence of increased manipulation. This suggests that Nepalese banks may have responded to regulatory reforms with greater diligence and improved internal controls, reflecting positively on the financial governance environment. Furthermore, the effects of control variables like EBIT and total loans are consistent with previous research (Alhadab & Al-Own, 2019), reinforcing the idea that both profitability and scale are key drivers in earnings management behavior.

In conclusion, this study provides empirical evidence that supports the effectiveness of NFRS in enhancing the transparency of financial reporting among Nepalese commercial banks. By focusing on DLLP as a proxy for earnings management and employing robust statistical methods, the research demonstrates that earnings manipulation declined after the adoption of NFRS. While macroeconomic indicators like GDP and credit growth do not significantly influence DLLP, factors such as profitability, loan volume, and capital adequacy do. These insights are crucial for policymakers, regulators, and banking institutions in Nepal, as they highlight the importance of consistent and enforceable accounting standards in promoting financial integrity. The findings also contribute to the global discourse on IFRS and earnings management, offering a context-specific perspective from a developing country that has recently undergone significant regulatory transformation.

5. Conclusion

This paper examines the impact of the implementation of NFRS before and after on earnings management in the Nepalese banking industry, especially from commercial banks. Using 331 bank-year observation samples from the period of 2011-2024, this study provides evidence of earnings management practices in Nepal. This study found that after the implementation of NFRS in Nepal, earnings management was reduced in the banking sector. The findings of this paper may be useful to investors and regulators in Nepal. Financial statements provided by banks can be reliable as there is evidence of improved transparency in the presence of NFRS. However, this study does not include all bank-specific characteristics such as corporate governance that may impact earnings management. Therefore, from this perspective, future researchers are encouraged to include such variables. So that earnings management could be analyzed in detail. Furthermore, this research included the period from 2011-2024, in future research more periods can be included to examine this relation. In addition, this paper includes only commercial banks so, all category banks can be included in future research.

Many past research papers used different measurements of earnings management (Cadot al et.,2020, Trimble, 2018; Said,2019). Therefore, researchers are encouraged to use various measurements and examine this relationship would contribute to academia and this theme. As per Diri (2017), signaling theory and other theory were used beside agency theory to examine earnings management practice. Therefore, that can be done in the context of Nepal in future research. From the methodological perspective, this study used two-stage discretionary method using Pooled OLS, Fixed Effects Model and Random Effects Model. Results from Random Effect Model is adopted and significant at 10% level. Therefore, this study encouraged to conduct same research with same data using method like GMM and other relevant econometric model to examine impact of NFRS implementation before and after on earnings management. In addition, this study assumes linear relationship between earnings management and accounting standards (NFRS) (referring model i and ii), in reality this may not be true. Future research should explore non-linear models for comparison. This paper contributes to the literature on earnings management in Nepal, focusing on accounting standards (NFRS), an area not yet fully explored, unlike previous studies which primarily emphasized corporate governance. Therefore, this study provides evidence on the impact of NFRS implantation on earnings management practice in Nepal.

References

Akgün, A. İ., Altunbaş, Y., & Uymaz, Y. (2021). The relationship between financial reporting standards and accounting irregularities: Evidence from US banks. *Journal of Financial Crime, 28*(4), 1161–1178. https://doi.org/10.1108/jfc-10-2020-0218

Alhadab, M., & Al-Own, B. (2019). Earnings management and equity incentives: Evidence from the European banking industry. *International Journal of Accounting and Information Management, 27*(2), 244–261. https://doi.org/10.1108/ijaim-08-2017-0094

Altunbaş, Y., Thornton, J., & Uymaz, Y. (2017). CEO tenure and corporate misconduct: Evidence from US banks. *Finance Research Letters, 26*, 1–8. https://doi.org/10.1016/j.frl.2017.11.003

Amer, A. M. M., Azimli, A., & Adedokun, M. W. (2024). Can IFRS adoption mitigate earnings management in an emerging market? *Heliyon, 10*(19), e38226. https://doi.org/10.1016/j.heliyon.2024.e38226

Asteriou, D., Pilbeam, K., & Tomuleasa, I. (2021). The impact of corruption, economic freedom, regulation, and transparency on bank profitability and bank stability: Evidence from the Eurozone area. *Journal of Economic Behavior & Organization, 184*, 150–177. https://doi.org/10.1016/j.jebo.2020.08.023

Bansal, M. (2023). Earnings management: A three-decade analysis and future prospects. *Journal of Accounting Literature, 46*(4), 630–670. https://doi.org/10.1108/jal-10-2022-0107

Baschieri, G., Carosi, A., & Mengoli, S. (2016). Does the earnings quality matter? Evidence from a quasi-experimental setting. *Finance Research Letters, 19*, 146–157. https://doi.org/10.1016/j.frl.2016.07.006

Bedford, A., Bugeja, M., & Ma, N. (2021). The impact of IFRS 10 on consolidated financial reporting. *Accounting and Finance, 62*(1), 101–141. https://doi.org/10.1111/acfi.12782

Brown, J. R., Cookson, J. A., & Heimer, R. Z. (2019). Growing up without finance. *Journal of Financial Economics, 134*(3), 591–616. https://doi.org/10.1016/j.jfineco.2019.05.006

Cadot, J., Rezaee, A., & Chemama, R. B. (2020). Earnings management and derivatives reporting: Evidence from the adoption of IFRS standards in Europe. *Applied Economics, 53*(14), 1628–1637. https://doi.org/10.1080/00036846.2020.1841085

Capkun, V., Collins, D., & Jeanjean, T. (2016). The effect of IAS/IFRS adoption on earnings management (smoothing): A closer look at competing explanations. *Journal of Accounting and Public Policy, 35*(4), 352–394. https://doi.org/10.1016/j.jaccpubpol.2016.04.002

De George, E. T., Li, X., & Shivakumar, L. (2016). A review of the IFRS adoption literature. *Review of Accounting Studies, 21*(3), 898–1004. https://doi.org/10.1007/s11142-016-9363-1

Deegan, C., & Unerman, J. (2011). *Financial Accounting Theory* (2nd ed.). McGraw-Hill.

Del Angel, M., Richardson, G., & Gou, M. (2024). Bank failures and economic activity: Evidence from the Progressive Era. *Explorations in Economic History, 94*, 101616. https://doi.org/10.1016/j.eeh.2024.101616

Diri, M. E. (2017). Introduction to earnings management. In *Springer eBooks*. https://doi.org/10.1007/978-3-319-62686-4