

Assessing the Quality of Accounting Information Under IFRS 9: A Comparative Panel-ARDL Analysis of Islamic and Conventional Banks Listed on the Damascus Securities Exchange

تقييم جودة المعلومات المحاسبية في ظل IFRS 9: تحليل مقارن باستخدام نموذج Panel-ARDL

للمصارف الإسلامية والتقليدية المدرجة في سوق دمشق للأوراق المالية

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Abstract

This study investigates the quality of accounting information (AIQ) under IFRS 9 implementation, using a comparative analysis of annual financial reports from Islamic Banks (IBs) and Conventional Banks (CBs) listed on the Damascus Stock Exchange between 2012–2023. AIQ is assessed via the discretionary loan loss provisions (DLLP) approach within the loan loss provisions (LLP) model, employing EViews 13 for panel data analysis. Findings reveal a persistent long-term strategic use of DLLP for earnings management (EM), with IBs exhibiting a more pronounced response. Despite IFRS 9 adoption, the earnings–DLLP relationship remains intact in CBs, while it weakens in IBs—except among high-performing entities—suggesting that EM persists conditionally on profitability. This signals a decline in AIQ and underscores the adaptive nature of IFRS 9, which appears shaped by institutional context rather than serving as a rigid regulatory constraint.

Keywords: Quality Of Accounting Information, IFRS 9, Earnings Management, LLP, Panel-ARDL, Islamic Banks, Conventional Banks.

ملخص

يهدف هذا البحث إلى تقييم جودة المعلومات المحاسبية (AIQ) في ظل تطبيق معيار IFRS 9، من خلال تحليل مقارن للتقارير المالية السنوية بين المصارف الإسلامية (IBs) والتقليدية (CBs) المدرجة في سوق دمشق خلال الفترة 2012–2023. تم قياس AIQ باستخدام مدخل المستحقات التقديرية (DLLP) ضمن نموذج مخصص خسائر القروض (LLP)، وتحليل البيانات باستخدام EViews 13. أظهرت النتائج نمطاً استراتيجياً طويل الأجل في استخدام المخصصات الاختيارية لإدارة الأرباح، مع استجابة أكثر وضوحاً لدى IBs. ورغم تطبيق معيار IFRS 9، استمرت العلاقة بين الأرباح قبل اقتطاع المخصصات والضرائب و DLLP في CBs، بينما تراجعت نسبياً في IBs، باستثناء تلك ذات الأداء العالي، مما يعكس استمرار إدارة الأرباح بشكل مشروط بالربحية. ويُعد ذلك مؤشراً على انخفاض AIQ بشكل عام، ويعكس مرونة معيار IFRS 9 الذي يُعاد تشكيله وفق السياق المؤسسي، أكثر من كونه حاجزاً تنظيمياً صارماً.

الكلمات المفتاحية: جودة المعلومات المحاسبية، IFRS 9، إدارة الأرباح، LLP، نموذج Panel-ARDL، المصارف الإسلامية، المصارف التقليدية.

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1. Introduction

The banking sector constitutes a cornerstone of modern economies, serving not only as a conduit for channeling savings into investment and production, but also as a stabilizing force in financial systems. The resilience and adaptability of banks in dynamic environments hinge on their institutional agility and capacity to respond to legal, economic, political, and technological shifts. Beyond asset size, the effectiveness of risk management, the integrity of accounting information, and the transparency of financial disclosures are critical indicators of institutional performance.

In this context, International Financial Reporting Standards (IFRS) have emerged as essential instruments for harmonizing global accounting practices, enhancing the credibility of financial statements, and promoting transparency and accountability. As noted by Bashaira (2010), IFRS contribute significantly to strengthening banking systems by improving internal controls and increasing the reliability of financial reporting. Among the most consequential developments in accounting regulation is the adoption of IFRS 9, which replaced IAS 39 in early 2018. Designed to address limitations in credit loss recognition, IFRS 9 introduces a forward-looking model that incorporates historical data, current conditions, and future expectations. This shift reflects a departure from traditional accounting conservatism toward a more anticipatory and risk-sensitive approach, aiming to balance present realities with projected outcomes and thereby enhance stakeholder confidence and institutional stability. However, the implementation of IFRS 9 presents notable challenges, particularly within dual banking systems. Conventional banks generally align more readily with the standard's conceptual framework, while Islamic banks face complexities in reconciling IFRS 9 with Sharia-compliant financing structures. These challenges underscore the tension between religious principles and international disclosure requirements, raising questions about the comparability and consistency of financial reporting across banking models.

Despite growing global interest in IFRS 9's implications, limited empirical research has examined its impact within the Syrian banking sector—especially in comparative analyses between Islamic and conventional banks. This study seeks to address this gap by evaluating the effect of IFRS 9 adoption on the quality of accounting information (AIQ) among banks listed on the Damascus Securities Exchange (DSE). Through a comparative analysis of Islamic and conventional institutions, the research aims to assess the effectiveness of IFRS 9 implementation and explore potential disparities in financial reporting quality across banking models.

2. Problem Statement

The assessment of accounting information quality (AIQ) in banks under the application of the IFRS 9 remains a subject of extensive debate in accounting literature, particularly when using indirect indicators such as Loan Loss Provisions (LLPs) to measure AIQ or earnings management. Numerous studies (Abd-Elrazek, 2024; Klish et al., 2021) have shown that despite IFRS 9's objectives to enhance transparency and reduce manipulation, it has not been sufficient to curb earnings management practices in many banking contexts (Nnadi et al., 2023; Gharib & Dawood, 2023; Dawood, 2023). Moreover, literature suggests that Islamic banks may employ different earnings management mechanisms compared to conventional banks, such as the use of profit smoothing reserves or investment risk reserves (Taktak et al., 2010; Quttainah et al., 2013).

In the Syrian context, local studies (Talimat, 2019; Taja & Al-Aday, 2024) have indicated some effects of IFRS 9 implementation on financial instrument classification and bank profitability but have not directly addressed the quality of accounting reports or earnings management (EM). Additionally, advanced statistical models, such as the modified two-step Johansen model, have not been applied to investigate these relationships. Therefore, this study's problem lies in the lack of sufficient empirical evidence on the impact of IFRS 9 implementation on AIQ, measured indirectly through LLPs, with a comparative analysis between Islamic and conventional banks listed on the DSE, considering the unique dual nature of the Syrian banking system. Accordingly, this research raises the following questions:

- 1. Is there a positive relationship between discretionary loan loss provisions (DLLP) and earnings before taxes and provisions (EBTP) in banks listed on DSE?**
- 2. Are Islamic banks less likely to use DLLP for earnings management compared to conventional banks?**
- 3. Does the implementation of IFRS 9 reduce the use of discretionary provisions in earnings management among banks?**
- 4. Is the impact of IFRS 9 in reducing the use of DLLP for earnings management stronger in Islamic banks than in conventional banks?**

3. Research Objective

This paper seeks to evaluate the quality of accounting information under IFRS 9 among Syrian banks listed on the Damascus Securities Exchange. The analysis utilizes discretionary loan loss provisions as an indirect proxy for financial reporting quality and earnings management. Furthermore, the research compares the effects between Islamic and conventional banks, considering the distinct financial instruments, contractual frameworks, and

regulatory requirements that characterize each, in order to provide a comprehensive understanding of IFRS 9's influence within Syria's dual banking system.

4. The Importance of Research

The scientific significance of this study lies in its focus on a relatively recent issue within the Syrian banking sector — the implementation of IFRS 9 and its impact on the AIQ. Despite the widespread international adoption of this standard, research investigating its effects in contexts characterized by unique legislative and economic conditions, such as Islamic and conventional banks in Syria, remains scarce. This study contributes to filling this knowledge gap by providing a comparative analysis between these two types of banks, thereby enriching the theoretical understanding of how international standards interact with accounting practices in diverse regulatory and supervisory environments.

From a practical standpoint, the study offers valuable insights for policymakers, accountants, and regulatory bodies by assessing the extent to which banks comply with IFRS 9, identifying potential shortcomings or variations in its application. The findings aim to support improvements in transparency and financial disclosure, and to guide future regulatory policies aimed at enhancing the efficiency and reliability of financial reporting. This practical relevance is particularly critical given the economic and financial challenges faced by Syria, where high-quality financial information is essential to fostering financial stability and promoting sustainable economic growth.

5. Background and hypothesis development

Numerous studies have demonstrated that the discretionary provisions DLLP are used by banks as a tool for earnings management and income smoothing over time. Abd-Elrazek (2024) highlighted that this approach is globally adopted, across both Islamic and conventional banks. The study indicated that these practices are routinely employed to smooth earnings, mitigate economic volatility, and enhance the appearance of financial performance in reports. Early quantitative studies (e.g., Collins et al., 1995; Greenawalt & Sinkey, 1988) as well as more recent ones (Klish et al., 2021; Kanagaretnam et al., 2004; Lobo & Yang, 2001; Khalil & Dawood, 2022; Gharib & Dawood, 2023; Biswas et al., 2024) support this view, showing that conventional banks tend to increase EM when profits are high, indicating that provisions serve as a flexible tool for achieving managerial accounting objectives. Accordingly, the first hypothesis can be developed as follows:

H₁: There is a positive relationship between discretionary loan loss provisions (EM) and earnings before taxes and provisions (EBTP) in banks listed on DSE.

Regarding the distinction between Islamic and conventional banks, the study by Ben Othman & Mersni (2014) analyzed earnings management practices through DLLP in 21 Islamic banks (ISs), 18 conventional banks (CBs) with Islamic windows (i.e., CBs with Sharia-compliant branches), and 33 CBs in the Middle East (Bahrain, Egypt, Jordan, Kuwait, Qatar, Saudi Arabia and UAE) during the period 2000–2008. The findings revealed that all types of banks utilize DLLP for earnings and capital management, and no statistically significant differences were found between Islamic and conventional banks, indicating a similarity in earnings management practices. Quttainah et al. (2013) examined the differences in earnings management between Islamic and conventional banks and found that ISs are relatively less likely to engage in such practices. While the presence of Sharia supervisory boards does not completely eliminate earnings management, it significantly constrains it. Taktak et al. (2010) expanded on this analysis, indicating that although ISs do engage in income smoothing, they rely less on DLLP and more on alternative tools such as Profit Equalization Reserves (PER) and Investment Risk Reserves (IRR). These alternatives reflect the unique accounting practices within Islamic banks. Furthermore, El-Halaby et al. (2020) showed that ISs applying AAOIFI standards are less involved in earnings manipulation, due to the enhanced prudence and reduced managerial discretion promoted by these standards. Consequently, differences in regulatory environments, accounting standards, and the contractual nature of Islamic finance justify the reduced reliance on DLLP in Islamic banks compared to their conventional counterparts. Based on this, the second hypothesis can be developed:

H₂: Islamic banks are less inclined to utilize discretionary loan loss provisions (DLLP) for the purpose of managing earnings, relative to conventional banks.

Although IFRS 9 was designed to enhance transparency and mitigate accounting manipulation, the evidence regarding its effectiveness in curbing earnings management through DLLP remains mixed. Proença et al. (2024) found that the implementation of IFRS 9 significantly improved financial transparency and reduced earnings manipulation, particularly in firms with diverse boards of directors. The study utilized an experimental model based on European data and concluded that IFRS 9 reduces the potential for manipulation via loan loss provisions by transitioning from the incurred loss model under IAS 39 to the expected credit loss (ECL) approach. Other studies such as Ahmed et al. (2021), Alkhresat & Almubaydeen (2019), and Al-Ameen & Zarquat (2021) found that the implementation of IFRS 9 improved the reliability of financial data, enhanced the quality of financial reporting, and

reduced opportunities for using DLLP for earnings management—particularly in European banks under strong regulatory supervision. This finding is also supported by Biswas et al. (2024), who showed that banks in BRICS countries that adopt IFRS are less likely to engage in earnings management, especially when a strong institutional environment is present. On the other hand, Nnadi et al. (2023) noted that the impact was not universal; some banks, particularly outside of Europe, continued to use DLLP for earnings management even after adopting IFRS 9. Moreover, the mere presence of international auditors (Big 4) was not always sufficient to deter manipulation or improve reporting quality. Therefore, while IFRS 9 does not entirely eliminate earnings management practices, it significantly constrains them in jurisdictions with stricter regulatory oversight. However, due to the lack of sufficient evidence confirming its universal effectiveness, this leads to the development of the following hypothesis:

H₃: The implementation of IFRS 9 reduces the use of DLLP in earnings management among banks.

Some studies suggest that the regulatory impact of IFRS 9 may be more pronounced in Islamic banks compared to conventional ones, owing to the combined influence of international accounting standards and Shariah compliance requirements. El-Halaby et al. (2020) found that ISs adhering to AAOIFI standards exhibit lower involvement in earnings management, indicating that the implementation of IFRS 9 in such environments is likely supported by a more stringent regulatory framework rooted in prudence and adherence to Shariah principles. Supporting this view, Quttainah et al. (2013) observed that Islamic banks tend to rely less on accounting mechanisms such as DLLP, which suggests that the effect of IFRS 9 could be more significant within the inherently transparent and conservative context of Islamic banking. Conversely, Nnadi et al. (2023) documented that many non-European banks—including numerous conventional institutions—persisted in using DLLP for earnings management even after adopting IFRS 9, highlighting weaknesses in enforcement or the limited effectiveness of the standard in certain regulatory environments. Collectively, these findings underscore that the conservative institutional nature of Islamic banks, alongside the application of AAOIFI standards, may amplify the effectiveness of IFRS 9 in curtailing DLLP-based earnings management. Therefore, the fourth hypothesis can be formulated as follows:

H₄: The impact of IFRS 9 in reducing the use of DLLP for earnings management is stronger in Islamic banks than in conventional banks.

6. Theoretical Framework

6.1: *Quality of Accounting Information (QAI)*

According to the literature issued by the Financial Accounting Standards Board (FASB), the International Accounting Standards Board (IASB), the UK Accounting Standards Board (ASB), and the Australian Accounting Standards Board (AASB), the QAI serves as an indicator of the extent to which financial statements provide accurate and fair information that reflects the true financial position and economic performance of an entity. The quality of such reporting primarily depends on two fundamental qualitative characteristics: faithful representation and relevance, which enable users to assess the usefulness of the information provided for decision-making purposes. To achieve high-quality reporting, financial statements must also exhibit several enhancing qualitative characteristics, including comparability, verifiability, timeliness, and understandability. Transparent, non-misleading reports that offer an accurate and predictable portrayal of economic activities are key indicators of accounting information quality (Gajevszky, 2015).

Numerous accounting studies have examined the factors influencing the QAI. The literature points to the role of corporate governance, the accounting profession, the economic environment, tax policies, political systems, and cultural factors in shaping reporting quality (Gajevszky, 2015). Additional studies highlight a wide array of technical and institutional factors affecting quality, such as earnings management, internal control practices, capital markets, internal reporting systems, applied accounting standards, information technology systems, audit efficiency, degree of conservatism, corporate reputation, organizational culture, work ethics, firm size, firm age, and board composition (Herath & Albarqi, 2017). Given the diversity of these factors, researchers have increasingly adopted non-financial and context-based measures to assess reporting quality beyond the traditional financial analysis, including qualitative or contextual indicators (Pounder, 2013). Within this context, the current research focuses on one of the most significant factors affecting reporting quality: earnings management.

6.2: *Earnings management (EM)*

Earnings management refers to the use of managerial discretion in financial reporting and transaction structuring with the aim of achieving specific financial outcomes that may influence investment decisions or contractual arrangements linked to accounting information (Healy & Wahlen, 1999). The concern with earnings management lies in its potential to distort the true financial performance of an entity. Investors and financial statement users demand highly reliable information, making earnings quality a vital component

in the efficiency of capital markets (Herath & Albarqi, 2017). Earnings quality plays a pivotal role in enhancing the effectiveness of financial decision-making and has become a key benchmark for assessing the reliability of accounting information. It reflects the extent to which management adheres to accounting standards while minimizing intentional biases. Empirical studies have proposed multiple measures for earnings quality, including earnings persistence, predictability, income smoothing, abnormal accruals, accrual quality, timeliness of revenue recognition, accounting conservatism, and earnings volatility. Managerial and institutional incentives are among the primary drivers of earnings management practices, with higher levels often associated with lower reporting quality.

6.3: International Financial Reporting Standard 9 (IFRS 9)

The 2008 global financial crisis revealed fundamental shortcomings in the incurred loss approach embedded in IAS 39, which delayed the recognition of credit losses until they were realized. This reactive framework hindered the timely identification of emerging financial risks (Gebhardt & Novotny-Farkas, 2011; Barth et al., 2008; Leventis et al., 2011). In response, the International Accounting Standards Board (IASB) introduced IFRS 9, which replaced the backward-looking model with a forward-looking Expected Credit Loss (ECL) framework. Under this approach, financial institutions are required to estimate and recognize credit losses based on anticipated future risk developments rather than actual defaults (Fatouh & Giansante, 2023). IFRS 9 categorizes financial assets into three stages according to changes in credit risk: Stage 1: Recognizes ECL over the next 12 months. Stage 2: Applies lifetime ECL when a significant deterioration in credit quality is observed. Stage 3: Records credit losses when objective evidence of impairment exists. This methodological shift reflects a more prudent and proactive stance in credit risk management. It enhances institutions' responsiveness to deteriorating credit conditions and improves the transparency and timeliness of financial disclosures, thereby enabling stakeholders to better assess exposure to credit risk. Nevertheless, IFRS 9 allows substantial managerial discretion, particularly in determining the timing of transitions between stages and in estimating expected losses. This raises concerns about the objectivity of reported information (Bholat & Lastra, 2017). Additionally, IFRS 9 provides considerable flexibility in implementing hedging strategies and capital management, balancing transparency with operational adaptability. Recent studies (Resende et al., 2024) suggest that this model has reduced profit volatility and contributed to more stable financial performance. Despite its advantages, IFRS 9 faces implementation challenges in diverse contexts, particularly in Islamic banking, which adheres to Shariah principles.

Certain provisions of the standard may conflict with Islamic jurisprudence, necessitating the development of Shariah-compliant accounting models that maintain transparency and disclosure standards (Sarea, 2012).

6.4: Accounting Practices in Islamic vs. Conventional Banks

Islamic banks are distinct financial institutions that operate in accordance with Islamic Shariah, derived from the Qur'an, Sunnah, and other jurisprudential sources such as consensus (Ijma'), analogy (Qiyas), and scholarly reasoning (Ijtihad) (Al-Gamal, 2006). The Islamic banking system is characterized by its ethical foundation and its commitment to balancing profit generation with social responsibility, contrasting with the conventional focus on profit maximization (Hamdi & Zarai, 2012).

A fundamental tenet of Islamic finance is the categorical rejection of interest (riba), which is viewed as a form of exploitation and is explicitly condemned in both the Qur'an (e.g., Surah Al-Baqarah 2:275, 278–279) and the Hadith literature (e.g., Bukhari, Muslim). This prohibition is grounded not only in jurisprudential rulings but also in ethical and spiritual imperatives that shape the moral foundations of the Islamic financial system. Financial relationships are thus based on **profit-and-loss sharing**, not debt and interest (Taktak et al., 2010; Farouk et al., 2012). IBs also avoid financing activities or sectors that are prohibited by Shariah, such as alcohol, gambling, and narcotics (Al-Gamal, 2006). Prominent Islamic financing contracts include: 1) Mudharaba (Trust Financing): a partnership where one party contributes the financial resources and the other undertakes the business operations. Profits are distributed based on a mutually agreed ratio. 2) Musharaka (Partnership): Both parties contribute capital and management efforts, sharing profits and losses accordingly.

In terms of accounting practices, IBs differ notably in provisioning mechanisms. They adhere to the standards issued by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), which emphasize the importance of dynamic provisioning to mitigate profit volatility and credit risk (Wezel et al., 2012). According to AAOIFI Standard No. 11, provisions are amounts deducted from income to cover potential losses related to financial receivables or assets and are categorized as: 1) General Provisions: For unspecified potential losses. 2) Specific Provisions: For identified receivables expected to default (Taktak et al., 2010). These provisions rely on forward-looking estimates, offering greater flexibility than CBs that may depend more on incurred losses (Taktak, 2011). However, harmonizing the application of these standards remains challenging due to variations in legal and regulatory frameworks across Islamic countries. This leads to significant disparities in accounting practices among Islamic banks (Sarea, 2012).

7. Research Methodology

This study employs a quantitative analytical methodology using panel data to investigate the moderating effect of IFRS 9 implementation on the AIQ in Syrian banks listed on the DSE. IFRS 9 replaced the incurred loss model under IAS 39 with the expected credit loss (ECL) model, representing a significant shift in financial reporting standards. Although IFRS 9 was officially adopted in Syria in 2019, financial statements for the year 2018 were retroactively adjusted to comply with its requirements. Accordingly, 2018 is considered a pivotal year marking the beginning of the adjustment and implementation phase. The dataset comprises annual financial reports from all 14 listed banks—3 Islamic and 11 conventional—covering the period from 2012 to 2023. This yields a balanced panel of 168 bank-year observations ($14 \text{ banks} \times 12 \text{ years}$). Data analysis was conducted using EViews 13, applying descriptive statistics and econometric techniques to explore relationships and test the study's hypotheses.

To measure the AIQ, the study adopts the specific accruals approach, diverging from the total accruals methodology employed in earlier research such as Shahid & Alissa (2018), Peña & Franco (2017), Baig & Khan (2016), Mongrut & Winkelried (2019), and Junior et al. (2018). The rationale for this choice lies in the prominence of loan loss provisions (LLPs) as a key discretionary accrual in banking institutions, with a significant influence on reported earnings (Kanagaretnam et al., 2004; vanOosterbosch, 2010). Consistent with prior studies including Ben Othman & Mersni (2014) and Biswas et al. (2024), the analysis employs the **income statement approach** to LLPs rather than the balance sheet-based loan loss allowances (LLA). As noted by Beaver and Engel (1996), the LLA approach does not offer superior explanatory power, and banks may strategically utilize either method to achieve distinct financial reporting objectives.

Special consideration was given to the unique operational and financial characteristics of Islamic banks, which operate under Sharia law and utilize instruments such as Qard Hassan (benevolent loans), Musharakah (equity partnerships), Murabaha (cost-plus financing), and Mudarabah (profit-sharing investments). Accordingly, for Islamic banks, the study includes only ECL provisions related to deferred sales receivables and financing activities, as Syrian Islamic banks do not allocate provisions for Musharakah contracts.

7.1: Empirical Model

This study aims to assess the extent of earnings management practices in banks by analyzing the discretionary component of loan loss provisions (DLLP), using a two-stage regression model. In the first stage, total provisions

are decomposed into non-discretionary provisions—attributable to objective operational factors—and discretionary provisions, which reflect managerial intervention in financial reporting. The discretionary portion is extracted from the residuals of the first-stage model and serves as an indirect proxy for the AIQ. A higher absolute value of these residuals indicates lower reporting quality, as it suggests unjustified inflation or reduction in provisions.

Stage One: Provision Determinants Model

The first-stage regression model is specified as follows:

$$LLP_{it} = \beta_0 + \beta_1 LLA_{it-1} + \beta_2 NPL_{it-1} + \beta_3 CHNPL_{it} + \beta_4 CHLOAN_{it} + \beta_5 SIZE_{it} + \varepsilon_{it} \quad (EQ1)$$

Where:

LLP_{it}: Total loan loss provisions at the end of period t, scaled by total loans at the beginning of the period.

LLA_{it-1}: The loan loss allowance at the end of the previous year, scaled by total loans at the beginning of the period, used to control for prior-period conservatism. Prior literature (e.g. Kanagaretnam et al., 2005) suggests a negative relationship with current provisions, as a higher existing ALL reduces the need for additional provisioning.

NPL_{it-1}: Non-performing loans at the beginning of the period, scaled by total loans. Expected to have a positive association with provisions, serving as a direct indicator of credit risk (Ryan, 2007).

CHNPL_{it}: Change in non-performing loans between periods t and t–1, scaled by beginning loans. also expected to positively influence provisions, as it reflects deterioration in asset quality (Kanagaretnam et al., 2005).

CHLOAN_{it}: Change in total loans between t and t–1, scaled by beginning loans. Expected to be positively associated with LLPs, since loan growth increases the likelihood of doubtful accounts requiring provisioning (Ryan, 2007).

SIZE_{it}: Bank Size, Natural logarithm of total assets, included as a control variable. Prior studies offer mixed evidence: larger banks may exhibit more conservative provisioning behavior, though the direction of the relationship may vary depending on institutional context.

ε_{it}: The error term, representing the discretionary component of LLPs (DLLP).

Stage Two: Hypothesis Testing equations

In the second stage, the absolute value of the residuals from the first-stage regression ($|\varepsilon_{it}|$) denoted as EM, is employed as the dependent variable to test hypotheses H₁–H₄, serving as a proxy for DLLP and reflecting earnings management through managerial discretion in provisioning.

Several estimation challenges emerged during model development. The Islamic bank indicator—used to test H_2 and H_4 —is time-invariant (coded as 1 for Islamic banks and 0 for conventional banks), which limits its inclusion in fixed-effects panel models due to within transformation. To overcome this, separate regressions were conducted for each bank type, enabling comparative institutional analysis. Additionally, IFRS 9 was modeled both as a direct regressor and through an interaction term with EBTP, enabling a comprehensive evaluation of both its direct impact and its moderating role in shaping earnings management behavior. The final model is specified as follows:

$$EM_{it} = \beta_0 + \beta_1 EBTP_{it} + \beta_2 PostIFRS9_t + \beta_3 (EBTP_{it} \times PostIFRS9_t) + Controls + \varepsilon_{it}$$

Where:

EM_{it}: denotes earnings management, captured by the absolute value of the residual from the first-stage regression.

EBTP_{it}: Earnings before taxes and provisions, scaled by total assets, reflecting pre-discretionary bank performance. A positive link is expected, as managers may adjust provisions upward in high-earnings periods to smooth income or meet regulatory norms, and downward when earnings are low to enhance reported performance.

PostIFRS9_t: A dummy variable equal to 1 for years from 2018 onward, and 0 otherwise. It captures structural changes in provisioning behavior following IFRS 9 adoption. A negative and significant β_2 would indicate reduced earnings management due to stricter impairment rules and enhanced disclosure requirements.

EBTP_{it} × PostIFRS9_t: An interaction term used to examine whether the implementation of IFRS 9 moderates the relationship between EBTP and earnings management behavior. A negative and significant coefficient β_3 would suggest that IFRS 9 weakens this relationship by reducing the reliance on EBTP for manipulating provisions, reflecting the standard's role in enhancing financial reporting quality and curbing earnings management.

Controls:

ROA_{it} (Return on Assets): Defined as net income divided by total assets, serves as a proxy for bank profitability and operational efficiency.

LEV_{it} (Leverage): Measured as total liabilities over total assets, captures the bank's capital structure and exposure to financial risk.

ε_{it}: The error term.

8. Results and discussion

Before proceeding with the statistical analysis, it is important to note that the derived variable EM—defined as the absolute value of the residuals from the first model (EQ1)—was extracted following the

estimation of Equation (1) presented in Table 5. The reliability of the first model was verified through diagnostic tests conducted on the original residuals, as shown in Table 6. This methodological validation reinforces the credibility of the EM construction and justifies its use in subsequent analysis.

8.1: Descriptive Statistics and correlation.

The descriptive statistics of the variables are presented in Table 1.

Table 1. Descriptive Statistics					
Islamic Banks					
	Mean	Median	Maximum	Minimum	Std. Dev.
LLP	0.0400	0.0340	0.1558	-0.0557	0.0428
LLA	0.1369	0.1309	0.3400	0.0157	0.0910
NPL	0.2021	0.1973	0.5821	0.0051	0.1571
CHNPL	0.0736	0.0298	0.5484	-0.3035	0.1598
CHLOAN	0.0783	0.0537	0.3305	-0.0644	0.0890
EM	0.0338	0.0259	0.1151	0.0005	0.0287
EBTP	0.0856	0.0474	0.4140	0.0014	0.1014
ROA	0.0391	0.0413	0.1009	-0.0105	0.0285
LEV	0.1177	0.1173	0.1733	0.0487	0.0322
SIZE	26.6997	26.5189	29.6969	24.7652	1.3788
Conventional Banks					
	Mean	Median	Maximum	Minimum	Std. Dev.
LLP	0.037338	0.028965	0.207831	-0.12033	0.060118
LLA	0.232326	0.198914	0.512885	0.033576	0.127726
NPL	0.371738	0.328498	0.924857	0.027523	0.20189
CHNPL	0.09085	0.067774	0.681348	-0.35049	0.156919
CHLOAN	0.059657	0.041628	0.399988	-0.12417	0.089074
EM	0.053938	0.048465	0.118998	0.001714	0.035449
EBTP	0.188239	0.079275	0.829456	-0.10771	0.248294
ROA	0.087623	0.045306	0.419874	-0.12219	0.117038
LEV	254.2812	203.7359	800.3288	0.220381	186.1483
SIZE	18.85986	18.60728	22.54945	16.63592	1.252714
Source(s): Author's own creation based on EViews 13 output.					

The average loan loss provision (LLP) in Islamic banks is 4% of total loans, compared to 3.73% in conventional banks, with greater volatility observed in the latter (Std. Dev. = 6.01%). This suggests that conventional banks rely more heavily on periodic provisioning to manage credit risk, whereas Islamic banks follow a more consistent approach. The loan loss allowance (LLA),

representing provisions accumulated from prior periods, averages 13.69% in Islamic banks and 23.23% in conventional banks, reflecting a more conservative provisioning policy in the conventional model. Non-performing loans (NPL) are significantly higher in conventional banks (37.17%) than in Islamic banks (20.21%), indicating relatively weaker asset quality. Loan growth (CHLOAN) is stronger in Islamic banks (7.83% vs. 5.97%), suggesting a more expansionary lending strategy. In terms of profitability, conventional banks report a higher average of earnings before provisions and taxes (EBTP) at 18.82%, compared to 8.56% in Islamic banks. Similarly, return on assets (ROA) is higher in conventional banks (8.76% vs. 3.91%), indicating stronger earnings capacity. Earnings management (EM), is also higher in conventional banks (5.39%), which may reflect greater flexibility in profit management. Leverage (LEV) shows a pronounced disparity, with conventional banks averaging 254.28% compared to 11.77% in Islamic banks, possibly due to fundamental differences in capital structure. Finally, bank size (SIZE) is larger in Islamic banks (26.70 vs. 18.86), indicating a broader operational scale.

8.2: Correlation Matrix

Table 2 reveals varying degrees of association among the independent variables, with the most notable being a relatively strong positive correlation between LLA and NPL, at $r = 0.76$, which may suggest a degree of functional overlap. Additionally, ROA demonstrates a strong linear relationship with both EBTP and LEV, with correlation coefficients of 0.8058 and 0.7124, respectively. Since the correlation between ROA and EBTP exceeds the commonly accepted threshold of 0.80, ROA was excluded from the model to reduce the risk of multicollinearity and improve the reliability of coefficient estimates. While no definitive signs of multicollinearity are evident across the remaining variables, the relatively high correlation between LLA and NPL warrants further scrutiny through the Variance Inflation Factor (VIF) test to ensure the robustness of the model specification.

Table 2. Correlation Matrix						
Stage One - Model Eq(1)						
	LLP	LLA	NPL	CHNPL	CHLOAN	SIZE
LLA	-0.3315	1.0000				
p-value	0.0000	-----				
NPL	-0.1921	0.7623	1.0000			
p-value	0.0126	0.0000	-----			
CHNPL	0.2876	-0.1433	-0.0470	1.0000		
p-value	0.0002	0.0638	0.5448	-----		
CHLOAN	-0.0452	0.0792	0.3034	0.1922	1.0000	

p-value	0.5610	0.3073	0.0001	0.0126	-----	
SIZE	-0.0524	-0.3304	-0.3115	-0.0306	0.1790	1
p-value	0.5003	0.0000	0.0000	0.6934	0.0203	-----
Stage Tow - Model						
	EM	EBTP	ROA	LEV		
EBTP	0.2508	1.0000				
p-value	0.0017	-----				
ROA	0.1768	0.8058	1.0000			
p-value	0.0283	0.0000	-----			
LEV	0.2234	0.3522	0.5920	1.0000		
p-value	0.0053	0.0000	0.0000	-----		
Source(s): Author’s own creation based on EViews 13 output.						

8.3: Analysis of Time Series Stationarity Test Results

8.2.1: Stage One: Cross-Sectional Dependence Test

The application of the Pesaran CD test (Pesaran, 2007) revealed statistically significant cross-sectional dependence among the original panel variables, as all test statistics indicated strong inter-unit correlations. This finding necessitated the use of second-generation unit root tests that explicitly accommodate cross-sectional dependence. Accordingly, the augmented CIPS test was employed, in line with best practice for dependent panels (Levine, 2005), thereby enhancing the reliability of stationarity assessment. In contrast to the original variables, the derived variable *EM* exhibits no evidence of cross-sectional dependence, as confirmed by the Pesaran CD test (p-value = 0.323). Furthermore, panel unit root tests (Levin, Lin & Chu; Breitung; IPS; ADF-Fisher; PP-Fisher) strongly reject the null hypothesis of a unit root, indicating that *EM* is stationary at level (I(0)) under all specifications, including those with intercept and trend (Table 3).

8.2.2: Analysis of Variable Stationarity

Table (3) presents the results of the CIPS test applied to the panel variables under investigation, covering the model variables across both Stages. The results reveal heterogeneity in the stationarity properties of the variables. Some variables are classified as level stationary (I(0)), while others require first differencing to achieve stationarity, indicating they are integrated of order one (I(1)). This variation reflects the mixed nature of the panel data employed and underscores the need for a flexible modeling approach.

Table 3. Results of the CIPS Unit Root Test for Panel Data Variables.							
STAGE ONE_level							
	No		Constant		Constant & Trend		OFI
Variable	CIPS	Result	CIPS	Result	CIPS	Result	

LLP	-2.632**	YES	-2.700*	YES	0.000	NO	I(0)
LLA	-2.331**	YES	0.000	NO	0.000	NO	
NPL	-1.932*	YES	-3.804**	YES	0.000	NO	I(0)
CHNPL	-2.583**	YES	-2.350	NO	0.000	NO	
CHLOAN	-3.146**	YES	-9.438**	YES	0.000	NO	I(0)
SIZE	-2.050**	YES	-1.293	NO	0.000	NO	
STAGE TWO_level							
EM	-3.982***	YES	-2.579*	YES	-3.326*	YES	I(0)
EBTP	-0.168	NO	0.000	NO	0.000	NO	
LEV	-1.307	NO	-0.619	NO	0.000	NO	
STAGE ONE_1st diff							
LLP	-3.842**	YES	-3.943**	YES	-3.261*	YES	
LLA	-3.218**	YES	-2.963**	YES	-2.696	NO	I(1)
NPL	-2.863**	YES	-2.801**	YES	-4.157**	YES	
CHNPL	-3.364**	YES	-2.895**	YES	-4.689**	YES	I(1)
CHLOAN	-4.273**	YES	-3.958**	YES	-3.888**	YES	
SIZE	-2.699**	YES	-3.752**	YES	-4.327**	YES	I(1)
STAGE TWO_1st diff							
EBTP	-3.636**	YES	-3.280**	YES	-5.878**	YES	I(1)
LEV	-2.972**	YES	-3.686**	YES	-3.792**	YES	I(1)
Levin, Lin & Chu t*	Constant		Constant& Trend		NO		
EM	-8.242***	YES	-7.669***	YES	-3.370***	YES	I(0)
Note: ** significant at 1%, * significant at 5%. OFI means Order of Integration.							
Source(s): Author's own creation based on EViews 13 output.							

8.2.3: Cointegration Test

The results presented in Table (4) indicate a strong cointegration relationship among the variables under investigation within the panel data framework, across both the **Stage One** and **Stage Two** models. The outcomes of the Kao (ADF) test and the Pedroni tests (both PP and ADF versions) demonstrate high statistical significance in 6 out of 11 tests, under various deterministic assumptions.

Table 4. Cointegration Test			
Test Type	Assumptions	Statistic_Stage 1	Statistic_Stage 2
Kao (ADF)	intercept	-5.858***	-3.347***
Pedroni PP	intercept	-5.534***	-5.957***
Pedroni ADF	intercept	-4.380***	-5.852***
Pedroni PP	With trend/intercept	-9.023***	-7.154***

Pedroni ADF	With trend/intercept	-5.699***	-5.440***
Pedroni PP	Without trend/intercept	-5.940***	-5.914***
Pedroni ADF	Without trend/intercept	-3.093***	-5.943***
Note: *** significant at 1%.			
Source(s): Author's own creation based on EViews 13 output.			

These findings highlight the importance of using econometric models that accommodate cross-sectional dependence and mixed integration orders. The ARDL framework, as shown by Pesaran et al. (2001), is well-suited for analyzing long-run relationships without prior cointegration testing. Moreover, Pesaran (2007) underscores the need to address cross-sectional dependence in panel data, supporting the use of flexible approaches such as ARDL and CS-ARDL.

8.4: Estimation of the First Model

Table (5) presents the results of the Panel ARDL model estimated using the PMG approach, with the optimal specification selected based on the Akaike Information Criterion. The dependent variable is D(LLP), and five independent variables were included with automatic lag selection.

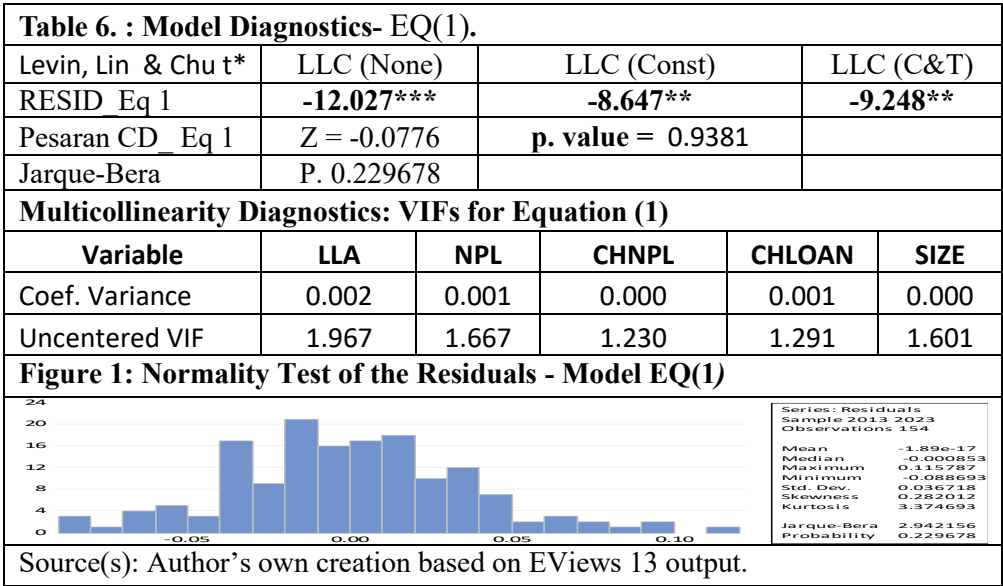
Table 5. Panel ARDL Estimation Results for Model 1.				
Dependent Variable: D(LLP)				
Method: PMG (1,1,0,0,0,0) selected via AIC				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-run (Pooled) Coefficients				
LLA	-0.4542	0.0399	-11.3958	0.0000
NPL	0.0619	0.0264	2.3454	0.0203
CHNPL	0.0234	0.0194	1.2018	0.2313
CHLOAN	0.0863	0.0317	2.7261	0.0072
SIZE	-0.0159	0.0029	-5.5531	0.0000
Short-run (Mean-Group) Coefficients				
COINTEQ	-0.9666	0.1028	-9.4056	0.0000
D(LLA)	0.2455	0.0747	3.2866	0.0013
C	0.4129	0.0454	9.0972	0.0000
Log-Likelihood: 305.7088535				
Source(s): Author's own creation based on EViews 13 output.				

Long-run Results: LLA shows a significant negative relationship with LLP, indicating that a higher opening balance of LLA reduces the need for new provisions—reflecting a prudent accounting logic. NPL has a positive and significant effect, consistent with regulatory requirements that link rising non-performing loans to increased provisioning. CHLOAN exhibits a significant positive relationship, suggesting that loan growth prompts banks to increase

provisions as a precautionary measure. SIZE is negatively associated with LLP, implying that larger banks tend to record lower provisions, possibly due to greater stability or advanced risk management strategies. **Short-run Results:** Changes in the allowance balance (D(LLA)) are positively related to LLP, reflecting banks' immediate response to shifts in credit portfolio quality. The error correction term (-0.967) is statistically significant and indicates a high speed of adjustment, with approximately 96.7% of short-term deviations corrected within one year. These findings suggest that banks' provisioning behavior combines rapid responses to short-term risks with reliance on cumulative long-term decisions, reflecting a balance between financial prudence and sustainable risk management.

8.3.1 Model 1 Fitness and Diagnostic Evaluation

Post-estimation diagnostics for Model EQ(1) confirm its statistical adequacy. Cross-sectional dependence and residual stationarity tests (Table 3) reveal no significant dependence and level-stationary residuals, affirming internal consistency. Table 6 reports VIFs for EQ(1), all below the conservative threshold of 5, indicating no multicollinearity and supporting coefficient reliability. Residuals also pass the Jarque-Bera normality test ($p = 0.2296$; Figure 1), reinforcing the model's suitability for inference.



8.5: Hypothesis Testing

8.4.1: Estimation of Hypothesis 1

Table (7) reports the estimation results of the ARDL model. In the long run, *EBTP* exhibits a positive and highly significant effect ($\beta = 0.1045$, $p < 0.001$), confirming its strategic role in earnings management—consistent with the intentional use of provisions as a tool for earnings management. The coefficient

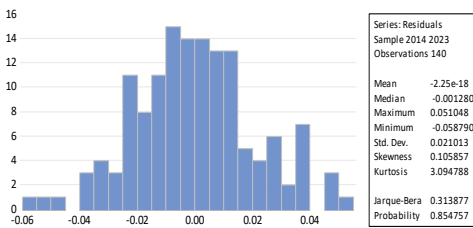
for *LEV* is positive but marginally insignificant ($\beta = 0.000033$, $p = 0.092$), suggesting a weak long-term association between leverage and discretionary provisions. Short-run dynamics reveal a significant negative effect for *D(EBTP)* ($\beta = -0.0857$, $p < 0.001$), indicating that banks do not immediately adjust provisions in response to short-term earnings changes. Instead, it appears that banks refrain from engaging in intra-year earnings management through loan loss provisions, possibly deferring such actions until year-end when the full financial picture becomes clearer. The short-run coefficient for *D(LEV)* is positive but statistically insignificant ($\beta = 0.0425$, $p = 0.140$), implying that leverage does not drive short-term adjustments in provisions. The error correction term (*COINTEQ*) is strongly negative and highly significant ($\beta = -1.0192$, $p < 0.001$), reflecting a rapid convergence to long-run equilibrium, with over 100% of deviations corrected annually. The model's log-likelihood value (347.4312) indicates a well-fitted specification.

Table 7. Estimation H ₁ .				
Dependent Variable: D(EM). Method: PMG (1,1,1) selected via AIC.				
FULL MODEL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Long-run (Pooled) Coefficients				
EBTP	0.1045	0.0192	5.4448	0.000
LEV	0.000033	0.0000	1.6951	0.092
Short-run (Mean-Group) Coefficients				
COINTEQ	-1.0192	0.1107	-9.2070	0.0000
D(EBTP)	-0.0857	0.0207	-4.1431	0.0001
D(LEV)	0.0425	0.0286	1.4852	0.1398
C	0.0321	0.0064	5.0260	0.0000
Log-Likelihood:		347.4312		
Source(s): Author's own creation based on EViews 13 output.				

Collectively, these results provide robust **support for Hypothesis 1**, highlighting the long-term strategic use of discretionary provisions in response to earnings, while short-term adjustments appear limited and non-reactive to leverage fluctuations. This result aligns with the findings of Abd-Elrazek (2024), who indicated that the use of DLLP is a globally common practice for earnings management in both Islamic and conventional banks. It also concurs with several previous studies (Collins et al., 1995; Greenwalt & Sinkey, 1988; Klish et al., 2021; Kanagaretnam et al., 2004; Lobo & Yang, 2001; Khalil & Dawood, 2022; Gharib & Dawood, 2023; Biswas et al., 2024), which emphasized the use of DLLP as a tool for earnings management.

8.4.1.1 Hypothesis 1 Fitness and Diagnostic Evaluation

Table 8 confirms the statistical soundness of Model H₁ across multiple diagnostic dimensions. The VIF values (1.13) are well below the conventional threshold, ruling out multicollinearity concerns. Stationarity is consistently supported by the LLC test under all specifications. The Pesaran CD test yields a non-significant result (p= 0.273), indicating no cross-sectional dependence. Furthermore, the Jarque-Bera test (p≈ 0.85), along with the residual histogram, suggests that the residuals exhibit approximate normality—supporting the model’s reliability for inference.

Table 8: Model Diagnostics – H ₁		
Diagnostic Test	H ₁	Figure 2: Histogram of Residuals– H₁ 
VIF (EBTP, LEV)	1.13 / 1.13	
LLC (None)	-12.471***	
LLC (Const)	-7.698***	
LLC (C&T)	-10.124***	
Pesaran CD	Z = 1.095, p = 0.273	
Jarque-Bera	P. 0.854757	
Note: LLC = Levin, Lin & Chu test; “None” = no deterministic terms, “Const” = constant only, “C&T” = constant and trend. *** significant at 1%.		
Source(s): Author’s own creation based on EViews 13 output.		

8.4.2: Estimation of Hypothesis 2

Table 9 presents the estimation results for H₂. **In the long run**, the results show a statistically significant positive relationship between EBTP and discretionary earnings adjustments, with coefficients of 0.107 (p= 0.005) for Islamic banks (IBs) and 0.103 (p= 0.000) for conventional banks (CBs). **This indicates that both banking models rely on EBTP as a mechanism for long-term earnings management with comparable intensity.** LEV has a significant positive effect in IBs (0.317, p= 0.002), while its impact in conventional banks is statistically insignificant (p = 0.087), suggesting that capital structure plays a more pronounced role in shaping earnings behavior within Islamic institutions. **In the short run**, the COINTEQ is negative and highly significant for both sectors, confirming convergence toward long-run equilibrium. However, the adjustment speed is higher in IBs (−1.921) compared to CBs (−0.961), indicating that IBs respond more rapidly to deviations from equilibrium. Short-term changes in D(EBTP) exhibit a negative relationship with earnings management, which appears more pronounced in CBs (−0.069, p= 0.000), while the effect in IBs is statistically insignificant (−0.184, p= 0.098). These results suggest that CBs may be more inclined to adjust provisions in response to interim earnings fluctuations, whereas no comparable pattern can be

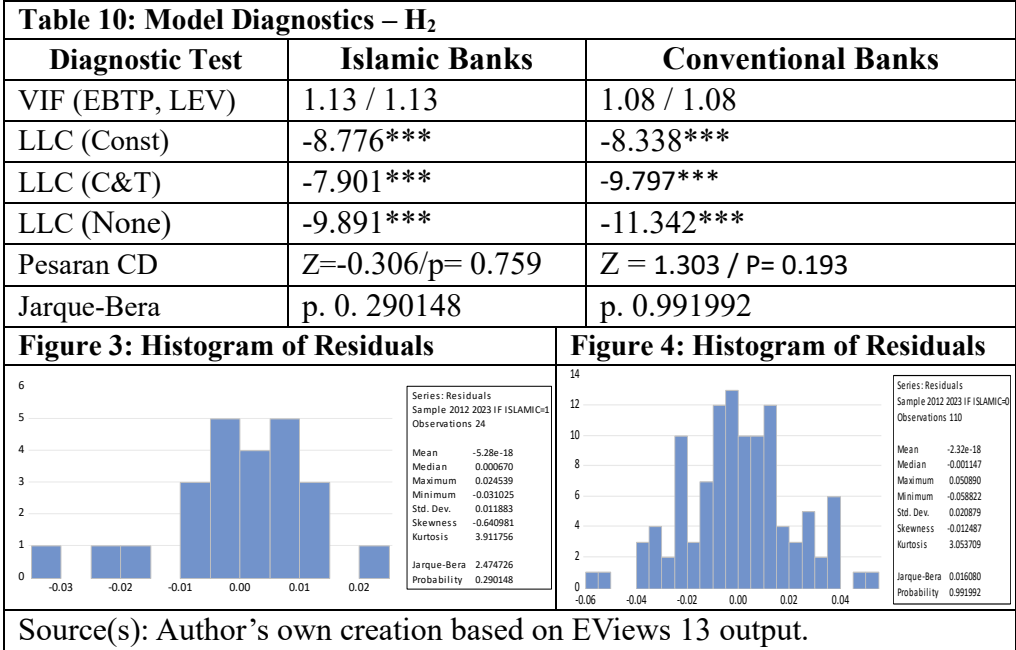
confirmed for IBs based on the current data. Apparently, pre-provision earnings are not typically used for earnings management during the fiscal year, but rather deferred until year-end, when financial positions become more clearly defined.

Table 9. Estimation H ₂ .									
ISLAMIC BANKSB (IBs)					CONVENTIONAL BANKS (CBs)				
Dependent Variable: D(EM) Method: PMG (3,1,0) selected via AIC					Dependent Variable: D(EM) PMG(1,1,1) selected via AIC				
Var.	Coef.	SE	t-stat	Prob	Coef.	StdErr	t-stat	Prob.	
Long-run (Pooled) Coefficients					Long-run (Pooled) Coefficients				
EBTP	0.107	0.034	3.100	0.005	0.103	0.020	5.232	0.000	
LEV	0.317	0.088	3.619	0.002	0.000	0.000	1.725	0.087	
Short-run (Mean-Group) Coefficients					Short-run (Mean-Group) Coefficients				
COINTEQ	-1.921	0.455	-4.226	0.000	-0.961	0.133	-7.223	0.000	
D(EM(-1))	0.371	0.316	1.173	0.255					
D(EM(-2))	0.260	0.415	0.627	0.538					
D(EBTP)	-0.184	0.106	-1.738	0.098	-0.069	0.019	-3.719	0.000	
D(LEV)					0.000	0.000	-0.819	0.415	
C	-0.023	0.028	-0.838	0.412	0.031	0.007	4.361	0.000	
Log-Likelihood:		76.3227			272.691				
Source(s): Author's own creation based on EViews 13 output.									

Based on these results, Hypothesis 2 is rejected. The findings reveal a stronger and more responsive earnings management pattern among Islamic banks, particularly in the long run, confirming that both banking sectors actively utilize discretionary loan loss provisions as a tool for managing earnings. This result aligns with the findings of Ben Othman and Mersni (2014), who reported no statistically significant differences between Islamic and conventional banks in their earnings management practices—indicating behavioral convergence despite divergent regulatory frameworks. Conversely, these findings stand in contrast to prior studies such as Quttainah et al. (2013) and Taktak et al. (2010), which emphasized the constraining role of Shariah governance and the reliance of Islamic banks on alternative instruments, such as profit equalization reserves and investment risk reserves. This divergence may reflect structural shifts in the competitive landscape or evolving risk management strategies, suggesting that Islamic financial behavior is no longer governed solely by religious constraints, but is increasingly shaped by market and regulatory considerations. Such a shift calls for a critical reassessment of traditional assumptions regarding the distinctiveness of Islamic banking conduct.

8.4.2.1 Hypothesis 2 Fitness and Diagnostic Evaluation

Table (10) presents the diagnostic test results for both models. The VIF values indicate that multicollinearity is not a concern, as all values fall within acceptable limits. The LLC test results confirm that the residuals are statistically stationary across specifications, enhancing the reliability of both models. Additionally, the Pesaran CD test suggests no significant cross-sectional dependence, while the Jarque-Bera results indicate that the residuals are approximately normally distributed. Overall, both models exhibit strong statistical properties that support the robustness of the estimations and the validity of the conclusions.



8.4.3: Estimation of Hypothesis 3

When testing for a moderating effect, it is crucial to include the direct path from the moderator variable (M) to the dependent variable (Y). This ensures that the direct effect is properly accounted for and prevents the overestimation of the interaction effect. Omitting this path can result in misleading conclusions (Hair et al., 2021, p. 158). Accordingly, the first stage should estimate only the direct effects of the independent and moderator variables on the dependent variable. In the second stage, the interaction term is added alongside the main variables to capture the moderating effect within the ARDL framework.

Table (11) presents the results of the ARDL model estimation across two stages. In the first stage, the interaction term was excluded to estimate the main effects only. In the second stage, the interaction variable EBTP_IFRS9 was incorporated into the long-run relationship (fixed regressors) to address two methodological concerns: (1) multicollinearity arising from the overlap

between EBTP (profitability) and the interaction term, and (2) non-normality of residuals, where Jarque-Bera tests showed notable improvement following the reallocation of variables. **In the first stage**, the coefficient on POSTIFRS9 was negative (−0.0073) and statistically significant at the 5% level ($p=0.0429$), indicating a direct impact of the standard on EM through provisions. **In the second stage**, the long-run relationship revealed a positive and statistically significant association between EBTP and EM across the full sample period, with a coefficient of 0.052. LEV also exhibited a positive and significant effect, suggesting that highly leveraged banks are more inclined to engage in EM. Conversely, the coefficient on POSTIFRS9 remained negative and significant, indicating that the adoption of IFRS9 was associated with a **general decline in EM practices**. Importantly, the inclusion of the interaction term EBTP_IFRS9 allowed for isolating the incremental effect of profitability on EM specifically after IFRS9 adoption. The interaction coefficient of 0.094 suggests that the relationship between EBTP and EM became stronger post-implementation, with the total effect rising to **0.146** ($0.052 + 0.094$). This implies that banks with strong financial performance retained—and possibly enhanced—their ability to manage earnings under IFRS9.

Table 11. Estimation H ₃ .								
Results of the First-Stage Estimation					the Second-Stage Estimation			
Dependent Variable: D(EM) Method: PMG (1,1,1,0) selected via AIC					Dependent Variable: D(EM) PMG (1,1,1,0) selected via AIC			
Var.	Coef.	S.E.	t-stat	Prob.	Coef.	Std. Err.	t-stat	Prob.
Long-run (Pooled) Coefficients					Long-run (Pooled) Coefficients			
EBTP	0.125	0.021	5.905	0.000	0.052	0.026	2.028	0.044
LEV	0.000	0.000	1.416	0.159	0.000	0.000	3.150	0.002
POSTIFRS9	-0.007	0.004	-2.044	0.043	-0.014	0.004	-3.645	0.000
Short-run (Mean-Group) Coefficients					Short-run (Mean-Group) Coefficients			
COINTEQ	-1.012	0.124	-8.189	0.000	-1.127	0.124	-9.090	0.000
D(EBTP)	-0.090	0.021	-4.236	0.000	-0.103	0.025	-4.204	0.000
D(LEV)	0.049	0.037	1.339	0.183	0.042	0.038	1.116	0.267
EBTP_IFRS9					0.094	0.024	3.855	0.000
C	0.035	0.007	5.195	0.000	0.038	0.007	5.323	0.000
Log-Likelihood:		348.492			357.474			
Source(s): Author's own creation based on EViews 13 output.								

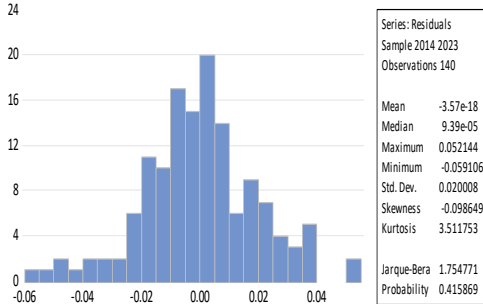
In the short-run dynamics, the coefficient on D(EBTP) was negative and statistically significant, indicating that temporary changes in profitability are associated with short-term reductions in EM—possibly reflecting tactical responses by banks to performance fluctuations. Meanwhile, the coefficient on

D(LEV) was not statistically significant, suggesting that the short-term effect of leverage is either unstable or non-systematic. The COINTEQ was negative and highly significant, confirming the existence of a long-run equilibrium relationship among the variables and validating the model's self-correcting mechanism toward equilibrium.

Taken together, the hypothesis that IFRS9 reduces the use of EBTP in EM **did not receive full empirical support**. The results indicate that the EBTP–EM relationship **strengthened** following the standard's implementation, particularly among high-performing banks, despite the overall decline in EM associated with POSTIFRS9. This finding partially diverges from several prior studies that linked the adoption of IFRS 9 to a reduction in earnings manipulation through DLLP, particularly within strong institutional environments (Proença et al., 2024; Ahmed et al., 2021; Alkhresat & Almubaydeen, 2019; Al-Ameen & Zarquat, 2021; Biswas et al., 2024). These studies indicated that the standard enhances reporting quality and constrains earnings management practices, especially in BRICS countries with robust regulatory frameworks. Conversely, the current results align with Nnadi et al. (2023), who emphasized that the impact of IFRS 9 is not globally uniform. Some banks outside Europe continued to use DLLP for earnings management purposes even after the standard's implementation, and the presence of international auditors (Big 4) did not consistently mitigate manipulation or improve disclosure quality. Accordingly, these findings highlight the heterogeneous nature of IFRS 9's impact and suggest that its effectiveness in curbing earnings management is contingent upon regulatory context, institutional environment, and bank performance. This is further supported by Dawood (2023), who found that environmental uncertainty significantly explains variations in financial reporting quality. Thus, the results advocate for interactive analytical models that account for the interplay between accounting standards and banks' structural characteristics, rather than assuming a uniform effect.

8.4.3.1 Hypothesis 3 Fitness and Diagnostic Evaluation

Table 12 presents the diagnostic evaluation for H3, confirming the methodological soundness of the model. The VIF values for EBTP, LEV, and POSTIFRS9 are well below the conventional threshold of 5, indicating no multicollinearity concerns. The LLC tests confirm the stationarity of all variables across different specifications. The Jarque-Bera test indicates that the residuals follow a normal distribution ($p = 0.415$), enhancing the reliability of the model. Meanwhile, the Pesaran CD test for cross-sectional dependence is not statistically significant at the 5% level ($Z = 1.791$, $p = 0.0732$).

Table 12: Model Diagnostics – H ₃		
Diagnostic Test	H ₃	Figure 5: Histogram of Residuals– H₃ 
VIF (EBTP, LEV, POSTIFRS9	1.119 1.017 1.121	
LLC (Const)	-8.044***	
LLC (C&T)	-8.047***	
LLC (None)	-12.052***	
Pesaran CD	Z =1.791, p = 0.0732	
Jarque-Bera	P. 0.415869	
Series: Residuals Sample 2014 2023 Observations 140 Mean -3.57e-18 Median 9.39e-05 Maximum 0.052144 Minimum -0.059106 Std. Dev. 0.020008 Skewness -0.098649 Kurtosis 3.511753 Jarque-Bera 1.754771 Probability 0.415869		
Note: LLC = Levin, Lin & Chu test; “None” = no deterministic terms, “Const” = constant only, “C&T” = constant and trend. *** significant at 1%.		
Source(s): Author’s own creation based on EViews 13 output.		

8.4.4: Estimation of Hypothesis 4

The results of Table (13) indicate a clear divergence in earnings management behavior between Islamic and conventional banks, particularly in light of the implementation of IFRS 9. In the model specific to Islamic banks, the direct effects of EBTP, the application of IFRS 9, and LEV were not statistically significant, suggesting the **absence** of a direct relationship between these variables and the use of DLLP in the first phase.

Table 13. Estimation H4.									
Islamic Banks									
Results of the First-Stage Estimation					the Second-Stage Estimation				
Dependent Variable: D(EM)					Dependent Variable: D(EM)				
Selected model: PMG(1,1,0,0)					Selected model: PMG(1,0,0,0)				
Var.	Coef.	StdErr.	t-stat	Prob.	Coef.	StdErr.	t-stat	Prob.	
Long-run (Pooled) Coefficients					Long-run (Pooled) Coefficients				
EBTP	0.119	0.073	1.630	0.115	-0.449	0.107	-4.195	0.000	
LEV	0.188	0.137	1.371	0.182	0.323	0.133	2.418	0.023	
POSIFRS9	-0.005	0.006	-0.726	0.474	-0.021	0.006	-3.202	0.003	
Short-run (Mean-Group) Coefficients					Short-run (Mean-Group) Coefficients				
COINTEQ	-1.335	0.110	-12.089	0.000	-1.266	0.225	-5.635	0.000	
D(EBTP)	-0.166	0.063	-2.624	0.014					
EBTP_IFRS9					0.586	0.071	8.214	0.000	
C	0.013	0.017	0.743	0.464	0.022	0.016	1.406	0.171	
Log-Likelihood:		76.613			79.690				
Conventional Banks									
Results of the First-Stage Estimation					the Second-Stage Estimation				
Dependent Variable: D(EM)					Dependent Variable: D(EM)				

Selected model: PMG(1,1,1,1)					Selected model: PMG(1,1,1,0)			
Var.	Coef.	StdErr.	t-stat	Prob.	Coef.	StdErr.	t-stat	Prob.
	Long-run (Pooled) Coefficients				Long-run (Pooled) Coefficients			
EBTP	0.149	0.023	6.388	0.000	0.071	0.030	2.331	0.022
LEV	0.000	0.000	-0.625	0.533	0.000	0.000	2.991	0.003
POSIFRS9	0.000	0.005	0.023	0.982	-0.005	0.005	-0.974	0.332
Short-run (Mean-Group) Coefficients					Short-run (Mean-Group) Coefficients			
COINTEQ	-0.962	0.133	-7.229	0.000	-1.088	0.132	-8.237	0.000
D(EBTP)	-0.101	0.022	-4.535	0.000	-0.074	0.026	-2.848	0.005
D(LEV)	0.000	0.000	-0.496	0.621	0.000	0.000	-2.895	0.005
D(IFRS9)	0.010	0.013	0.778	0.438				
EBTP_IFRS9					0.036	0.027	1.328	0.187
C	0.037	0.008	4.524	0.000	0.031	0.008	3.855	0.000
Log-Likelihood:		288.968			Log-Likelihood:		280.064	
Source(s): Author's own creation based on EViews 13 output.								

In contrast, conventional banks (CBs) showed statistical significance only for earnings (EBTP), while the application of the IFRS 9 and LEV had no clear direct impact, reflecting a continued practice of earnings management, albeit to a lesser extent than in previous periods.

Upon introducing the interaction variable EBTP_IFRS9 in the Islamic banks' model, a negative relationship emerged between EBTP and the use of provisions ($B = -0.449$, $p = 0.000$), while the interaction coefficient was positive and statistically significant ($B = +0.586$, $p = 0.000$). This indicates that the relationship between profitability and the use of provisions became conditional on the level of earnings following the implementation of the standard. When earnings increase by one standard deviation, the relationship between EBTP and the use of provisions becomes positive ($0.137 = -0.449 + 0.586$), meaning that high-performing Islamic banks tend to use provisions as a tool for earnings management. Conversely, when earnings decline, the relationship becomes more strongly negative ($-1.035 = -0.449 - 0.586$), indicating reduced use of provisions under weaker financial performance. The results also showed that financial leverage became positively significant in the second phase, suggesting that highly leveraged banks are more inclined to use discretionary provisions. Additionally, the implementation of IFRS 9 contributed to a general reduction in the use of provisions, as evidenced by the negative and significant effect of the POST-IFRS9 variable. On the other hand, neither the application of the standard nor the interaction variable had a significant effect in conventional banks, indicating that these banks maintained their accounting behavior in earnings management, albeit to a lesser extent than before ($B = 0.071$, $p =$

0.022). The effect of LEV persisted, as reflected in the increase in the error correction speed from -0.962 to -1.088, indicating a stronger equilibrium relationship in the second phase.

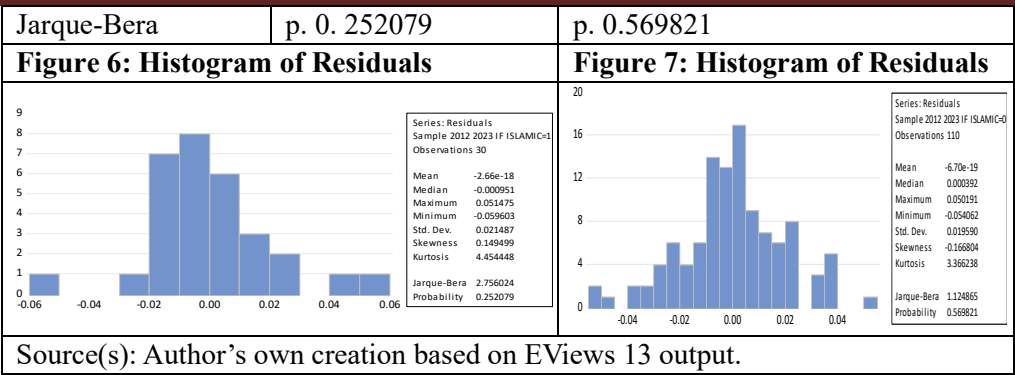
Based on the above, it can be concluded that **the fourth hypothesis is supported**; the impact of IFRS 9 in reducing the use of provisions for earnings management was stronger in Islamic banks compared to conventional banks. Nevertheless, high-profit Islamic banks continue to use provisions as a tool for earnings management, reflecting a response **that is conditional on profitability levels under the new regulatory constraints**. This result is consistent with previous studies indicating that Islamic banks—particularly those adhering to the standards of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)—exhibit more conservative behavior in earnings management. El-Halaby et al. (2020) demonstrated that the regulatory environment in Islamic banks supports a more effective implementation of IFRS 9, due to the integration of international standards with Shariah-based controls that promote transparency and financial discipline. Similarly, Quttainah et al. (2013) noted a lower reliance on provisions as a tool for earnings management in Islamic banks, reinforcing the hypothesis that IFRS 9 has a stronger impact within this conservative institutional context.

Nevertheless, the continued use of provisions by high-profit Islamic banks reveals a partial divergence from these studies, suggesting that the effectiveness of the standard is not absolute but conditional on profitability-driven incentives. This pattern intersects with the findings of Nnadi et al. (2023), who documented the persistence of earnings management practices in some conventional banks following IFRS 9 adoption, particularly in regulatory environments characterized by weak enforcement mechanisms.

8.4.4.1 Hypothesis 3 Fitness and Diagnostic Evaluation

Table 14 indicates that the models used for Islamic and conventional banks demonstrate strong statistical quality. The VIF tests confirm the absence of multicollinearity, while the LLC results support stability and autoregressive properties. Additionally, the Pesaran CD and Jarque-Bera tests show that the data are independent and the residuals follow a normal distribution, enhancing the reliability of the results presented in Table 13.

Table 14: Model Diagnostics – H ₄			
Diagnostic Test	Islamic Banks		Conventional Banks
VIF (EBTP, LEV, POSTIFRS9)	2.690, 3.384, 2.197		1.117, 1.008, 1.113
LLC (Const)	-4.474***		-8.301***
LLC (C&T)	-3.490***		-7.501***
LLC (None)	-5.586***		-10.307***
Pesaran CD	Z=1.598/p= 0.1100		Z = 0.741 / P= 0.459



9. Conclusion

This study was anchored in a clearly defined objective: to evaluate the quality of accounting information under IFRS 9 among Syrian banks listed on the Damascus Securities Exchange. Discretionary loan loss provisions were employed as an indirect proxy for both earnings management and financial reporting quality. By comparing Islamic and conventional banks—each operating under distinct contractual arrangements, financial instruments, and regulatory frameworks—the research sought to offer a nuanced understanding of IFRS 9’s implementation within Syria’s dual banking system. The findings indicate that discretionary provisions remain a strategic tool for earnings management, particularly over extended time horizons, irrespective of bank type. While Islamic banks exhibited a stronger regulatory response to IFRS 9—especially in jurisdictions aligned with AAOIFI standards—high-performing institutions across both banking models continued to apply provisions selectively. This suggests that profitability remains a key motivator for discretionary behavior. Moreover, the anticipated behavioral divergence between Islamic and conventional banks proved less pronounced than expected, pointing to a convergence in financial reporting practices under shared regulatory pressures. Based on these insights, several policy implications emerge:

- Regulatory bodies should avoid assuming a uniform impact of IFRS 9 across banking models and instead develop oversight mechanisms tailored to institutional differences.
- Enhanced scrutiny should be directed toward highly profitable banks, where incentives for earnings management may persist despite formal compliance.
- Greater support should be extended to the integration of international standards with Shariah-compliant governance in Islamic banks, as this appears to reinforce transparency and reporting discipline.

For future research, adopting interactive analytical frameworks that account for the interplay between accounting standards, institutional governance, and performance incentives would be beneficial. Expanding the

geographic scope to include other emerging economies with dual banking systems could yield broader insights into the global dynamics of earnings management under IFRS 9. Such efforts would not only enrich the academic literature but also inform the development of more context-sensitive regulatory frameworks.

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