# TRANSITIONING TO IFRS 9 IN IRAQI BANKS: TECHNICAL DIFFICULTIES AND LEARNING GAPS

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**DOI: https://doi.org/10.57233/ijamer.v2i2.57**

**Article History: Received:** 19 June 2026 | **Revised:** 22 June 2026 | **Accepted:** 23 June 2026 | **Published:** 25 June 2026

## How to Cite This Article:
Shamki, D. (2026). Transitioning to IFRS 9 in Iraqi banks: Technical difficulties and learning gaps. *International Journal of Accounting, Management and Economic Review, (2)2*. https://doi.org/10.57233/ijamer.v2i2.57

**Abstract**
The IFRS 9 adoption represents an essential transition from incurred loss to creating provision for expected credit loss (ECL). In emerging markets such Iraq, this transition appears many difficulties for technical and learning difficulties. The study examines the technical difficulties and learning gaps that accrue in applying IFRS 9 by Iraqi banks, and offers useful guidance.Different statistical methods were used containing a survey and interviews. The questionnaire forms were distributed to 185 banking professionals across 40 Iraqi banks, and semi-structured interviews were conducted with 18 bank managers, CPAs, and IFRSs trainers. It is found that; unsuitable data availability forms the most technical and learning difficulties; limited training skills for IFRS 9 (Less than 40% of respondents received training skills; the correlation between learning gaps and technical difficulties was a strong and positive, and finally; compared with the large banks, the small ones facing greater difficulties. Technical and learning difficulties are interconnected. Weak regulatory enforcement and high staff turnover compound these problems. Recommendations include strengthening Central Bank enforcement, investing in credit infrastructure, and developing practical, hands-on training programs. The contributions of the study can be employed by practical recommendations for policymakers, central bank enforcement policy, CPAs, IFRSs trainers and academic curricula in Iraq universities.

**Keywords:** IFRS 9, ECL, Iraqi banks, emerging markets, technical difficulties, learning gaps.

## 1.0 Introduction
Adopting International Financial Reporting Standards (IFRS) is considered a sound accounting practice and a strategic objective pursued by many developing nations, following the adoption by developed nations, particularly in Europe. This aims to enhance financial transparency and gain greater confidence in global financial markets, thereby attracting promising foreign direct investments (FDI). Iraq is striving to align itself with this global economic trend. In line with this Iraqi endeavor, the Central Bank of Iraq (CBI) mandated the use of IFRSs in all banks starting in 2016, underscoring Iraq's commitment to adopting these standards within the banking sector. One of the standards emphasized for compliance is IFRS 9, which became mandatory in 2019, followed by further directives from the CBI in March 2020.

IFRS 9 (Financial Instruments) represents a comprehensive shift in how banks recognize credit losses. Unlike IFRS 39, which relied on an "incurred loss" approach, recognizing losses only after they have occurred, IFRS 9 employs an expected credit loss (ECL) approach. This approach

mandates that banks recognize losses at an earlier stage in their credit cycles, starting from the loans origination, and to take into account all future macroeconomic information.

The ECL approach operates through the following three stages: (1) healthy assets (without a significant increase in credit risk), require: 12-month expected credit loss; (2) significant increase in credit risk (since the loan was granted), requires: expected lifetime credit loss; and (3) credit-deteriorating assets (default status), require: expected lifetime credit loss.

In Iraq and in spite of the regulatory authorization to apply International Financial Reporting Standard 9, Testimonials from other developing market contexts indicate that the expected benefits from this standard like faster loss recognition and improved quality of financial reporting are predominantly not recognized. It is found that adopting IFRS 9 adds no value for financial information in environments characterized by weak regulatory and enforcement quality (Taylor, Awuye, Cudjoe, and Aubert ,2025).Indeed, there are many banks in Iraqi are in confrontation with many difficulties that may hinder implementing IFRS 9 Successfully. The difficulties contain:

i. Instability of political impacting forecasts of economic and assessing credit risk
ii. Fragmented financial data infrastructure without centralized credit registry
iii. Limited trained risk professionals enabling to model in ECL
iv. Shortage of technological capacity to automatically calculate ECL
v. Low mechanisms of regulatory enforcement decrease the urgency of management

In truth, there is no published systematically study addressing the obstacles to implementing IFRS 9 technically and learningly in the banking industry in Iraq. It is found that in a comprehensive review of the literature on IFRS 9 implementation in Iraq for period 2010-2024, research body still lacks methodological consistency and that studies specifically addressing IFRS 9 are totally absent (Madhi and Mohammed, 2025).

Accordingly, the study designs the following questions:
i. What are the most significant technical difficulties facing the banking industry in Iraq when implementing IFRS 9?
ii. What learning and knowledge skills do Iraqi bank employees lack when applying IFRS 9?
iii. Is there a relationship between technical difficulties and limited learning skills?
iv. Do the size and type of bank, and its training status, have a direct and strong relationship to the extent of technical difficulties and the scarcity of learning and training skills?

The contributions of this study are divided between theoretical and practical aspects. Theoretically, and within the framework of applying Financial Reporting Standard 9 in emerging financial markets, this study expands on institutional theory and provides empirical evidence from the emerging Iraqi market regarding the nature of the relationship between technical difficulties and limited learning skills. In the theory aspect, it also demonstrates the applicability of the regulatory enforcement findings of Taylor et al. (2025) to the Iraqi case.

Practically, this study offers recommendations to the CBI based on empirical evidence, and proposes a methodology for Iraqi banks to prioritize their investments in technology, data, and

training. This study can also highlight the learning gap in accounting skills required to implement International Financial Reporting Standards (IFRSs), particularly IFRS 9.On the methodological side, the study develops and validates Arabic-language survey tools to assess IFRS 9, and provides a practical and reproducible framework based on mixed methodologies for conducting similar studies in other emerging markets.

The study addresses the following specific objectives:

i. Identify and classify the most significant technical difficulties faced by banks in Iraq when implementing Standard 9.
ii. Assess and rank the lacking knowledge skills among banking professionals when implementing IFRS 9.
iii. Examine the relationship between technical difficulties, the scarcity of learning skills, and organizational indicators.
iv. Compare the difficulties of implementing IFRS 9 based on the varying sizes and types of Iraqi banks.
v. Evaluate the impact of training programs conducted by Iraqi banks.
vi. Propose practical recommendations for regulatory bodies, banks, and learning institutions.

## 2.0 Literature Review

IFRS 9 came into effect in January 2018, replacing IASA 39. IFRS 9 introduced three key updates not previously in place: (1) a methodology for classifying and measuring financial assets that employs a business model and cash flow characteristics; (2) the incurred loss model (IAS 39) has been replaced by an expected credit loss impairment model (IFRS 9); and (3) a revised hedge accounting model. Of these three changes, the model introduced in the second change proved to be the most difficult for banks to implement (IFRS 9; IAS 39).The structure of ECLprovisions requires banks to indicate these losses based on reasonable and substantiated forward-looking information. This represents a radical shift from the realized loss provision model based on historical data. The three-stage model requires banks to continuously monitor credit risk and move assets between stages when credit risk significantly increases. Historically, the comprehensive accounting literature review to date, covering 2010–2024 period and conducted by Madhi Mohammed (2025), examined the IFRSs adoption in Iraq. The study's findings were as follows:

i. The CBI mandated the application of IFRS to Iraqi banks starting in 2016, and subsequently emphasized the IFRS 9 implementation.
ii. Most research addressing the application of IFRS in Iraqi banks, while its application in non-financial sectors has not been adequately studied.
iii. Correlational evidence is found between the IFRS adoption and asymmetric information, value of firm, equity cost, and earnings quality.
iv. The previous studies employed diverse and inconsistent methodologies, relying on a pre- and post-adoption approach rather than an examination of the causal factors related to the obstacles to IFRS implementation.
v. There is a major flaw related to disclosure indicators and limited compliance associated with governance and implementation policies.

Based on the regulatory timeline set by the International Federation of Accountants (IFAC, 2024), and although the legal framework for adopting IFRSs exists, its implementation is not yet complete. Internationally, in a 2021 World Bank survey of 91 countries, the top three difficulties facing regulators in implementing IFRS 9 were identified:

i. Risk modeling: Developing and validating ECL models that comply with regulatory requirements.
ii. Poor data quality and availability: Insufficient historical data to estimate PD/LGD.
iii. Human capacity shortage: A lack of technical expertise among both bank staff and regulators.

A study by Deloitte (2016) confirmed the World Bank findings on IFRSs in the banking sector, and that nearly half of the banks do not have the necessary technical resources to implement IFRS 9. The biggest concern related to data was considered to be the quality of this data, particularly regarding the availability of the probability of default throughout the establishment period.The study by Taylor, et al.,(2025) is one of the first empirical studies to demonstrate the importance of IFRS 9 in emerging markets, specifically focusing on African banks. Their key finding was that the application of IFRS 9 does not add informational value in environments characterized by low regulatory and implementation quality. This implies that, in the case of Iraq as an emerging market, maximizing the benefits of IFRS 9 requires prioritizing the strengthening of the regulatory framework before or concurrently with its technical implementation.

The cyclical nature of 1,096 global banks loan loss provisions under IFRS 9 has been examined for period 1998-2022. The results showed a worrying pattern: while IFRS 9 mitigates cyclical fluctuations globally, it exacerbates them in emerging markets and Asia. This suggests that a standardized approach to IFRS 9 may not be effective, and that emerging economies may require tailored implementation guidelines (Mooneeapen and de Jager, 2025).Moodley, Verster, and Raubenheimer (2025) suggest a novel approach, based on database from Kenya and Mauritius, to dynamically adjust probability of default(PD) using a macroeconomic indicator that incorporates forward-looking information. Their methodology comprised five steps: (1) research and planning, (2) data preparation, (3) model development, (4) indicator calculation, and (5) model validation. Following validation, the methodology proved effective in adjusting PD within the ECL model for emerging markets characterized by data scarcity and economic volatility.

The learning dimension of implementing IFRS 9 is predominantly overlooked in comparison to the technical difficulties. However, proofs propose that human capital restrictions may be also a significant. Therefore, the World Bank (2021) recommends that regulators in emerging markets prioritize:

i. Investment in credit risk modeling capabilities (human resources and IT tools).
ii. Regulatory technology solutions for data collection and ECL modeling.
iii. Online training platforms and technical support for regulators facing budget constraints.

A Peaks2Tails study (2025) indicates that despite the importance of IFRS 9, many capacity-building programs still focus primarily on Basel standards without adequately addressing the specific requirements of IFRS 9. Today’s risk professionals must understand time-vulnerable probabilities (PDs), behavioral models of LGD/EAD, transition matrices for stage classification,

and integration with stress testing requirements. Based on the literature review, the specific research gaps are found in the research body. Focusing on IFRS 9, no a systematic test of the difficulties in implementing IFRS 9 in any published study in Iraq (Madhi & Mohammed, 2025). For learning deficit, the learning dimension was overlooked in evaluating the implementation of Standard 9 (World Bank, 2021). About the analysis of organizational implementation, insufficient linkage was shown to the outcomes of compliance with governance and enforcement mechanisms (Madhi & Mohammed, 2025). Finally and accordance with the loan loss provision cyclicality, the ability of this standard to mitigate or exacerbate the poor cyclicality of loan loss provisions in Iraq has not been tested (Mooneeapen & de Jager, 2025).

## 3.0 Methodology

The current study adopted a philosophical, research-oriented, and practical approach, prioritizing applied results while recognizing that both quantitative and qualitative methodologies contribute to understanding complex real-world problems. Accordingly, a sequential interpretive mixed-methods design was employed, whereby the quantitative component involved administering a questionnaire to accounting, risk management, and finance professionals in the banking sector in Iraq, while the qualitative component consisted of semi-structured interviews with bank managers, Central Bank supervisory officials, and IFRSs trainers.

The study's target population included: (1) government and private commercial banks supervised by the CBI, (2) professional levels of risk management officers, CPA, internal auditors, compliance officers, and senior financial managers, (3) CBI supervisory staff, and (4) IFRSs trainers and consultants at the Iraqi Accountants and Auditors Association.

Stratified random sampling was employed to distribute the questionnaires, taking into account the size of the banks in the sample and whether they were public or private[1]. A total of 183 valid responses were received out of 309 questionnaires distributed across 35 banks, representing a response rate of 59.23%. Regarding the qualitative aspect of the study, the target sample consisted of 21 interviewees: 9 bank managers, 7 CPAs, and 5 trainers of IFRS at the Association of Accountants and Auditors.

The questionnaire involved five sections: (1) personal demographic information, (2) technical difficulties (12 items), (3) learning deficit (12 items), (4) organizational support (12 items), and (4) open-ended questions. It was piloted with 10 banking professionals. All items in the five sections were assessed on a five-point scale: 1 = strongly disagree; 2 = agree; 3 = neutral; 4 = agree; and 5 = strongly agree.

The interviews covered the following: organizational history of IFRS 9 implementation, technical difficulties, effectiveness of training programs, implementation of regulations, and recommendations for improvement. The interviews lasted 40 to 60 minutes and were audio-recorded with the participants' consent. The SPSS software was used to analyze the quantitative data using descriptive statistics, independent t-tests, one-way ANOVA, and Pearson correlation coefficients. Qualitative data were analyzed using thematic analysis according to the six-stage framework of Braun & Clarke (2008).

[1]Branches of government and private banks are considered as independent banks alone for the purposes of statistical analysis in this study.

## 4.0 Results

Table 1 presents the demographic characteristics of the 185 survey respondents.

**Table 1:**

***Demographic Profile of Survey Respondents (N=185)***

| Feature | Class | N | (%) |
|---|---|---|---|
| **Bank type** | Governmental | 36 | 19.46 |
| | Private (commercial) | 116 | 62.27 |
| | Private (Islamic) | 26 | 14.05 |
| | Branch of Foreign bank | 7 | 3.78 |
| **Bank (Capital) size** | Small (Less than 200 billion Iraqi dinars) | 51 | 27.57 |
| | Medium (200 billion - 1.5 trillion Iraqi dinars) | 87 | 47.03 |
| | Large (More than 1.5 trillion Iraqi dinars) | 47 | 25.40 |
| **Position** | CFO/Finance Manager | 21 | 11.35 |
| | CPA | 59 | 31.89 |
| | Accountant | 62 | 33.51 |
| | Internal Auditor | 25 | 13.51 |
| | Trainer (IFRSs) | 10 | 5.54 |
| | Others | 8 | 4.32 |
| **Experience Years** | **<2** | 37 | 13.1 |
| | 2-5 | 50 | 27.02 |
| | 6-10 | 48 | 25.94 |
| | 11-15 | 33 | 17.83 |
| | 15> سنة | 17 | 9.18 |
| **Training for IFRS 9** | Trained | 75 | 40.54 |
| | Not Trained | 110 | 59.45 |

**Source:**SPSS Output, 2026.

Private commercial banks dominate the sample, comprising 65% of respondents, with the remaining demographic information randomly distributed. Furthermore, 59.45% of respondents are not trained in the IFRS 9 implementation. In accordance with the second section of the survey questionnaire employed in this study, 12 technical items/difficulties were designed, as shown in Table 2, which provides the mean and standard deviation of the values associated with these technical difficulties.

**Table 2:**
***Technical Difficulties (N=185)***

| # | Challenge | Mean | SD |
|---|---|---|---|
| 1 | Availability of historical data on default cases and loss ratios | 4.61 | 0.79 |
| 2 | Integration of future macroeconomic information | 4.22 | 0.91 |
| 3 | Ability to calculate PD | 4.12 | 0.93 |
| 4 | Design of models for diverse macroeconomic scenarios | 3.97 | 0.99 |
| 5 | Automation of ECL calculations | 3.91 | 1.07 |
| 6 | Demonstration of significant credit risk increases | 3.82 | 1.09 |
| 7 | Ability loss calculation capability | 3.73 | 1.12 |
| 8 | Retrospective validation of ECL models | 3.61 | 1.13 |
| 9 | Ability exposure calculation capability | 3.55 | 1.11 |
| 10 | Compatibility with existing core banking systems | 3.29 | 1.23 |
| 11 | Recording of assumptions used in models | 2.99 | 1.21 |
| 12 | Loan naming according to the three-stage model | 2.81 | 1.17 |

**Source:** SPSS Output, 2026.

In accordance with the third section of the survey questionnaire employed in this study, 12 items were designed to determine the size of the learning gap, as shown in Table 3, which provides the mean and standard deviation of the Self-Assessed Knowledge.

**Table 3:**

***Ranked Learning Gaps (N=185)***

| # | Topic | Mean Knowledge | SD | Gap Size |
|---|---|---|---|---|
| 1 | A macroeconomic scenarios and forward-looking information | 1.75 | 0.95 | High |
| 2 | Designing models for diverse macroeconomic scenarios | 1.91 | 0.89 | High |
| 3 | Methods for calculating the PD | 2.06 | 0.97 | High |
| 4 | Methods for calculating LGD | 2.11 | 0.92 | High |
| 5 | Retrospective testing of ECL models | 2.22 | 1.06 | Medium |
| 6 | Methods for calculating exposure at default EAD | 2.41 | 0.96 | Medium |
| 7 | Employing transition patterns for stage classification | 2.53 | 1.02 | Medium |
| 8 | Identifying ECL throughout the loan term | 2.71 | 1.08 | Medium |
| 9 | Sorting a three-stage model | 2.79 | 1.09 | Medium |
| 10 | Identifying a large increase in credit risk (unhealthy assets) | 3.09 | 1.13 | Low |
| 11 | Identifying a moderate increase in credit risk (healthy assets) | 3.23 | 1.17 | Low |
| 12 | Linking IFRS 9 principles to the ECL provision structure | 3.43 | 1.08 | Low |

Note: Scale 1 = No knowledge at all, 5 = Expert knowledge.
Gap Size: High = mean less than 2.0, Medium = 2.0-3.0, Low = mean greater than 3.0.
**Source:**SPSS Output, 2026.

The first four highest-ranked gaps (average knowledge less than 2.2) all relate to forward-looking information and probability/loss estimation - key innovations of IFRS 9. In accordance with the third section of the survey questionnaire employed in this study, 12 items were designed to determine the size of the organizational support, as shown in Table 4, which provides the mean and standard deviation of the organizational support.

**Table 4:**
***Organizational Support for IFRS 9 Implementation (N=185)***

| Paragraph | Support Mean | SD | % Agree/Strongly Agree |
|---|---|---|---|
| Senior management has a strong desire to successfully implement IFRS 9. | 3.93 | 1.09 | 59.7 |
| Senior management fully supports the implementation of IFRS 9. | 3.81 | 1.16 | 57.8 |
| The bank has allocated a sufficient budget for implementing IFRS 9. | 2.89 | 1.19 | 27.1 |
| The bank has invested in appropriate technologies/software for implementing IFRS 9. | 2.71 | 1.16 | 19.9 |
| The bank has high-level technology suitable for IFRS 9 applications. | 2.69 | 1.19 | 18.2 |
| The bank provides suitable training on IFRS 9. | 2.38 | 1.11 | 15.9 |
| The bank has trained and qualified staff to implement IFRS 9. | 2.29 | 1.14 | 15.4 |
| The bank has engaged external consultants to implement IFRS 9. | 3.14 | 1.27 | 43.1 |
| The bank has staff at the level of consultant experts to implement IFRS 9. | 3.29 | 1.27 | 43.7 |
| The bank has a dedicated team to implement IFRS 9. | 2.85 | 1.32 | 30.9 |
| The bank has engaged a dedicated team to implement IFRS 9. | 2.73 | 1.41 | 31.2 |
| Senior management has provided all the necessary resources for implementing IFRS 9. | 2.97 | 1.41 | 33.1 |

*Note: Scale 1= Strongly disagree, 5= Strongly agree.
**Source:**SPSS Output, 2026.

According to survey participants, 60% agree that senior management is willing to support the implementation of Standard 9, and 58% believe that it is actually doing so. 27% of respondents agreed that there is a sufficient budget. Training (16% and 15%, respectively) and investment in technology (20% and 18%) are considered weak, and the presence of an expert team (43%) or the hiring of experts (44%) for Standard 9 implementation is below average. Finally, 33% of respondents believe that senior management has provided only limited resources for Standard 9

implementation.Data analysis was conducted using independent t-tests, as described in Part 3 of this study. Table 5 presents the results of these tests, comparing trained and untrained staff.

**Table 5:**
***T-Test Results-Trained and Not trained Staff***

| Variable | Trained (n=75) Mean (SD) | Untrained (n=110) Mean (SD) | Mean Difference | t-value | df | p-value |
|---|---|---|---|---|---|---|
| Technical Difficulties | 3.63(0.71) | 3.57(0.76) | 0.06 | 0.41 | 171 | 0.731 |
| Knowledge Score | 3.12(0.65) | 2.46(0.69) | 0.66 | 6.19 | 171 | <0.002 |
| Organizational Support | 3.07(0.79) | 2.79(0.81) | 0.28 | 1.41 | 171 | 0.171 |

**Source:**SPSS Output, 2026.

Training significantly reduces the learning gap ($p < 0.002$) but does not significantly reduce the perceived technical difficulties ($p = 0.731$), indicating that increasing knowledge or reducing the learning gap alone does not contribute significantly to solving infrastructure and data problems.Correlation analysis using Pearson's correlation coefficients was employed, as noted in Part 3 of this study. Table 6 presents the correlation matrix for the variables of technical difficulties, learning gaps, organizational support, training access, and finally, bank size.

**Table 6:**
***Correlation Matrix (N=185, Pearson's r)***

| Variable | Technical Difficulties | Learning Gaps | Organizational Support | Training | Bank Size |
|---|---|---|---|---|---|
| Technical Difficulties | 1.00 | | | | |
| Learning Gaps | 0.61* | 1.00 | | | |
| Organizational Support | -0.39 | -0.34* | 1.00 | | |
| Training Received | -0.05 | -0.57* | 0.17 | 1.00 | |
| Bank Size | -0.29* | -0.13 | 0.31* | 0.11 | 1.00 |

Note: * indicates $p < 0.01$.
**Source:**SPSS Output, 2026.

The correlation matrix revealed a strong positive correlation (0.61) between learning gaps and technical difficulties. Conversely, most other relationships among the study variables were negative moderate, with the exception of the strong negative correlation (-0.57) between learning

gaps and training, and weak positive correlations between organizational support and training (0.17), and between technical difficulties and both organizational support, and between training and bank size (0.11).The SPSS software was used to analyze the quantitative data through analysis of variance, as shown in Table 7, to compare the difficulties across bank sizes.

**Table 7:**
***ANOVA Results by Bank Size***

| Variable | Small Mean (SD) | Medium Mean (SD) | Large Mean (SD) | F-value | p-value |
|---|---|---|---|---|---|
| Technical Difficulties | 4.16 (0.66) | 3.71 (0.69) | 3.21 (0.73) | 23.01 | <0.000 |
| Knowledge Gaps* | 2.31 (0.65) | 2.71 (0.67) | 2.89 (0.61) | 19.87 | <0.002 |

Note: Higher scores indicate larger gaps.
**Source:**SPSS Output, 2026.

Small banks often face greater technical difficulties and learning gaps compared to medium and large banks.

Regarding the interviews with 21 participants from among bank managers, auditors, and international standards trainers, the interviews and their results were as shown in Table 8, which presents the topics of these interviews analytically and their results 21 interviews.

**Table 8:**
***Thematic Analysis Summary-Interview Findings (N=18)***

| Interview Theme | Sub-Themes | *F* | Interview result |
|---|---|---|---|
| Data availability | Lack of historical data on defaults | 21/17 | There is insufficient historical data on defaults. |
| | Data quality | 21/15 | There is a problem with the completeness of loan files and the consistency of default definitions. |
| Use of Excel | Long time required | 21/16 | The team needs two weeks every three months. |
| Level of knowledge | Inability to select scenarios | 21/20 | The staff is not qualified to determine the rationale behind choosing the macroeconomic scenario. |
| Training drawbacks | Short timeframes | 21/19 | Due to the brevity of the workshops (one day), they are insufficient for learning anything practical. |
| | Practicality | 21/15 | Because of the emphasis on theory, it cannot be applied to our specialization. |
| Implementation evaluation | Lack of follow-up | 21/17 | There are no penalties for non-compliance. |

| Interview Theme | Sub-Themes | *F* | Interview result |
|---|---|---|---|
| Staff Turnover | Inadequate qualifications | 21/14 | Three junior accountants were trained, but only one remains at the institution. |

Note: *F* indicates the frequency of respondents in the sample
**Source:**Author's Compilation, 2026.

## 5.0 Discussion and Recommendations

After examining the technical difficulties and learning gaps faced by Iraqi banks in transitioning to IFRS 9, this study revealed the following:

i. Regarding the most significant technical challenge, the scarcity of data, particularly the lack of historical default data and loss ratios (average 4.61/5), is the most critical.
ii. As for the learning gaps hindering the implementation of IFRS 9 in Iraqi banks, the most significant gaps are in forecasting information and macroeconomic scenarios (mean knowledge 1.75/5 and 1.91/5, respectively).
iii. Training programs are inadequate in terms of both time and practical application, as 59.45% of respondents reported not receiving any training; this figure is based on the respondents' descriptions of their training.
iv. In connection with the above results, a strong positive correlation was found between learning gaps and technological difficulties ($r = 0.61$, $p < 0.001$), indicating that these problems are interconnected and mutually reinforcing.
v. The difficulties faced by banks are fundamentally related to their size. Therefore, smaller banks facing more severe difficulties than larger ones.

Regarding technical difficulties, the findings of this study align with those of the World Bank (2021), which identified poor data quality and unavailability as major difficulties facing banks worldwide. For Iraqi banks, this challenge appears even more acute compared to developed economies that can rely on historical loan data. This situation in the Iraqi economy reinforces the established need for tailored solutions to the difficulties faced by developing economies (Moodley et al., 2025).

Regarding learning gaps**, t**his study found that the lack of future information is a learning gap, which supports the conclusion of Peaks2Tails (2025) that there is a need to judge the probability of information rather than to calculate information, and that this gap is not an abstract technical one, but is mainly learning when it is difficult to understand the mechanism for determining appropriate scenarios and choosing the best one.

When examining the training variable in this study, it was found to significantly improve knowledge scores, but it did not reduce perceived technical difficulties. Notably, training alone was insufficient when infrastructure and data systems were inadequate. One interviewee succinctly summarized this relationship, saying, "The trainee knows what to do in theory, but cannot do it in practice.

The weakness of regulatory enforcement in Iraqi banks, through the lack of penalties for non-compliance and the weak incentive to invest in working towards the correct application of

Standard 9, is consistent with the argument of Taylor et al. (2025); that there is no publicity value in adopting Standard 9 in environments characterized by low quality of regulation and enforcement.

The result of this study is consistent with the resource-based theory, which states that small banks face significant difficulties due to their lack of substantial financial resources to invest in technology and data infrastructure, and the scarcity of specialized staff, which necessitates different regulatory interventions depending on the size of the bank, along with targeted support for small banks.

Theoretically, the current study contributes to institutional theory within the context of adopting IFRSs. This indicates that; (1) the quality of regulatory implementation is not merely a moderating factor, but a prerequisite for IFRS 9 to achieve its intended benefits. This expands upon the work of Taylor et al. (2025) by demonstrating that weak regulatory implementation not only affects value propositions but also implementation efforts; (2) Learning gaps and technical difficulties exacerbate this, creating a vicious cycle that may require regulatory intervention to break; and (3) Context is important beyond the traditional "emerging markets" classification. Iraq's specific difficulties such as political instability, a creditworthiness lack, and high employee turnover require solutions tailored to its context.

Practically and for the Central Bank of Iraq, it is found:

i. To ensure the effective implementation of IFRS 9 by the CBI, regulators must strengthen its enforcement by moving beyond passive supervision. This includes conducting thorough periodic inspections and implementing a tiered system of penalties to guarantee compliance and achieve the standard's intended financial benefits.
ii. To ensure the successful of this model that depends on building a robust credit infrastructure. Accelerating the development of a centralized credit registry is crucial, as it provides banks with the historical data needed to accurately calculate ECL.
iii. To bridge the learning gap, a shift toward targeted training is essential. Moving from general seminars to tailored, practical workshops for each bank ensures that staff gains the practical and technical expertise necessary to perform complex tasks.
iv. Lastly, a differentiated approach is fundamental to supporting a diversified banking sector. Presenting specialized and tailored technical assistance to smaller banks helps them overcome resource constraints that larger institutions may not face.

Practically and for Iraqi banks, it is found:

i. All files of historical loan should be digitized and standardized definitions for default have to be established. This creates a clean and reliable database essential for accurately reporting.
ii. Switching from Excel to the specialized ECL software will reduce human error and handle complex calculations efficiently.
iii. To ensures capturing the technical knowledge and sharing across the organization, create "train-the-trainer" programs and documenting the internal processes..
iv. Offering incentives to main, experienced staff, and train a number of employees on multiple and different tasks. This will prevent significant knowledge gaps when employees leave the organization.

Practically and for universities and trainers, it is found

i. Update the curriculum to include specific units of IFRS 9. Emphasize practical modeling exercises to prepare students for practical application.
ii. Prepare case studies in Arabic based on examples from the Iraqi banking sector to make complex IFRSs more accessible and culturally relevant.
iii. Establish training programs focused on IFRS 9 implementation projects to bridge the gap between theoretical knowledge and practical application in the banking sector.

**Recommendations**

This study provides the recommendations according to the role of each party related to IFRS 9 implications. The Central Bank of Iraq is required to: (1) conduct regular inspections and impose graduated penalties according to the type of violation to promote the implementation of IFRS 9 by all banks; (2) expedite the development of the central credit registry to build the credit infrastructure; (3) develop a training plan to transition from general theoretical seminars to practical workshops related to banking operations; and finally (4) provide specialized technical assistance to small banks.

In the side of Iraqi banks, they must: (1) prioritize building a robust data infrastructure by developing loan file models and ensuring consistent default definitions; (2) modernize their technology investment strategies by utilizing specialized ECL software; (3) focus on internal training by establishing train-the-trainer programs and documenting processes; and finally (4) retain and nurture trained employees to minimize turnover.

To contribute to academic education, this study suggests: (1) integrating practical instruction in Standard 9 into the accounting curricula of colleges of administration and economics; (2) developing case studies in Arabic related to Standard 9, utilizing data from Iraqi banks to enhance Arabic resources; (3) Integrating practical training in Iraqi banks into university curricula, supervised by instructors and trainers experienced in implementing Standard 9.

**Future Research Directions**

There remains a pressing need for further studies on the application of IFRS 9 in the coming years, including:

i. A comparative study of the impact of loan loss provisions before and after IFRS 9 on the quality of financial reporting.
ii. An assessment of the effectiveness of different training programs (in-person vs. online; practical vs. theoretical).
iii. The importance of credit records in mitigating the difficulties of time-varying probabilities of default (PD).
iv. The impact of employee turnover rates on the selection of effective retention strategies.

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