


**THE IMPACT OF INFORMATION TECHNOLOGY ON THE PERFORMANCE OF  
COMMERCIAL BANKS THROUGH THE FAITHFUL REPRESENTATION OF  
ACCOUNTING INFORMATION SYSTEM**

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ARTICLE INFO	ABSTRACT
<p><b>Article history:</b></p> <p>Received 09 June 2023</p> <p>Accepted 06 September 2023</p>	<p><b>Purpose:</b> The aim of this study is to investigate the impact of IT on banking performance through RF of AIT.</p> <p><b>Theoretical framework:</b> Business companies and institutions strive to work in a shorter amount of time, which makes information technology an important and necessary way to reach their goals and develop their business day by day. It assumes that they have a positive and significant impact on performance.</p> <p><b>Methodology:</b> Data on five major banks in the Kurdistan Region of Iraq has been gathered. An ARDL model for estimation has been used.</p> <p><b>Findings:</b> It is revealing that both IT and RF jointly have a significant impact on performance in the short and long run by 97% and 109%, respectively.</p> <p><b>Research, Practical &amp; Social implications:</b> banks adopt IT in order to compete in the market and improve the skills of their employees through training on advanced IT and facilities.</p> <p><b>Originality:</b> This study examined and identified the performance of commercial banks in the shed of AIS through RF. Beside of the impact of AIS; RF has a great role in performance and AIS as well.</p>
<p><b>Keywords:</b></p> <p>Information Technology; Representational Faithfulness of Accounting Information Systems; Bank Performance.</p> <div data-bbox="172 987 480 1234" style="text-align: center;">  </div>	<p>Doi: <a href="https://doi.org/10.26668/businessreview/2023.v8i9.1758">https://doi.org/10.26668/businessreview/2023.v8i9.1758</a></p>

**O IMPACTO DAS TECNOLOGIAS DA INFORMAÇÃO NO DESEMPENHO DOS BANCOS  
COMERCIAIS ATRAVÉS DA REPRESENTAÇÃO FIEL DO SISTEMA DE INFORMAÇÃO  
CONTABILÍSTICA**

**RESUMO**

**Objetivo:** O objetivo deste estudo é investigar o impacto da TI no desempenho bancário por meio da RF da AIT.

**Estrutura teórica:** Empresas e instituições se esforçam para trabalhar em um período mais curto de tempo, o que faz da tecnologia da informação uma maneira importante e necessária para alcançar seus objetivos e desenvolver seus negócios dia a dia. Ela pressupõe que eles tenham um impacto positivo e significativo no desempenho.

**Metodologia:** Foram recolhidos dados sobre cinco grandes bancos na região do Curdistão do Iraque. Utilizou-se um modelo ARDL de estimativa.

**Constatações:** é revelador que a TI e a RF juntas têm um impacto significativo no desempenho a curto e longo prazo em 97% e 109%, respectivamente.

**Investigação, Implicações práticas e Sociais:** os bancos adotam as tecnologias da informação para competirem no mercado e melhorarem as competências dos seus empregados através da formação em tecnologias de informação avançadas e instalações.

**Originalidade:** Este estudo examinou e identificou o desempenho dos bancos comerciais no galpão de AIS através de RF. Além do impacto do AIS, o RF tem um grande papel no desempenho e no AIS também.

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**Palavras-chave:** Tecnologia da Informação, Fidelidade Representacional de Sistemas de Informação Contábilística, Desempenho Bancário.

## EL IMPACTO DE LA TECNOLOGÍA DE LA INFORMACIÓN EN EL DESEMPEÑO DE LOS BANCOS COMERCIALES A TRAVÉS DE LA REPRESENTACIÓN FIEL DEL SISTEMA DE INFORMACIÓN CONTABLE

### RESUMEN

**Finalidad:** El objetivo de este estudio es investigar el impacto de la tecnología informática en el rendimiento bancario a través de RF de AIT.

**Marco teórico:** Las empresas e instituciones se esfuerzan por trabajar en un menor tiempo, lo que hace de la tecnología de la información una forma importante y necesaria de alcanzar sus objetivos y desarrollar su negocio día a día. Se supone que tienen un efecto positivo y significativo en el rendimiento.

**Metodología:** Se han reunido datos sobre cinco grandes bancos de la región del Kurdistán del Iraq. Se ha utilizado un modelo ARDL para la estimación.

**Conclusiones:** Es revelador que tanto TI como RF tienen conjuntamente un impacto significativo en el rendimiento a corto y largo plazo en un 97% y 109%, respectivamente.

**Investigación, Implicaciones prácticas y Sociales:** los bancos adoptan la tecnología informática para competir en el mercado y mejorar las habilidades de sus empleados a través de la formación en tecnología informática avanzada e instalaciones.

**Originalidad:** Este estudio examinó e identificó el desempeño de los bancos comerciales en el cobertizo de AIS a través de RF. Además del impacto del AIS, el RF tiene un gran papel en el rendimiento y el AIS también.

**Palabras clave:** Tecnología de la Información, Fidelidad Representacional de los Sistemas de Información Contable, Desempenho Bancario.

### INTRODUCTION

According to the latest forecast by Gartner, Inc. (Gartner Market Databook 2022), worldwide IT spending is projected to reach 4.5 trillion dollars in 2022, which represents a 3% increase from 2021. The capabilities of computer technologies, such as analyzing massive amounts of data and producing accurate and timely reports, have led to increased use of information. These unique features have also resulted in the introduction of various information systems, including accounting information systems (AIS), manufacturing resource planning systems (MRP), and human resource systems (HRM) (Saira, Zariyawati, and Annuar 2010).

Information technology can be defined as the application of Information and Communication Technologies tools, including computer networks, software, and hardware required for internet connection, as recently stated by Tan et al. (2009). Based on this review and in alignment with the aforementioned views, the term information technology covers a wide range of information processing and computer applications in organizations. It encompasses systems of information, the internet, information and communication related technologies, and their infrastructure, including computer software, networks, and hardware, which process or transmit information to enhance the effectiveness of individuals and organizations. However, the term information technology also includes any computer

application and required packages of hardware such as Computer-Aided Manufacturing, Computer-Aided Design, Electronic Data Interchange, and Enterprise Resource Planning that positively affect the productivity of corporations.

Various businesses, companies, and institutions strive to work more efficiently and productively, with a shorter turnaround time. Information technology has become an important and necessary way to reach their goals and develop their business day by day. There is an urgent need to perform many tasks in a short time to meet the demands of global and local markets for services and goods. This has led organizations to develop new policies and strategies in a competitive environment, based on existing information technologies. The nature of economic activities has changed radically in parallel with the development of information technologies (Paksoy, ÖZBEZEK, and KILINÇ (2019); Alsuwaidi and Sultan (2023).

The adoption of information systems has increased the performance and operational efficiency of companies, especially in larger ones, as indicated by research conducted by Al-Okaily et al. (2020), Chae, Koh, and Park (2018), Tam and Thuy (2023) Daoud and Triki (2013), Darmansyah et al. (2022), Esmeray (2016), Susanto and Meiryani (2019), Teru, Idoku, and Ndeyati (2017). This positive effect on a company's performance cannot be achieved without the reliability of the information system used (Choi, Lim, and Lee, 2013; Ram, 2013). However, the concept of reliability has evolved to include the notion of faithful representation.

As part of their convergence agenda following the Norwalk agreement in 2010, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) published the results of their joint project on the revision of the conceptual framework. In the revised framework, the qualitative characteristic of "reliability" was replaced by "representational faithfulness" (RF). This change is notable because reliability was previously considered one of the most important concepts in financial reporting. In particular, the idea of a trade-off between relevance and reliability was a common topic in accounting discussions. The IASB and FASB justified the replacement as a mere clarification of terminology, viewing it as necessary due to perceived misunderstandings and diverse understandings of the term "reliability" (ifac.org, 2015).

It is inevitable that the accounting information system can enhance and improve the faithful representation of financial information (McCallig, Robb, and Rohde, 2019). The newly issued International Financial Reporting Standards (IFRS) have significantly transformed the accounting process and the accounting information system (AIS). Given the changes in information technologies (IT), it is crucial to use the AIS appropriately to derive accurate

information from which to process business transactions and report information in compliance with the new IFRS (Nguyen, Chen, and Nguyen, 2021).

The use of information technology, which broadly refers to computers and peripheral equipment, has experienced tremendous growth in service industries in recent years. The most obvious example is perhaps the banking industry, where the introduction of information technology-related products such as internet banking, electronic payments, security investments, and information exchange has allowed banks to provide more diverse services to customers with less manpower (Ahmadirezaei, 2011). Given this pattern of growth, it seems obvious that accounting information technology can bring about an equivalent contribution to profits. However, mismanagement of accounting information technology due to technical problems, communication problems, training, and maintenance has become an issue in the banking sector. Such failures can result in low productivity, loss of accounting information technology inventory, as well as loss of important and confidential data (Dandago and Rufai (2014); Oleiwi (2023).

This research is important due to the significant role that information technology plays in the business world, especially with the emergence of modern technology and its effects on the faithful representation of accounting information and the performance of commercial banks. The study aims to examine the relationship between information technology and the dimensions of accounting information system's representational faithfulness. It also aims to identify the nature of the relationship between the use of information technology and the RF of accounting information systems and to reveal their impacts on the performance of banking in short and long-run.

The hypotheses of this research are as follows: Firstly, there is a positive and significant impact of information technology and RF of accounting information systems on the performance of commercial banks in the short and long run. Secondly, their impact will be greater in the long run. Finally, it is expected that when studied jointly, their impact will be greater together compared to their impact individually.

## **LITERATURE REVIEW**

This section provides a review of the most recent studies conducted on the topic of interest, using different methods and in different regions. For instance, Mahboub (2018) examined the impact of investments in information and communication technology (ICT) on the performance of Lebanese banks. The study utilized data from 50 banks during the period

2009-2016 and employed the CAMELS model as a measure of performance. The study's independent variable was the adoption of various ICT systems, including automated teller machines, mobile banking, internet banking, telephone banking, debit and credit cards, and point of sale terminals.

According to the research findings, some ICT systems, including mobile banking and credit card offerings, have a significant positive impact on bank performance. On the other hand, automated teller machines, internet banking, and point of sale terminals do not have a significant impact. Based on these findings, the study recommends that Lebanese banks should concentrate on increasing customers' use of mobile banking and providing a variety of credit card options to enhance their overall performance.

Binuyo and Aregbeshola's study (2014) examines the impact of Information and Communication Technology (ICT) on the performance of banks, particularly in the South African banking industry. The study utilizes data from 1990-2012 and analyzes it in a dynamic panel setting. The research findings indicate that ICT improves the return on capital employed and return on assets for the South African banking industry. Moreover, the study suggests that cost efficiency in ICT plays a more significant role in bank performance than investment in ICT. As a result, the study recommends that banks focus on utilizing existing ICT equipment rather than making new investments.

Mensah, Ansah, and Oteng (2016) conducted a study on the relationship between Information and Communication Technology (ICT) and the performance of rural banks in Ghana. Using panel data regression and data from 2011 to 2014, the study found that ICT cost efficiency significantly impacted the performance of rural banks, whereas investment in ICT had little effect. Based on these findings, the study suggests that instead of investing in new ICT facilities, rural banks should focus on utilizing their existing capacities by adjusting their financial products and services to enhance their performance and remain competitive in the rural banking industry.

Siddik et al. (2016) conducted a study to investigate the impact of electronic banking on the performance of 13 private commercial banks in Bangladesh over a decade (2003-2013). The study utilized questionnaire data collected from the banks' head offices or management information systems departments through in-person visits. The research findings indicate that electronic banking had a positive impact on the return on equity of the banks, but with a two-year delay. However, the study also found a negative impact in the first year of adoption.

Overall, the study's results support previous research that suggests electronic banking has a gradual positive impact on firm performance.

Kyeremeh, Prempeh, and Forson (2019) aimed to investigate the impact of Information and Communication Technology (ICT) on the performance of banks regarding service delivery in financial institutions in Ghana. The research design employed both exploratory and descriptive methods, and qualitative data was collected through a structured questionnaire administered to 50 respondents, consisting of eight staff members and 48 customers of Barclays Bank. Data analysis was conducted using the Statistical Package for Social Sciences. The study's findings indicate that ICT had a positive effect on performance through enhanced customer service delivery. However, issues with ATM services, such as withdrawal discrepancies and long wait times for new cards, deterred customers from using the service. Based on these findings, the study recommends that Barclays Bank improve the performance of their ATM network to increase customer satisfaction.

The study conducted by Mansour and Masadeh (2017) aims to investigate the relationship between the dependability of accounting information systems and the performance of Jordanian commercial banks using the SysTrust model. The research uses a survey method and sends questionnaires to all commercial banks listed in the Amman Stock Exchange, with a response rate of over 75%. The study's results show a positive correlation between the SysTrust model's application and financial performance indicators such as net profit margin and return on assets, indicating a high level of readiness for SysTrust principles in the accounting information systems of the banks. However, a negative correlation was found between the model and market value-related performance indicators. The study suggests that Jordanian commercial banks should focus on improving their accounting information systems' reliability and implement the SysTrust model to improve their financial performance.

The study by Dabbous (2020) investigates the relationship between information and communication technology (ICT) and the performance of 25 Lebanese commercial banks from the years 2000 to 2014. Panel data analysis was employed to determine the impact of the number of Internet users and domain registrations in Lebanon on the banks' performance. The results indicate a positive correlation between ICT and the banks' performance. Furthermore, the study also finds that the size of the bank, capital adequacy ratio, growth rate of gross domestic product, and lending interest rates positively impact the performance of the banks.

It is concluded that a higher level of ICT usage is a critical factor that affects the profitability of commercial banks and allows them to improve their performance. This article

aims to use two different methods, multiple linear regression and neural network, to predict business performance by examining the reliability of accounting information systems as independent variables and business performance as a dependent variable. The study was conducted using primary data collected from 162 out of 202 public listed companies in the financial service sector in Jordan through a structured questionnaire. The data was analyzed using both ANN and MLR, and the results showed that the business performance indicators (financial, non-financial, and combined) can be predicted by the reliability of AIS. Additionally, the results revealed that the neural network method (ANN) was more accurate in predicting business performance than the multiple linear regression method (MLR).

Al-Dmour (2018) conducted a study to investigate the relationship between the reliability of Accounting Information Systems (AIS) and business performance, with a focus on the role of the quality of financial reporting as a mediator. The study used the principles and criteria of the SysTrust framework as a measure of AIS reliability and surveyed public listed companies in the Amman stock market to gather data. The study concluded that there is a positive correlation between AIS reliability and business performance, and the quality of financial reporting plays a significant mediating role in this relationship.

## **DATA AND METHODOLOGY**

This article focuses solely on commercial banks, as Islamic banks follow different accounting procedures due to Islamic Sharia principles, especially regarding interest rates. Therefore, they have been excluded from this research. The study selected five commercial banks to be the subject of the research, namely Trade Bank of Iraq, Investment Bank of Iraq, National Bank, Mansour Bank, and Sumer Commercial Bank.

The analytical part of the study depends on primary data gathered through a questionnaire method. A total of 130 forms were distributed, and 100 of them were collected. Eventually, 93 forms were deemed acceptable for data analysis. The questionnaire form consisted of three parts. The first part pertained to information technology, the second part pertained to the FR of accounting information systems, and the third part pertained to the performance of commercial banks.

The Auto-regressive Distributed Lag (ARDL) model will be used to test the hypothesis, with E-View V.12 being used for the estimation. The main model posits that there are positive effects of information technology and FR on the performance of commercial banks. Additionally, there will be two sub-models, as follows:

$$DY = \alpha + \beta_1 DIT + \beta_2 DR + \varepsilon. \dots\dots\dots \text{(Main Model).}$$

$$DY = \alpha + \beta_1 DIT\varepsilon. \dots\dots\dots \text{(First Sub Model).}$$

$$DY = \alpha + \beta_1 DRF + \varepsilon. \dots\dots\dots \text{(Second Sub Model).}$$

Where:

DY = Differenced of performance. (Dependent Variable).

DIT = Differenced of Information technology (Independent Variable).

DRF = Differenced of RF. (Independent Variable).

$\beta_i$  = Coefficient factor (The Effectiveness of Variables).

$\varepsilon$  = Error term.

The ARDL approach is a dynamic econometric modeling technique based on OLS estimation. It was first proposed by Hendry in 1986 and developed by Pesaran, Shin, and Smith in 1999. This approach involves a general function that contains both the current and lagged values of the variables.

$$y(t) = c + a_1 * y(t-1) + b_0 * x(t) + b_1 * x(t-1) + e(t)$$

Where:

$y(t)$  = Dependent variable in time  $t$ .

$y(t-1)$  = Dependent variable in lagged period one ( $t-1$ ).

$x(t)$  = Independent variable in time  $t$ .

$x(t-1)$  = Independent variable in lagged period one ( $t-1$ ).

$C$  = Constant term.

$t$  = Time

$a_1$  = Coefficient of dependent variable in one period lag.

$B_0$  = Coefficient of independent variable in time  $t$ .

$b_1$  = Coefficient of independent variable in one lagged time period.

$e(t)$  = Error term in time  $t$ .

## RESULT

Before conducting other statistical tests, a reliability test was performed to determine the degree of internal consistency of the questionnaire items. The results showed a relatively high degree of consistency (0.79). Following this, a stationarity test was conducted using the Philips-Perron methodology. The table below shows the results for all variables at both the level and first difference.



Table (1) Result of PP test for all variables

PP test at level			PP test at first difference		
Variables	Adj.t-stat	Prob.	Variables	Adj.t-test	Prob.
<b>Y</b>	-8.325847	0.0000***	<b>DY</b>	-33.44667	0.0001***
<b>IT</b>	-8.091450	0.0000***	<b>DIT</b>	-74.91749	0.0000***
<b>RF</b>	-7.258414	0.0000***	<b>DRF</b>	-50.56648	0.0001***

Note: D with variable's name is notation for differenced variable.

\*significant at 10%, \*\*significant at 05%, \*\*\*significant at 01%

Source: Prepared by the authors (2023).

In Table 1, the stationarity test was conducted for all variables at the level and first difference. The results showed that they are stationary at the 1% level of significance. According to the table, all data for both dependent and independent variables are stationary with a level of significance less than 0.05. This indicates that our data is reliable and can be used to achieve the study objective. The next step is to determine the correlation between variables, as shown in Table 2:

Table (2) The result of Correlation test for all variables

Variables	Y	IT	RF
Y	1	0.794531637	0.734309997
IT	0.794531637	1	0.677047566
RF	0.734309997	0.677047566	1

Source: Prepared by the authors (2023).

A correlation test was conducted to determine the relationships between variables. The results show a positive and high relationship between Y and IT (0.79), as well as a positive relationship between Y and R (0.73). Additionally, there is a positive relationship between R and IT (0.67).

Next test is Co-integration test by using Johansen test. The result is illustrated in the table (3):

Table (3) Result of Johansen Test for Co-integration

Sample (adjusted): 4 92				
Included observations: 89 after adjustments				
Trend assumption: Linear deterministic trend				
Series: Y IT R				
Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.341255	72.31686	29.79707	0.0000
At most 1 *	0.216559	35.16659	15.49471	0.0000
At most 2 *	0.140213	13.44523	3.841465	0.0002
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.341255	37.15027	21.13162	0.0001
At most 1 *	0.216559	21.72135	14.26460	0.0028
At most 2 *	0.140213	13.44523	3.841465	0.0002
Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Prepared by the authors (2023).

The results indicate that there are three co-integrations at the 1% level of significance, as evidenced by the p-values of 0.0000, 0.0000, and 0.0002 (trace), and 0.0001, 0.0028, and 0.0002 (maximum eigenvalue). This means that all variables are related to each other in the long run, or that there are long-run equilibrium relationships between the variables.

After confirming the reliability of the data, the next step is to test whether there is a long-term correlation between the variables. To do this, we used the Johansen Test for Co-integration. The first section of the table shows that all variables are significantly correlated in the long-term, with a significance level of less than 0.01. Similarly, all variables are correlated using the Maximum Eigenvalue test, with a significance level of less than 0.05. In both tests, the critical value for all variables is less than 1%, which means that we can apply regression to our data in the next step.

After conducting the previous tests, the regressions for the first and second sub-models with the main models are presented in Table 4. The results show that all coefficients in all models, both in the long-run and short-run, are significant at the 1% level. Additionally, all models have a relatively high value of R<sup>2</sup> and adj-R<sup>2</sup>, indicating a good fit.

Table (4) Summary of Results for Regression Models

	Explanatory Variable	Short Run Co-efficient	Long Run Co-efficient	R <sup>2</sup>	Adj-R <sup>2</sup>	F-Statistic	CointEq (-1)	Bound Test I(1) [5%]
First Sub Model	IT	0.822191 (0.0000)***	0.920304 (0.0000)***	0.66	0.64	32.95257 (0.0000)***	-0.893391 (0.0000)***	6.84 [5.73]
Second Sub Model	RF	0.809623 (0.0000)***	0.928312 (0.0000)***	0.61	0.57	18.00986 (0.0000)***	-1.076849 (0.0000)***	29.39 [5.73]
Main Model	IT	0.584404 (0.0000)***	0.669419 (0.0000)***	0.76	0.73	27.74304 (0.0000)***	-0.880143 (0.0000)***	23.88 [4.85]
	RF	0.386174 (0.0001)***	0.424032 (0.0055)***					

\*significant at 10%, \*\*significant at 05%, \*\*\*significant at 01%

Source: Prepared by the authors (2023).

The CointEq(-1) is negative with an associated coefficient estimate of (-0.89, -1.07, -0.88) respectively and is statistically significant at the 1% level. This implies that approximately

89%, 107%, and 88% of any movements into disequilibrium are corrected within one period. Regarding the bound test, the F-values of (6.84, 29.39, 23.88) respectively are greater than the I(I) bound value, and thus, the null hypothesis of no long-run relationship can be rejected. This means there is a long-term relationship between the variables. However, all models have to pass a problem check, and the results are presented in the following table:

Table (5), Summary of Problem Checks for All Models.

Models	Autocorrelation	Heteroskedasticity	Multicollinearity Centered	Normality	Identification
First	0.402805 (0.8176)	0.288485 (0.5912)	(IT) 1.05	1.828789 (0.4007)	0.013129 (0.9091)
Second	0.450087 (0.7985)	0.707272 (0.4004)	(RF) 1.16	1.120077 (0.571187)	1.220545 (0.2726)
Main	0.413167 (0.8134)	0.426330 (0.5138)	(IT) 1.97 (RF) 2.03	1.317328 (0.517542)	0.788043 (0.3774)

\*significant at 10%, \*\*significant at 05%, \*\*\*significant at 01%

Source: Prepared by the authors (2023).

Table 5 shows that all three models do not have the problem of autocorrelation because their probabilities are greater than 0.05 (0.8176, 0.7985, 0.8134) respectively. The same applies to heteroscedasticity (0.5912, 0.4004, 0.5138 > 0.05). With regard to multicollinearity, all values (1.05, 1.16, 1.97, 2.03) are smaller than 5, indicating that all models are not affected by this issue. The normality test shows that all models are normal (0.4007, 0.571187, 0.517542 > 0.05) respectively. The last test, the test of identification, indicates that all three models are well-specified and well-defined.

## DISCUSSION

In the first sub-model, it can be observed that information technology is significant in both the short and long run. Specifically, in the short run, a 1% improvement in information technology, such as providing advanced software and tools, would lead to an increase in commercial banks' performance by approximately 0.82%. However, the impact of improving information technology would have a greater effect on commercial banks' performance in the long run, with an increase of 0.92%.

This means that increasing or improving IT will make banks more efficient by reducing the time required for banking procedures for both clients and employees. As a result, there will be a higher volume of transactions due to increased time efficiency, leading to an increase in the liquidity of the bank. Additionally, IT can decrease variable costs in the long run by reducing or even eliminating paperwork in the bank, or requiring fewer employees due to high-tech

solutions. This, in turn, will lead to a higher profit rate in the long run. As a consequence, the bank will have a higher rate of performance, which will be advantageous for market competition.

Moving on to the second sub-model, it is noteworthy that RF in the accounting information system is significant both in the short run and the long run. Furthermore, an improvement in RF by 1% will lead to a positive improvement in commercial banks' performance by 0.80% and 0.92% in the short run and long run, respectively. This means that when a bank ensures accurate and orderly management of data with complete trust, privacy, and secrecy, its performance is likely to improve. In other words, the more reliable a bank is in terms of trust, privacy, and secrecy, the more confidence people will have in the bank. This, in turn, will result in increased clientele, greater banking transactions, and ultimately higher profits and liquidity.

This indicates that both information technology and accounting information system RF have a significant positive effect on the banking performance. The joint effect of these two variables shows that they complement each other in improving the banking performance. By having reliable accounting information system and advanced information technology, the banking procedure will be faster, more efficient and accurate, which will attract more clients and transactions, resulting in increased profit and liquidity in the long run. In addition, the confidence and trust of the clients towards the bank will increase, which will lead to greater market competition and better overall performance of the bank.

That is a valid observation. The combined effect of IT and RF in the main model is greater than their individual effects because they are complementary and dependent on each other. RF is crucial for the effective implementation of IT, and IT enhances the RF and accuracy of the accounting information system. Therefore, the impact of both variables on the dependent variable is more significant in the long run as the benefits of their combined effect accumulate over time.

Furthermore, this statement can be explained by the fact that any improvement and implementation in IT must have the elements of FR, such as security, privacy, availability, dependability, probability, and durability. Without these properties, it cannot be relied on. Thus, IT and faithful representation are interconnected and behave as one object, which is why their impact is jointly reflected in the main model. In the short-run, the impact is close to (<1%), while in the long-run, it is more than (1%).

## CONCLUSION

The subject of this study was to investigate the role of IT and faithful representation in the performance of banks. Data was collected from five banks with the aim of revealing the impact of IT and faithful representation on banking performance. Thus, there were three models. The first model investigated the impact of IT on performance, and the results showed that it had an impact on performance of 0.82% and 0.92% in the short and long run, respectively.

Overall, the study aimed to explore how IT and faithful representation affect the performance of banks. Data was collected from five banks and three models were developed to analyze the impact of IT, faithful representation, and their joint impact on banking performance. The first model found that IT had a significant impact on performance, improving it by 82% and 92% in the short and long run, respectively. The second model showed that faithful representation also had a significant impact on performance, improving it by 80% and 92% in the short and long run, respectively. The third and final model tested the joint impact of IT and faithful representation on performance and found that together they had a greater impact on performance, improving it by 97% and 109% in the short and long run, respectively.

Furthermore, the findings confirm the hypothesis of this study, which proposed that IT and FR positively impact banking performance, and their impact will be greater in the long run. This is why the majority of banks in the Kurdistan region rely on information technology to increase the FR of their accounting information system. The contribution of this study was to investigate the impact of IT with the presence of the faithful representative variable. There is no study about their impact together on performance in the literature, and this is the first attempt to study this subject in the Kurdistan region banks.

In addition, the study recommends banks to focus on improving the elements of faithful representative (security, privacy, availability, dependability, probability, and durability) to ensure the FR of their accounting information system. This can be achieved through regular maintenance of IT infrastructure, implementing effective security measures, and providing training and education to employees to increase their awareness of the importance of data security and confidentiality.

Furthermore, the study suggests that banks should consider investing in new technologies such as cloud computing and artificial intelligence to improve the efficiency and effectiveness of their accounting information system. Finally, the study recommends conducting further research in this area to investigate the impact of other factors on banking

performance and to compare the results with other regions or countries to gain a broader perspective.

For future work, the study suggests that it is vital to investigate their role in more detail using different approaches, measurements, and more data, and over a longer time frame to reveal their impact more precisely. Additionally, it would be beneficial to include forecasting to assess their future impact.

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