

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

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ABSTRACT: The research aims to measure the impact of the modernity of digital accounting transformation techniques, represented by (Information quality, Human effort, Digitalization of processes, and Technologies), on achieving financial balance (FB), represented by (Financial solvency, Financial flexibility, Profitability, and Financial liquidity) among accountants in commercial banks. This objective was set to address an important issue: (Is there an impact of the modernity of digital accounting transformation techniques on achieving financial balance among accountants in commercial banks?). To achieve this objective, the current research adopted a descriptive analytical method through using a questionnaire tool to measure the availability of its variables in the concerned commercial banks, involving fourteen banks listed on the Iraq Stock Exchange, Accordingly, 120 questionnaires were distributed to measure the level of digital accounting transformation and financial balance among accountants in commercial banks, of which 113 questionnaires were retrieved, with 4 being damaged and 109 valid for analysis, representing a response rate of 90.83%. To analyse the results, the statistical programme SPSS V.29 and the office suite Excel v.2016 were used. The study presented several key findings, most notably the existence of a significant correlation and effect between digital accounting transformation techniques and financial balance, in terms of commercial banks' awareness of the need to develop and train their staff to keep up with the digital transformation process, which in turn contributed to ensuring the achievement of desired results and objectives. The banks assess the impact of training on digital transformation in achieving financial balance, Based on this, the research recommended that commercial banks should hold seminars, conferences and practical training courses to educate their employees and raise their awareness of the importance of digital transformation in improving the financial balance, which requires efforts to enhance the knowledge of employees of the commercial banks included in the study regarding the importance of digital transformation and its applications in the banking sector.

KEYWORDS: digital accounting transformation, financial balance, commercial banks.

I. INTRODUCTION

Any organisation, regardless of its activity, seeks to achieve a certain level of financial balance as a primary goal, as this enables it to meet its financial commitments on time (Gai et al.,2024). This is achieved by financing its fixed assets through permanent funds, thereby avoiding common financial mistakes, ensuring the ability to meet obligations promptly and avoiding incurring any financial liabilities (Al-Eid,2025). Accordingly, FB is a goal that banks struggle to achieve due to its close joining with their financial constancy and ability to last and meet their various financial duties (Udeagha & Muchapondwa,2023). Therefore, digital transformation technology is considered one of the most important developments in the fields of accounting and financial management, as research and studies have shown that modernity in these technologies significantly contributes to improving the financial balance for accountants in commercial banks (Alduneibat,2025), which means that technologies such as artificial intelligence and big data analytics enable accountants in commercial banks to efficiently and quickly collect, process and analyse financial data, enhancing their ability to make informed financial decisions that promote the sustainability of financial institutions and achieve targeted financial balance (Bose et al.,2023).

Financial balance is also one of the most prominent indicators used to measure the efficiency of the economic and financial performance of institutions, whether public or private (Moussaoui, 2024), and it indicates the institution's ability to achieve a

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

sustainable balance between its resources and expenditures, enabling it to meet its short- and long-term obligations without resorting excessively to borrowing or falling into chronic financial deficit (Zoidze, 2023).

Commercial banks understand that financial equilibrium helps them balance liquidity and profitability, paying their bills and investing as much of their money as possible at the same time (Yousef, 2024). Digital transformation technologies are not a fad for modernity, but a necessity to survive and grow in a highly competitive and rapidly changing market (Omol, 2024). This implies that the influence of these technologies is not limited to operational efficiency but also to qualitative leaps in financial performance that improve revenue collection, reduce costs, and increase transparency, which is one of the key elements to financial equilibrium (Bueno et al., 2024). The greater the use of these technologies to the benefit of the accountant, the more it enhances the internal capabilities of accountants to produce better financial statement outcomes and therefore more reliable decision-making (Jones, 2024).

On the other hand, it cannot be ignored that digital transformation affects the work culture within banks, which means that enhancing collaboration between work teams helps encourage them to exchange knowledge and information, thereby improving overall performance and contributing to achieving financial balance among departments in the concerned banks (Handani, 2024). This means that accountants gain the ability to build their financial capabilities by making decisions aimed at developing financial strategies that help achieve the objectives through which banks aim to maintain financial balance in the long term (Auliyah & Agit, 2024).

II. PART ONE: RESEARCH METHODOLOGY

First: Research Problem

Over time and with the development of the work environment, the tasks and services of banks have evolved and diversified. These banks aim to offer a wide range of services to their clients with the goal of attracting as many of them as possible and achieving the highest levels of performance (Challoumis & Eriotis, 2025), which in turn leads to profitability and increased revenue, thereby establishing their position as leading institutions in their fields. In order to comprehend the financial condition of banks, banks need to track and analyze their financial data, such as the balance sheet, income statement, and cash flow statement (Saydullayeva, 2025). Thus, using digital accounting transformation techniques comes with significant challenges, which directly and indirectly affects achieving financial balance (Badria & Hasanah, 2024), which can create major financial inefficiencies. Accountants who are skilled in accurately and comprehensively analyzing financial reports (Odonkor et al., 2024) demonstrate that achieving FB is a crucial cornerstone for organizations, as it forms the basis for the financial, economic, and social stability of the organization, and serves as a Launchpad for making added value (Challoumis & Eriotis, 2025). It is also the fundamental safeguard against financial failure, bankruptcy, or liquidity shortages (Burkova et al., 2023).

Furthermore, financial balance plays a crucial role in financing current assets, ensuring the availability of liquidity necessary for the continuation of the organisation's operations (Samborska et al., 2023). On the other hand, financial balance represents a social knowledge domain concerned with analysing data related to the subject to ensure effective monitoring of the use of available financial resources within the project (Shriya et al., 2025). Additionally, failing to grasp the benefits that digital transformation can offer may lead to increased liquidity risks and an inability to achieve the required financial balance, as the challenges related to investing in these technologies require having highly competent and effective accountants and strategies in order to implement innovations and technologies accurately to achieve financial balance. This highlights the reasons that necessitate evaluating the ability of accountants to utilise big data and their capability to analyse and interpret it correctly in order to support the organisation's financial analysis and predict future labour market requirements, thereby bridging the gap between information, reports and financial decisions. From this perspective, the research problem can be formulated in the question: 'Is there an impact of the novelty of digital accounting transformation techniques on achieving financial balance among accountants in commercial banks?' To address this problem, the following questions must be answered:

1. What is the impact of digital accounting transformation technologies on the financial balance of accountants in commercial banks?
2. How does the ability of accountants to achieve financial balance through the use of these technologies vary?
3. What obstacles do accountants face in implementing digital accounting transformation in their work at the bank?
4. How can awareness and training of accountants concerning digital transformation technologies be improved?
5. What is the role of administration in secondary the use of modern technologies to achieve FB?

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

Second: The Importance of research

One of the fundamental studies that provides the foundation for achieving the largest market share is to study the impact of modern digital accounting transformation techniques on achieving financial balance among accountants in commercial banks. In the era of the digital economy, with the growing complexity and pressure faced by financial entities, banking systems that can compete with financial institutions through highly precise and advanced tools and techniques that can achieve sustainable financial balance are needed. Thus, this research is an essential method to understand the operation of these technologies and to implement them into accounting processes, to contribute to the construction of the financial and strategic efficiency of commercial banks. This research shows how to mitigate the weaknesses of accounting efficiency, how to use innovative digital creations, and how to direct resources in a way that benefits banks, enhances their financial performance, and builds an accurate and transparent vision to make more accurate and objective decisions to achieve financial balance.

The relevance of the study is on the continuous requirements to train bankers to develop cognitive skills to adapt to the dynamic work environment. Understanding how much digital accounting transformation techniques contribute to achieving financial balance is critical for directing information quality, human effort, process digitalisation and technologies to improve accuracy and transparency in bank financial reports. This serves banks in understanding technical risks and leveraging positive technologies in ways that support financial solvency, financial flexibility, profitability, and financial liquidity, thereby improving financial metrics and achieving financial balance for the bank.

Third: The Objectives of research

The research aims to measure the impact of the modern digital accounting transformation techniques, represented by Information quality, Human effort, Digitalization of processes, and Technologies, on achieving financial balance, represented by Financial solvency, Financial flexibility, Profitability, and Financial liquidity, among accountants in commercial banks. By exploring the mechanisms that determine how to use these Technologies more effectively to enhance financial performance, this contributes to developing accountants' abilities to analyse data and use modern technological tools, thereby helping to build an objective, conceptual, and practical understanding of how to enable accountants to achieve financial balance for the bank. This means that it is essential to improve the accuracy of financial data and increase its operational efficiency in a way that supports making well-informed financial decisions, enhancing the transparency and reliability of this information within the banking sector. The research also seeks to achieve the following sub-objectives:

1. To determine the impact of digital accounting transformation technologies on the financial balance of accountants in commercial banks.
2. To measure the varying degrees to which accountants are able to achieve financial balance through the use of these technologies.
3. To identify the obstacles accountants face in implementing digital accounting transformation in their work at the bank.
4. To determine how to enhance awareness and training among accountants regarding digital transformation technologies.
5. To assess the role of management in supporting the use of modern technologies to achieve financial balance.

Fourth: Hypothesis Outline and Hypothesis Development

Based on a comprehensive review of the knowledge and research related to the study variables, as well as addressing the study problem, its objectives and significance, the necessity of having a conceptual model became evident. This model exemplifies the role of contemporary digital accounting techniques in attaining FB. In turn, this contributes to addressing the study problem and its questions, and achieving its main objectives. Therefore, the study model consists of two variables:

1. **Digital accounting transformation:** This was the independent variable and measured using four indicators: information quality, human effort, digitization of processes, and technologies.
2. **Financial balance:** This was the dependent variable and measured using four indicators: financial solvency, financial flexibility, profitability, and financial liquidity.

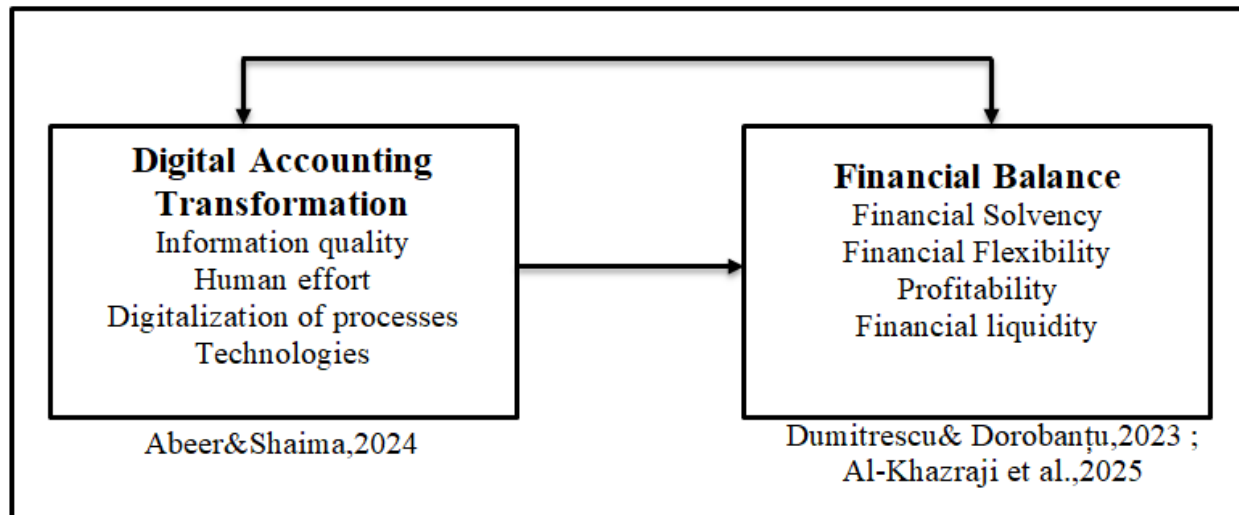


Figure (1) Hypothesis Outline

Based on Figure (1), two hypotheses can be developed:

H1: There is a significant correlation between digital accounting transformation and financial balance technologies, and it branches out from:

1. There is a correlation between Information Quality and Financial Balance with their combined indicators.
2. There is a correlation between Human Effort and Financial Balance with their combined indicators.
3. There is a correlation between digitalization of processes and financial balance with their combined indicators.
4. There is a correlation between technologies and financial balance with their combined indicators.

H2: There is a significant impact of digital accounting transformation technologies in the financial balance, and it branches out from it:

1. Information quality has a significant impact on the financial balance with its combined indicators.
2. There is a significant impact of human effort in financial balance with its combined indicators.
3. Digitalization of processes has a significant impact on the financial balance with its combined indicators.
4. The presence of a significant impact of technologies in financial balance with its combined indicators.

Fifth: Research Sample

The research community consists of a group of commercial banks, including bank is (iraqi middle east investment, baghdad, gulf commercial, al-mansour bank for investment, international development, iraqi islamic, trade bank of iraq, sumer commercial, north bank, al-janoob islamic, cihan, elaf, united bank for investment, world islamic), all listed on the Iraq Stock Exchange. The reasons for choosing commercial banks as the testing environment for the study's hypotheses and framework are due to the fact that this sector provides a suitable environment and favorable objective conditions, in addition to the importance of the banking sector and its maturity compared to other service sectors. Furthermore, Iraqi private banks enjoy greater flexibility and freedom in investing their resources to achieve financial balance. Accordingly, the research sample included accountants in these banks, with 120 questionnaires distributed to measure the level of digital accounting transformation and financial balance among accountants in commercial banks. From these, 113 questionnaires were retrieved, with 4 being damaged and 109 valid for analysis, representing a response rate of 90.83%.

III. PART TWO: THE THEORETICAL SIDE

First: digital accounting transformation

1. The concept of digital accounting transformation

Modern technologies in general, and digital technology in particular, are among the most influential factors in all aspects of human life today, because of its prominent role in work, education, entertainment, health and others, but have become a key factor in the future development of the services sector. providing an integrated scientific environment whose effects are directly and indirectly reflected on life relationships and ways of thinking and communication (Abdelhafiz & Mubarak, 2023), digital transformation techniques in accounting reflect a set of tools, programs and platforms that use digital technologies to facilitate and improve accounting, auditing and financial reporting processes. Examples of such technologies include cloud computing,

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

artificial intelligence, machine learning, blockchain technology (blockchain), and big data analytics (Hamed, 2024). Sakina & Toumi (2019) explained that digital transformation techniques in accounting refer to the provision of more accurate, fast, comprehensive, transparent and valuable accounting information to internal and external users. Therefore, these technologies affect accounting information systems because they enable new ways to create, process and disclose accounting information, which particularly affects the quality of accounting disclosure, which is a key indicator of accounting information quality. However, digital transformation technologies also raise new challenges and risks, such as data security, privacy, quality and compliance.

Successful implementation of digital transformation requires the adoption of a range of mechanisms that include technologists, data, human resources and processes. The support, development and continuous improvement of these mechanisms require significant investment. Analysis of these mechanisms reveals that accounting bears the greatest responsibility in their study and application. Data is the most important mechanism in accounting work, and accountants have the skills and capabilities to handle and present data appropriately and in a timely manner to reduce risk and enable users of this information to make sound investment decisions. Auditors also play a vital role in providing impartial professional opinions on the reliability, validity and accuracy of such data (Shanan, 2023). Mahlahel & AWITIL (2025) believes that digital transformation represents the process of applying technology and digital capabilities to do many of the things that you do regularly, but in new ways, as the current era is characterized by the multiplicity of modern information and communication technologies that have been quickly integrated with many areas of economic life and entered most of the business activities. whether administrative, financial or scientific, digital transformation is one of the new concepts in the world of technology (Al-Sahli & Qarwash, 2024)

AQILI (2025) defines digital transformation as a strategy that organizations seek to achieve to create value and revenue at the operational level to change their business models, improve their performance, and create a culture of innovation for their sustainability, through the adoption of ICT and the global Internet, while providing the requirements of the digital environment, starting with infrastructure, marketing and distribution models. after-sales services, including necessary structural changes.

Digital accounting transformation is a combination of capabilities that enable a company to make changes in its business and economic environment by adopting technology to improve its performance.

2. The importance of digital accounting transformation

The use of digital transformation technologies is constantly changing the way financial and non-financial data are collected, processed and disseminated. This change fundamentally changes the traditional tools used to handle accounting data and information, contributing to the efficiency and operational capacity of the accounting system to process data and obtain accounting information that is fast, objective, relevant and reliable. Accounting professionals must understand these changes affecting the accounting system itself, accounting standards, frameworks and regulations, and work to develop their skills in dealing with the mechanisms of digital transformation (Shanan, 2023). The importance of digital transformation in accounting is demonstrated by:

- a. Digital transformation is essential in accounting to keep pace with technological developments and improve the efficiency and effectiveness of accounting performance and financial reporting (Yousef & Al-BasYouoni, 2024).
- b. Digital transformation includes the application of cloud computing technologies, blockchain technology (blockchain), and big data technologies.
- c. It streamlines and expedites accounting and financial reporting processes, and facilitates efficient and effective work for auditors (Obaid, 2024).
- d. Digital transformation improves the timeliness and accuracy of data and financial reporting, which improves the quality of financial reporting.
- e. Digital transformation enhances the relevance and usefulness of accounting information and sound investment decisions.
- f. Digital transformation enhances communication and collaboration between different departments within organizations, and users are provided with comparable, relevant and accurate information that reflects the performance of organizations and their financial situation (Jones, 2024).
- g. Digital transformation integrates information and resources into a suite of business tools. Rather than diverting software and databases.
- h. Digital transformation makes organizations more flexible, as companies can increase their mobility through digital transformation to improve market speed and adopt continuous improvement strategies, allowing for faster innovation and adaptation while providing a path for improvement (Vogelsang et al., 2018).

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

3. Indicators for measuring digital accounting transformation

Digital accounting transformation can be measured through several indicators, including:

- a. Information Quality:** Digital transformation affects information quality, as the use of technology enables more transparent, reliable and timely information, and digital transformation contributes to increased disclosure in financial reports and lower the cost of issuing them, making them more useful to users and easier decision-making (Abdelkafi & Al-Qaddafi, 2023).
- b. Human effect:** This represents all the individuals working in the company, from superiors to subordinates, who are employed to perform all of its functions and operations. Through it, the culture of the organization is formulated, which clarifies patterns of behavior and refers to the many systems, plans, policies and procedures that regulate the performance of employees in their tasks and how they perform their functions in order to achieve the mission and objectives of the organization (Meraghni et al., 2021).
- c. Digitalization of processes:** When an organization implements digital transformation in its processes, it can make improvements to its procedures, which promotes innovation. This also allows them more room to develop their products and services, as the integration of new technologies allows them to achieve substantial improvements in their work (Abdell-Hafiz & Mubarak, 2023).
- d. Technologies:** Digital transformation has become a fundamental pillar for all organizations aiming to develop and improve their services and facilitate access to them, and digital transformation is not limited to the application of technologies within the organization, but is a comprehensive program that affects the organization and its internal processes, as well as its external impact by providing services to the target audience to speed and facilitate transactions. Accounting systems technologies are more important and urgent than ever, primarily due to the rapid development of information tools and technologies in all aspects of life, whether related to transactions with the public and private sectors, or those involving individuals (Al-Sahli & Qarwash, 2024).

Second: financial balance

1. The concept of financial balance

Financial Balance is the cornerstone of an organization's stability, ensuring its sustainability in a volatile and changing economic environment. It involves an acceptable mix of profitability, liquidity and optimal use of resources, as well as costs and debt, and is a necessary condition for the strategic goals of the organization and a measure of the effectiveness of its financial and management management. In the face of rising financial challenges and economic pressures, financial balance has become a central goal that must be planned for, monitored, and decided based on clear and well-thought-out financial indicators (Mohamed, 2025).

Financial Balance also derives from the financial budget, because it is based on the ratio between assets and liabilities, that is, the ability to pay its debts and to meet its obligations on time and the availability of assets to cover these debts (Mihaela & Mariana, 2023). In other words, money that is not spent within a year is applied to long-term expenditures, and current assets are applied to debt or short-term liabilities (Khadrush & Boulbatina, 2020).

Banking and financial institutions are the backbone of national economies, and maintaining their strength reflects their performance level, which is reflected in the strength of their balance sheets, and banks and financial institutions strive to balance their assets and liabilities, that is, their ability to meet their obligations on the due date. This means that the difference between the date of receipt and the date of maturity of the funds must be zero (Sulehri & Ali, 2023; Maouch, 2024). Financial balance is defined as the ability to settle final obligations on their due date, which means that a bank's assets must be sufficient to meet its obligations on that date (Alhiniti & Al-Madi, 2025).

Financial balance is the balance, in terms of value and duration, between the financial resources of a budget and its uses. The duration of use of resources varies according to the date they are due, while the duration of expenditure varies depending on their stability. This balance results in a discrepancy between the liquidity of the assets and the maturity date of the liabilities. The concept of financial balance is manifested in the ability of an organization to maintain an adequate level of liquidity that ensures continuous adjustment of cash flows. Therefore, organizations constantly seek to control their liquidity to ensure that they are able to meet their financial obligations (Mohamed, 2025), and (Shams Eddine et al., 2025) consider the financial balance to be the positive cash balance after all short-term debts are repaid on their due date, which requires a balance between the uses and sources of funds. Soumia (2023) argued that financial balance is defined as the temporal and value interaction between an organization's financial resources and their uses. It is based on the fundamental principle that permanent funding must equal total investments plus part of the operating cycle requirements, i.e. the Foundation's permanent funds must equal net investments plus standard capital.

From the above, it can be said that Financial Balance represents the extent to which an organization is able to achieve the required levels of financial resources in the best way, at the lowest cost, and in a manner that maintains its financial stability.

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

2. The importance of financial balance

The importance of Financial Balance lies in the fact that companies seek to balance assets and liabilities, and maintain this balance continuously (Nagy & Ghika, 2024), and mainly companies seek to provide sufficient liquidity to finance their operating expenses on the one hand, and achieve high returns by investing as much of their capital as possible on the other (Blessing & Sakouvogui, 2023), the importance of financial balance can therefore be defined in the following:

- a. Predict the future financial performance of the organization and assess the risks associated with it.
- b. Estimate returns on available investment opportunities.
- c. It is also used for internal control over cash inflows and outflows in terms of their use.
- d. Evaluate the financial performance of the organization and determine the extent to which resources are rationalized (Khadrush & Boulbatina, 2020).
- e. Financial Balance reflects the extent to which banks are able to make the best use of their financial resources.
- f. Financial Balance reflects the extent to which banks are able to repay part of their outstanding debt (Herman & Zsido, 2023).
- g. The Financial Balance investigation provides the security that allows banks to conduct their business normally without any difficulties (Alhinai et al., 2024).
- h. Securing the necessary financing for investment needs with permanent capital, as well as financial independence from external parties.
- i. Financial solvency guarantees through the ability to pay part or all of the debt (Hamza & Ghafsi, 2023).

3. Indicators for measuring financial balance

Financial balance can be measured through several indicators, including:

- a. **Financial solvency:** As a result of ongoing developments in international financial systems and the integration of information technology into financial operations, financial and monetary crises have worsened, resulting in multiple risks for financial institutions (Qudah et al., 2023), and these institutions have become more vulnerable to heavy losses even in the event of minor financial disruptions. these tourist attractions the importance of enhancing financial creditworthiness to ensure its stability and aptitude to meet financial tests (Bayrakceken, 2024). Shtiwi (2025) sees this as a major concern for supervisors, managers and regulators overseeing this vital sector. It also serves as an early warning indicator of the bank's ability to meet financial challenges, and the predictability of financial solvency, especially for those interested in financing the financial structure and investors, has become a key element in money management and sound financial decision-making (Chikri & Kassu, 2024).
- b. **Financial flexibility:** Measuring financial flexibility is a major challenge for researchers due to its intangible nature and difficult to quantify (Crespo et al., 2025), and many researchers have tried to measure financial flexibility using indicators such as long-term debt, but reliance on debt and leverage alone is insufficient. such as cash balances (Shojaee & Mirzaei, 2024). He explained (QAISAR et al., 2025) that financial flexibility reflects the ability of companies to provide and allocate sufficient financial resources to deal efficiently with emergencies and unforeseen circumstances, so as to ensure financial stability and maximize the company's long-term market value.
- c. **Profitability:** Profitability is defined as the basic measure that reflects the success of the bank, as it measures its ability to achieve a return on its investments, and one of its most important indicators is the net profit after tax divided by total assets, which is one of the most important indicators to measure the financial performance of banks (Yousef, 2024).
- d. **Financial liquidity:** Financial liquidity is the ability of a financial institution to meet its short-term obligations and provide credit (Xuanling & Meng, 2023), either by holding liquid assets or assets that can be converted into cash without significant loss of value, or by being able to borrow to cover daily and emergency withdrawal requirements (Mikou et al., 2024). Ndiritu (2024) pointed out that Financial Liquidity represents the ability of the institution/bank to provide the funds necessary to meet contractual obligations and non-contractual customer requirements in time and at reasonable cost.

IV. PART THREE: THE PRACTICAL ASPECT

First: Describing and Coding Research Variables

This step aims to present the symbols representing the variables and the measurement tool items, helping the reader to correctly understand the results and providing a clear view of the objectives the study seeks to reveal; thus, Table (1) illustrates the coding and description of the study variables.

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

Table (1) Variable Coding and Description

Variables	Dimensions	NO.	Code	Source
digital accounting transformation)ADT(	Information quality	3	INQ	Abeer&Shaima,2024
	Human effort	3	HUE	
	Digitalization of processes	4	PRD	
	Technologies	4	TEC	
financial balance)FB(	Financial solvency	5	FIS	Dumitrescu& Dorobanțu,2023 ; Al-Khazraji et al.,2025
	Financial flexibility	5	FIF	
	Profitability	5	FPR	
	Financial liquidity	5	FIL	

Second: Normality test

Table (2) shows the analysis of the data associated with the study variables, in which a statistical test was conducted to determine if the data are normally distributed, and the results indicate that the significance level is greater than 0.05, which means the data is normally distributed, the null hypothesis that the data sampled from the study sample is normally distributed was accepted, and the alternative hypothesis was rejected.

Table (2) Test for normality of study variables

NO.	Kol-Smia		Sig.	
INQ	0.173	0.113	0.136	0.100
HUE	0.149		0.131	
PRD	0.148		0.105	
TEC	0.176		0.158	
FIS	0.149	0.091	0.129	0.092
FIF	0.127		0.140	
FPR	0.118		0.097	
FIL	0.141		0.073	

Third: Analysis of the reliability of the measurement instrument

The findings in Table (4) indicate that the overall reliability of the measurement instrument was (0.967), of the variable digital accounting transformation, represented by four dimensions with a total of (14) items, with the reliability (Cronbach\'s Alpha =0.953) of its dimensions ranged from the lowest value (0.863) for the Human effort dimension to the highest value (0.885) for the Information quality dimension, which indicates the consistency of the questionnaire items.

The outcomes indicated that the dependent variable (financial balance), which is composed of four dimensions with 20 items, was reliable (Cronbach\'s Alpha = 0.942), and the reliability of the dimensions ranged from 0.837 (Financial liquidity) to 0.897 (Financial flexibility), showing that the questionnaire items were consistent.

Table (4) Cronbach's Alpha Test Parameter

Variables	Dimensions	NO.	Cronbach's Alpha		
digital accounting transformation	Information quality	3	0.885	0.953	0.967
	Human effort	3	0.863		
	Digitalization of processes	4	0.874		
	Technologies	4	0.870		
financial balance	Financial solvency	5	0.880	0.942	
	Financial flexibility	5	0.897		
	Profitability	5	0.869		
	Financial liquidity	5	0.837		

Fourth: Statistical description of the variables

Table (5) shows the results, where we can see a clear focus by accountants in the relevant banks on improving digital accounting transformation (mean of 3.52 and a standard deviation of 0.53) that is achieved by accountants focusing on adopting the Technologies TEC dimension (mean of 3.58 and a standard deviation of 0.57) and less interest in the Digitalization of Processes PRD dimension (mean of 3.37 and a standard deviation of 0.54). This indicates that commercial banks put emphasis on

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

implementing changes that facilitate communication between various departments and divisions, which in turn results from the emphasis on digital transformation technologies, contributing to improving the mechanisms for using digital transformation tools to deliver services to customers.

The outcomes in Table (5) demonstrate that accountants in the concerned banks have shown significant interest in improving financial balance, with a mean score of 3.39 and a standard deviation of 0.43, specifically focusing on the Financial Liquidity (FIL) dimension, with a mean score of 3.43 and a standard deviation of 0.49, while there is minimal interest in the Financial Solvency (FIS) dimension, with a mean score of 3.34 and a standard deviation of 0.51. This has led to the commercial banks focusing on taking steps to improve and monitor the quality of electronic services, which has contributed to building digital transformation as a key driver in opening new horizons to increase the effectiveness and efficiency of banking performance, and in turn, increasing financial balance.

Table (5) Statistical Description

No.	Mean	S.D	No.	Mean	S.D
INQ1	3.42	0.78	FIS4	3.26	0.78
INQ2	3.53	0.78	FIS5	3.45	0.73
INQ3	3.75	0.98	FIS	3.34	0.51
INQ	3.57	0.67	FIF1	3.37	0.85
HUE1	3.40	0.78	FIF2	3.40	0.86
HUE2	3.98	0.85	FIF3	3.47	0.82
HUE3	3.34	0.89	FIF4	3.46	0.89
HUE	3.57	0.62	FIF5	3.32	0.82
PRD1	3.41	0.83	FIF	3.40	0.66
PRD2	3.34	0.79	FPR1	3.28	0.88
PRD3	3.41	0.82	FPR2	3.55	0.79
PRD4	3.32	0.79	FPR3	3.44	0.79
PRD	3.37	0.54	FPR4	3.30	0.88
TEC1	3.30	0.66	FPR5	3.29	0.92
TEC2	3.43	0.85	FPR	3.37	0.58
TEC3	3.72	0.83	FIL1	3.39	0.81
TEC4	3.88	0.77	FIL2	3.53	0.71
TEC	3.58	0.57	FIL3	3.44	0.88
ADT	3.52	0.53	FIL4	3.21	0.99
FIS1	3.31	0.77	FIL5	3.58	0.71
FIS2	3.39	0.74	FIL	3.43	0.49
FIS3	3.28	0.85	FB	3.39	0.43

Fifth: Hypothesis testing and path analysis

H1: There is a significant correlation between ADT and FB.

As shown in Table (6), the strength of the relationship between digital accounting transformation and financial balance is (0.836), which is the result of the sample being strongly focused on the relationship between the dimensions of these variables, with correlation strengths between (0.566) between the Technologies (TEC) dimension and the Profitability (FPR) dimension, and (0.843) between the Digitalization of Processes (PRD) dimension and the Financial Solvency (FIS) dimension, which reflects the commercial banks' commitment to defining a digital transformation vision and ensuring that significant changes in their organizational structure are made to improve functional performance.

Table (6) Correlation Matrix

	INQ	HUE	PRD	TEC	ADT	FIS	FIF	FPR	FIL	FB
INQ	1									
HUE	.871**	1								
PRD	.830**	.802**	1							

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

TEC	.852**	.781**	.844**	1						
ADT	.954**	.926**	.927**	.929**	1					
FIS	.821**	.806**	.843**	.834**	.884**	1				
FIF	.633**	.653**	.666**	.634**	.692**	.668**	1			
FPR	.584**	.590**	.609**	.566**	.628**	.565**	.879**	1		
FIL	.681**	.638**	.611**	.680**	.699**	.711**	.595**	.534**	1	
FB	.782**	.775**	.787**	.780**	.836**	.845**	.921**	.873**	.810**	1

H2: There is a significant impact of ADT on the FB.

As shown in Table (7), there is a statistically significant effect of digital accounting transformation on financial balance, and an increase of one unit in digital accounting transformation will result in an improvement in financial balance by (0.863) with a standard error of (0.039) and a critical value of (22.128), indicating that the concerned accountants perceive the need for improving digital accounting transformation to meet the requirements of financial balance, and this is a factor in determining the priority of improving financial balance in their internal processes.

Digital accounting transformation contributed to explaining (0.698) of the variance in financial balance, while the remaining value falls outside the scope of the study, indicating a significant relationship between digital accounting transformation techniques and financial balance, based on the extent to which commercial banks perceive the necessity of developing and training their employees to keep up with digital transformation, which in turn contributes to ensuring the achievement of desired outcomes and goals. Banks measure the impact of training on digital transformation in achieving financial balance.

Table (7) Results of path analysis of the impact of digital accounting transformation on the financial balance

Path			Standard weights	standard error	critical value	R ²	P
digital accounting transformation	--->	financial balance	0.863	0.039	22.128	0.698	***

V. PART FOUR: CONCLUSIONS AND RECOMMENDATIONS

First: Conclusions

1. There is a significant correlation and influence relationship between digital accounting transformation techniques and financial balance, reflecting the extent to which commercial banks recognise the need to develop and train their employees to keep up with the digital transformation process, which in turn contributes to ensuring the achievement of desired results and objectives. Banks assess the impact of training on digital transformation in achieving financial balance.
2. Commercial banks are keen to define a digital transformation vision, which ensures their focus on implementing fundamental changes in their organisational structure to enhance functional performance.
3. Commercial banks focus on implementing changes that facilitate communication between different departments and divisions, which in turn results from attention to digital transformation techniques, contributing to the improvement of mechanisms for using digital transformation tools to provide services to customers.
4. Commercial banks are keen to take the necessary measures to improve and monitor the quality of electronic services, which in turn has contributed to building digital transformation as an important driver in opening new horizons to enhance the effectiveness and efficiency of banking performance, leading to an increase in financial balance.
5. Commercial banks are keen to invest in creative and innovative digital applications to ensure and enhance financial balance, which has helped in developing human resources to improve all management departments and bank branches in a way that achieves financial balance.

Second: Recommendations

Based on the previous findings, the study reached the following recommendations:

1. Commercial banks should hold seminars, conferences and practical training sessions to educate their employees and raise their awareness of the importance of digital transformation in improving financial balance, which requires efforts to enhance the knowledge of commercial bank employees covered by the study regarding the importance of digital transformation and its applications in the banking sector.
2. Iraqi commercial banks should improve their application of digital accounting transformation through information quality, human effort, digitalisation of processes and technologies as they are key tools for digital transformation in digital accounting,

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

which requires increasing the transparency and quality of accounting and financial information, thereby reducing information asymmetry between commercial banks and investors, leading to financial balance.

3. Commercial banks should be required to achieve adaptation to digital transformation to accelerate transactions between individuals and ensure their execution accurately and quickly, which in turn requires a flexible organisational structure.
4. Commercial banks must establish a timetable for digital transformation, with regular and careful review of the organisational structure to ensure the achievement of financial balance, which requires providing the necessary material and technical resources for their employees.
5. It is essential for commercial banks to focus on adopting digital transformation policies to keep pace with global developments in the banking sector, which requires enhancing the efficiency of banks' technical infrastructure to improve the quality of banking services, and this necessitates establishing legislative and legal frameworks to regulate the use of digital technologies in banking transactions and ensure compliance with banking IT governance principles, which in turn contributes to achieving financial balance.

REFERENCES

- 1) Abdel-Hafiz, M, R. H., & Mubarak, O. M. M. (2023). The role of digital transformation in improving sustainable development using modern management accounting methods: An applied study on private universities in Egypt. *Scientific Journal of Financial and Commercial Studies and Research*, 4(2), 1101-1182.
- 2) Abdelkafi, A. S., & Al-Qaddafi, A, S. M. (2023). The extent to which digital transformation and cloud computing contribute to enhancing the accounting profession, from the perspective of academics and accounting professionals. *Sirte University Journal of Humanities*, 13(2), 44-59.
- 3) Abeer, H, & Shaima, B. (2024). The impact of digital transformation on innovation and institutional performance (Doctoral dissertation, Tebessa: University of Shahid Sheikh Larbi Tebessi).
- 4) Alduneibat, K. A. (2025). The impact of digital transformation on the adoption of modern management accounting methods in commercial bank governance. *Asian Economic and Financial Review*, 15(9), 1431.
- 5) Al-Eid, D. (2025). Financial balance in the public economic institution and the limits of financial purification: A case study of the Algerian Water Company, Ghardaia Unit, 2021/2023 (Doctoral dissertation, University of Ghardaia - Faculty of Economic, Commercial and Management Sciences).
- 6) Alhinai, B. A. A., Mokhtar, A. I., & Ashaari, M. F. (2024). Improving Financial Stability: Business Intelligence's Function in Risk Reduction. *International Journal of Academic Research in Business and Social Sciences*, 14(1), 3145-3159.
- 7) Alhiniti, Y., & Al-Madi, M. N. D. (2025). Adjusting Interest Rates in Bank Loans: Balancing Legal Texts and Technological Advancements. In *Artificial Intelligence in the Digital Era: Economic, Legislative and Media Perspectives* (pp. 2279-2293). Cham: Springer Nature Switzerland.
- 8) Al-Khazraji, D. N. A., Al-Bhate, A. S. Y., & Khaji, J. A. (2025). The Impact of Re-Engineering Banking Accounting Operations on Achieving Financial Balance: An applied study of a sample of employees in Rafidain Bank AL-Diwaniyah Governorate. *American Journal of Economics and Business Management*, 8(8), 4082-4095.
- 9) Al-Sahli, N, & Qarwash, K. (2024). The Importance of Applying Digital Accounting Transformation in Entrepreneurial Projects: A Field Study on Accounting Professionals and Researchers at the Libyan Academy in Misrata Municipality. *Journal of Sustainable Research in Humanities*, 21-36.
- 10) Al-Sahli, N. M., & Qarwash, K. S. (2024). The importance of applying digital accounting transformation in entrepreneurial projects: A field study on accounting professionals and researchers at the Libyan Academy in Misrata Municipality. *Journal of Sustainable Research in Humanities*, 21-36.
- 11) Aqili, K. I. A. R. (2025). The impact of digital transformation on the foundations of formulating accounting standards and its implications for international convergence in accounting: A comparative theoretical and applied study. *Journal of Financial and Commercial Research*, 26(1), 391-439.
- 12) Auliyah, I., & Agit, A. (2024). Reflective Study on Financial Statement Quality Capability to Influence Firm Performance: Literature Review. *Advances in Economics & Financial Studies*, 2(3), 165-178.
- 13) Badria, N., & Hasanah, N. (2024). The role of digital accounting for smes in facing business challenges in the digital era. *Accounting and Finance Studies*, 4(4).
- 14) Bayrakçeken, A. (2024). Economic Security in Times of Crisis: A Legal Framework for Sustainable Financial Resilience. *Mayo Communication Journal*, 1(2), 65-74.

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

- 15) Blessing, H., & Sakouvogui, G. (2023). Impact of liquidity and solvency ratios on financial performance: a comprehensive analysis. *Indonesia Auditing Research Journal*, 12(3), 102-115.
- 16) Bose, S., Dey, S. K., & Bhattacharjee, S. (2023). Big data, data analytics and artificial intelligence in accounting: An overview. *Handbook of big data research methods*, 32-51.
- 17) Bueno, L. A., Sigahi, T. F., Rampasso, I. S., Leal Filho, W., & Anholon, R. (2024). Impacts of digitization on operational efficiency in the banking sector: Thematic analysis and research agenda proposal. *International Journal of Information Management Data Insights*, 4(1), 100230.
- 18) Burkova, L., Shepeliuk, V., & Rtyshchev, S. (2023). Management of financial risks of enterprises as a prevention component of their financial instability and bankruptcy for the sustainable development achieving. *Economics, Finance and Management Review*, (1), 98-114.
- 19) Challoumis, C., & Eriotis, N. (2025). Evolution of banking systems: A comprehensive historical analysis. *Journal of Contemporary Research in Business, Economics and Finance*, 7(1), 1-21.
- 20) Chikri, H., & Kassou, M. (2024). Financial revolution: Innovation powered by FinTech and artificial intelligence. *Journal of Theoretical and Applied Information Technology*, 102(9), 4145-4157.
- 21) Crespo, J. D. O., Domínguez, J. M. F., & Guzmán, D. M. C. (2025). Systematic Literature Review on Organizational and Financial Resilience. *IEEE Access*.
- 22) Dumitrescu, I. A., & Dorobanțu, A. I. (2023). Analysis of the impact of financial balance indicators on the stock market performance of companies listed on the Bucharest Stock Exchange. *Journal of Financial Studies*, 8(Special-June_2023), 72-82.
- 23) Gai, A. M., Chatra, A., Ibrahim, M. M., Anantadjaya, S. P., & Nawangwulan, I. M. (2024). Analysis of The Influence of Information Availability, Economic Factors and Changing Trends on Travel Agent Business Sustainability in Digital Era. *Jurnal Sistim Informasi dan Teknologi*, 6-11.
- 24) Hamed, A. A. A. (2024). The impact of digital transformation in accounting information systems on the quality of accounting disclosure in Libyan commercial banks from the perspective of stakeholders: A field study on commercial banks operating in the central region. *Economic Horizons Journal*, 10(1).
- 25) Hamza, B., & Ghafsi, T. (2023). The impact of motor insurance on the financial equilibrium of Algerian insurance companies during the period 2013-2022. *Journal of Economic Sciences, Management & Commercial Sciences (JESMCS)*, 16(1).
- 26) Handani, D. (2024). Organizational culture change and adaptation in the face of digital transformation: A study of Jambi's banking sector. *Enigma in Economics*, 2(2), 110-121.
- 27) Herman, E., & Zsido, K. E. (2023). The financial sustainability of retail food SMEs based on financial equilibrium and financial performance. *Mathematics*, 11(15), 3410.
- 28) Jones, V. A. (2024). Business intelligence solutions for enhanced accounting decision-making in digital transformation. *Engineering Science Letter*, 3(01), 11-15.
- 29) Khadrush, S., & Boulbatina, N. (2020). Sources of funding and their impact on financial balance: A case study of the sanitary ware company in El Milia (Doctoral dissertation, University of Jijel).
- 30) Mahlahel, S. M., & Awitil, A. B. J. (2025). Digital transformation and its impact on the quality of outputs of the accounting information system in commercial banks located in the city of Al-Khums. *Fezzan University Journal of Science*, 578-603.
- 31) Maouch, M. (2024). Sustaining the financial equilibrium of the Algerian social security sector in light of new occupational risks: The case of psychosocial risks. *Journal of Advanced Economic Research*, 9(1), 155-167.
- 32) Meraghni, O., Bekkouche, L., & Demdoun, Z. (2021). Impact of digital transformation on accounting information systems—evidence from Algerian firms. *Economics and Business*, 35, 249-264.
- 33) Mihaela, G., & MARIANA, B. (2023). Relevance Of Financial Balance Indicators For Diagnosing An Entity's Financial Position. *Annals of'Constantin Brancusi'University of Targu-Jiu. Economy Series/Analele Universității'Constantin Brâncuși'din Târgu-Jiu Seria Economie*, (4).
- 34) Mikou, S., Lahrichi, Y., & Achchab, S. (2024). Liquidity Risk Management in Islamic Banks: Review of the Literature and Future Research Perspectives. *European Journal of Studies in Management & Business*, 29.
- 35) Mohamed, A. (2025). Analysis of financial equilibrium indicators in the economic institution: An applied study on the Aurassi institution (Doctoral dissertation, University of Ghardaia - Faculty of Economic, Commercial and Management Sciences).

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

- 36) Moussaoui, M. (2024). -Using financial balance indicators to evaluate the financial Performance of economic institutions (Case study: Mostaganem State Electricity and Gas Distribution Company. *Revue Finance & marchés*, 11(2), 01-18.
- 37) Nagy, C. M., & Ghica, E. D. (2024). Maximizing the Entity's Value through Financial Balance Analysis from a Patrimonial Perspective. *Studii Juridice Universitare*, 134.
- 38) Ndiritu, G. M. (2024). Interest Rate Spread, Liquidity Creation, Firm Characteristics and Performance of Commercial Banks in Kenya (Doctoral dissertation, University of Nairobi).
- 39) Obaid, M. S. (2024). Navigating digital transformation in accounting system: Challenges and opportunities. *International Journal of Data & Network Science*, 8(2).
- 40) Odonkor, B., Kaggwa, S., Uwaoma, P. U., Hassan, A. O., & Farayola, O. A. (2024). The impact of AI on accounting practices: A review: Exploring how artificial intelligence is transforming traditional accounting methods and financial reporting. *World Journal of Advanced Research and Reviews*, 21(1), 172-188.
- 41) Omol, E. J. (2024). Organizational digital transformation: from evolution to future trends. *Digital Transformation and Society*, 3(3), 240-256.
- 42) Qaisar, M. N., Perveen, A., & Munir, S. (2025). Financial Resilience Strategies: Liquidity, Cost Management, and Risk Planning in Economic Downturns. *Advance Journal of Econometrics and Finance*, 3(2), 88-100.
- 43) Qudah, H., Malahim, S., Airout, R., Alomari, M., Hamour, A. A., & Alqudah, M. (2023). Islamic finance in the era of financial technology: A bibliometric review of future trends. *International Journal of Financial Studies*, 11(2), 76.
- 44) Sakina, R., & Toumi, M. (2019). The role of accounting information in the quality of accounting information. *Journal of Financial and Banking Economics and Business Management*, 5(2), 107-132.
- 45) Samborska, O., Domnich, O., Mazur, Y., Kyriazova, T., Yastrubetska, L., & Baranov, A. (2023). The Importance of Financial Management in Ensuring the Financial Stability and Profitability of Organizations.
- 46) Saydullayeva, R. (2025). Financial Stability and Profitability In Banking: A Quantitative Analysis Of Key Ratios And Results. *International Journal of Artificial Intelligence*, 1(5), 154-162.
- 47) Shams Eddine, I., Bilal, M., & Lakhdar, C. (2025). Diagnosing the financial equilibrium of economic institutions using financial analysis indicators (Doctoral dissertation).
- 48) Shanan, A. A. A. (2023). The impact of digital transformation on the transparency of financial reports in light of contemporary professional standards: A field study. *Scientific Journal of Financial and Commercial Studies and Research*, Faculty of Commerce, Damietta University, 4(1)2, 199-230.
- 49) Shojaee, S., & Mirzaei, I. (2024). The Impact of Financial Flexibility on the Resilience of Small and Medium Enterprises in the Face of Economic Shocks. *Business, Marketing, and Finance Open*, 1(2), 150-159.
- 50) Shriya, K., Velmurugan, T., & Kumar, G. (2025). The Future of Finance: A Socio-Cognitive Guide to Integrating Sustainability in Financial Decision Making. In *Computational Modelling Approaches to FinTech Innovation* (pp. 65-80). Bentham Science Publishers.
- 51) Shtiwi, A. A. (2025). Conceptions of capital, corporate governance and financial supervision in systemic risk mitigation: towards an integrated approach for Libya (Doctoral dissertation, University of Essex).
- 52) Singh, A., & Hess, T. (2020). How chief digital officers promote the digital transformation of their companies. In *Strategic information management* (pp. 202-220). Routledge.
- 53) Soumia, T. (2023). The role of financial equilibrium indicators in evaluating financial performance in the banking institution: A case study of the Algerian Foreign Bank "BEA" for the period between (2017 - 2020) (Doctoral dissertation, University of Ghardaia).
- 54) Sulehri, F. A., & Ali, A. (2023). Beyond the balance sheet: analyzing the relationship between corporate governance, financial performance, and stock prices in Pakistan's non-bank financial industry.
- 55) Udeagha, M. C., & Muchapondwa, E. (2023). Striving for the United Nations (UN) sustainable development goals (SDGs) in BRICS economies: The role of green finance, fintech, and natural resource rent. *Sustainable Development*, 31(5), 3657-3672.
- 56) Vogelsang, K., Liere-Netheler, K., Packmohr, S., & Hoppe, U. (2018). Success factors for fostering a digital transformation in manufacturing companies. *Journal of enterprise transformation*, 8(1-2), 121-142.
- 57) Xuanling, M. A., & Meng, J. I. (2023). Analysis on liquidity risk management of monetary and financial services based on the goal of financial stability. *Romanian Journal of Economic Forecasting*, 26(2), 72.

The Impact of Modern Digital Accounting Transformation Technologies on Achieving Financial Balance Among Accountants in Commercial Banks

- 58) Yousef, R. A. (2024). Measuring and analyzing the factors affecting the financial equilibrium of banks: An analytical study on a sample of banks listed on the Amman Stock Exchange for the period (2000-2021). *Journal of Economic, Administrative and Legal Sciences*, 8(12 (Supplement)), 91-103.
- 59) Youssef, H. I. A., & Al-Basyouni, H. M. (2024). A proposed accounting indicator for digital transformation and its impact on the quality of financial reports: An applied study on companies listed on the Egyptian Stock Exchange. *Scientific Journal of Financial and Commercial Studies and Research, Faculty of Commerce, Damietta University*, 5(2), 933-989.
- 60) Zoidze, G. (2023). Strategic directions of balanced economic growth of entrepreneurial entities. *Journal of Innovations and Sustainability*, 7(1), 1-22.



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