Journal of Humanities and Social Sciences Researches (JHSSR)

ISSN: 2958-3160 (Online)

Addressing enterprise risk management in Iraqi commercial banks based on the effectiveness of accounting information

Asst. Prof. Aminah Rasheed Jaber [1], Prof.Dr. Hisham Khalif[1]

[1] College of Economic Sciences and Management, University of Sfax, Tunisia.

* Corresponding author: hichem.khlif@fsegs.usf.tn

Received: 10/09/2023 Accepted:29/10/2023

Abstract

Accounting information systems play a pivotal role in the structural organization of banks, despite not being the most significant aspect, owing to the sensitive nature of banking operations. They are characterized by several key factors: the central focus on handling money with extreme caution, especially as banks primarily manage depositors' funds; the profound impact of banks on the state's economy, making effective management vital for adapting to changes; and the multifaceted nature of banking activities that require professionalism and speed. Effective accounting information systems are essential for a bank's success, enhancing its competitiveness, adaptability to technology, and response to economic changes .Given the sensitive nature of banking, Enterprise Risk Management (ERM) takes center stage. ERM involves planning, organizing, analyzing, evaluating, and reporting on various risks, including financial, operational, strategic, and reputational risks. Effective IT governance is essential, providing greater control over ERM and delivering benefits through the utilization of accounting information systems. It ensures efficient investment, risk reduction, flexibility in information systems, oversight, user validation, and data control to meet evolving needs effectively.

Keywords: Enterprise Risk Management, Iraqi Commercial Banks, Effectiveness, Accounting Information Systems.

Introduction

In an era of technological and cognitive development and intense competition, all organizations are actively pursuing their own strategic objectives to reach the primary goal of profitability and growth, increasing their staff wealth, maximizing their market value and improving their performance. information and data demonstrated the Organization's most important assets when used effectively and efficiently, Accounting information systems have become one of the most important pillars of organizations as they collect, store, process and convert data into appropriate information to contribute to planning, executive and oversight decision-making processes (Abboud, 2019).

Effectiveness of accounting information systems plays a key role in management, operations and the growth of organizations, particularly in shaping current strategies and opening up new business prospects for organizations by creating companies and exposing them to threats such as cybercrime and weaknesses in commercial operations, and due to changing forms of risk caused by effectiveness of accounting information systems, attention has increased in risk by specialists (Javaid & Iqbal, 2017).

Accounting information systems reflect a major quantitative information systems in an organization, providing information for managers' internal reporting for use in oversight and planning, non-routine

DOI: 10.33687/jhssr.002.05.000290

decision-making and the formulation of key policies and plans, and external reporting to shareholders, government and other external parties (Kim, 2017).

PART ONE: STUDY METHODOLOGY

Study problem and questions

Organizations in general and banks in particular face many challenges and risks in their way towards achieving their goals and reaching their goals. Ignoring these challenges and risks would cost organizations a high price and could lead them to extinction and completion. Organizations have recognized that the first step towards successfully legalizing and responding to these risks is to manage them efficiently and effectively, enabling them to achieve the goals and targets set, and improve performance, which has led to the application of ERM as a strategy when pursuing their goals, and has contributed to their inclusion in enterprise governance requirements.

ERM integrates risks into its agenda, decision-making processes and achieves the effective participation of all relevant parties in the preparation of ERM plans and procedures. To this end, it is essential to provide the necessary information to all members of the Organization and at different levels of management. This demonstrates the importance of effectiveness in accounting information systems, which has the greatest role to play in providing information and which is expected to be of great importance and relevance to ERM.

In order for organizations to be able to make the most of this information integrity, confidentiality, security and availability, Accounting information systems are like other systems that are exposed to many risks that negatively affect their efficiency and effectiveness and thus the quality of the information it provides, which has led organizations to apply effectiveness of accounting information systems, as a comprehensive approach aimed at protecting information.

Based on the foregoing, the main purpose of this study may be to investigate whether Iraq's commercial banks' accounting information systems are effective, their impact on ERM and the role of IT governance in this impact. The main elements of the problem can be represented by seeking an answer to each of the following questions:

1-What is the level of interest of Iraqi commercial banks in achieving effectiveness in accounting information systems?

2-What is the level of interest of Iraqi commercial banks in ERM?

3-What is the level of interest of Iraqi commercial banks in IT governance?

4-Is there an impact on the effectiveness of accounting information systems in ERM in Iraq's commercial banks?

The following sub-questions follow from this question:

a) Is there an impact on the quality of accounting information systems on ERM in Iraq's commercial banks?

b) Does the adequacy of accounting information systems have an impact on ERM in Iraq's commercial banks?

c) Is there an impact of the flexibility of accounting information systems on ERM in Iraq's commercial banks?

d) Is there an impact on the reliability of accounting information systems in ERM in Iraq's commercial banks?

e) Is there an impact on the accuracy of accounting information systems in ERM in Iraq's commercial banks?

f) Is there an impact of rapid access to information in ERM in Iraqi commercial banks?

g) Is there an impact of information security on ERM in Iraq's commercial banks?

5-Is there an impact on the effectiveness of accounting information systems in effectiveness of accounting information systems in Iraq's commercial banks?

6-Is there an impact of IT governance on ERM in Iraqi commercial banks?

7-Is there an impact on the effectiveness of accounting information systems in ERM in Iraq's commercial banks, with IT governance as an intermediary variable?

1-3 importance of study

The importance of this study stems from the fact that it addresses a vital and important economic sector in Iraq, the Iraqi commercial banking sector. which contributes to positive economic growth rates, the provision of diversified banking services and the attraction of investors through its optimal management

DOI: 10.33687/jhssr.002.05.000290

and investment of its activities and operations, Its orientation towards exploiting opportunities and reducing and successfully managing potential risks to ensure its survival and sustainability; Through the use of IT governance, which is one of the comprehensive approaches to ERM decision-making ", which ensures the safety and protection of information, thereby supporting decision-making towards the achievement of the goals set.

1-4 objectives of study's

The study seeks to achieve the following objectives:

1-Identify the level of interest of Iraqi commercial banks in achieving effectiveness in accounting information systems.

2-Recognize the level of interest of Iraqi commercial banks in managing enterprise risks.

3-Identify the level of interest of Iraqi commercial banks in IT governance.

4-Identify the impact of the effectiveness of accounting information systems on ERM in Iraq's commercial banks.

This objective has the following sub-objectives:

a) Identify the impact of quality accounting information systems on ERM in Iraq's commercial banks.

b) Identify the impact of adequacy of accounting information systems on ERM in Iraq's commercial banks.

c) Identify the impact of the flexibility of accounting information systems on ERM in Iraq's commercial banks.

d) Identify the impact of the reliability of accounting information systems on ERM in Iraq's commercial banks.

e) Identify the impact of accuracy of accounting information systems on ERM in Iraq's commercial banks.

f) Identify the impact of rapid access to information on ERM in Iraq's commercial banks.

g) Identify the impact of information security on ERM in Iraq's commercial banks.

5-Recognize the impact of the effectiveness of accounting information systems in effectiveness of accounting information systems in Iraqi commercial banks.

6-Recognize the impact of IT governance on ERM in Iraqi commercial banks.

7-Recognize the impact of the effectiveness of accounting information systems on enterprise risk management in Iraqi commercial banks, with IT governance as an intermediary variable.

1-5 study of hypotheses

Based on the problem of the study, the following hypotheses were formulated:

H01: There is no statistically significant effect at an indicative level ($0.05\geq\alpha$) For the effectiveness of accounting information systems in their dimensions (accounting information system quality, accounting information system suitability, accounting information system flexibility, accounting information system reliability, accounting information system accuracy, information access speed, information security) in enterprise risk management by its dimensions (internal environment, target setting, information and communication, risk response and risk assessment) in Iraqi commercial banks.

This hypothesis has the following sub-hypotheses:

H01-1: There is no statistically significant impact on the quality of the accounting information system ($0.05\geq\alpha$) in ERM in Iraq's commercial banks.

H01-2: There is no statistically significant impact at the ($0.05\geq\alpha$) indicative level of adequacy of the accounting information system in ERM in Iraq's commercial banks.

H01-3: There is no statistically significant impact at the ($0.05\geq\alpha$) indicative level of APIS flexibility in ERM in Iraqi commercial banks.

H01-4: There is no statistically significant impact at the ($0.05\geq\alpha$) indicative level of ACIS reliability in ERM in Iraq's commercial banks.

H01-5: There is no statistically significant impact at the ($0.05\geq\alpha$) indicative level of accuracy of the accounting information system in ERM in Iraq's commercial banks.

H01-6: There is no statistically significant impact at the indicative level ($0.05\geq\alpha$) of rapid access to information in ERM in Iraq's commercial banks.

H01-7: There is no statistically significant impact at the "$0.05\geq\alpha$" level of information security in ERM in Iraqi commercial banks.

H02: There is no statistically significant impact on the level of (0.05≥α) the effectiveness of accounting information systems by their dimensions (quality of the accounting information system, adequacy of the accounting information system, flexibility of the accounting information system, reliability of the accounting information system, accuracy of the accounting information system, speed of access to information, information security) in the governance of the effectiveness of accounting information systems in Iraq's commercial banks.
H03: There is no statistically significant impact at the "0.05≥α" level of effectiveness of accounting information systems on enterprise risk management in Iraqi commercial banks.
H04: There is no statistically significant impact on the level of indicator (0.05≥α) of the effectiveness of accounting information systems in enterprise risk management with the existence of IT governance in Iraqi commercial banks.

1-6 Study Model

This study contained three variables, an independent variable, a subordinate variable and an intermediate variable, each of which included a number of sub-variables, as follows:
Independent variable: the effectiveness of accounting information systems. It has been measured by the following dimensions: (quality of the accounting information system, adequacy of the accounting information system, flexibility of the accounting information system, reliability of the accounting information system, accuracy of the accounting information system, speed of access to information and information security).
Dependent variable: Enterprise risk management (ERM), It has been measured by the following dimensions: internal environment, target setting, information and communication, risk response and risk assessment.
Intermediate Variable: IT Governance . It has been measured by the following dimensions (planning and organization, ownership and implementation, support and delivery, follow-up and evaluation, guidance and control).
The following form represents the study model.

DOI: 10.33687/jhssr.002.05.000290

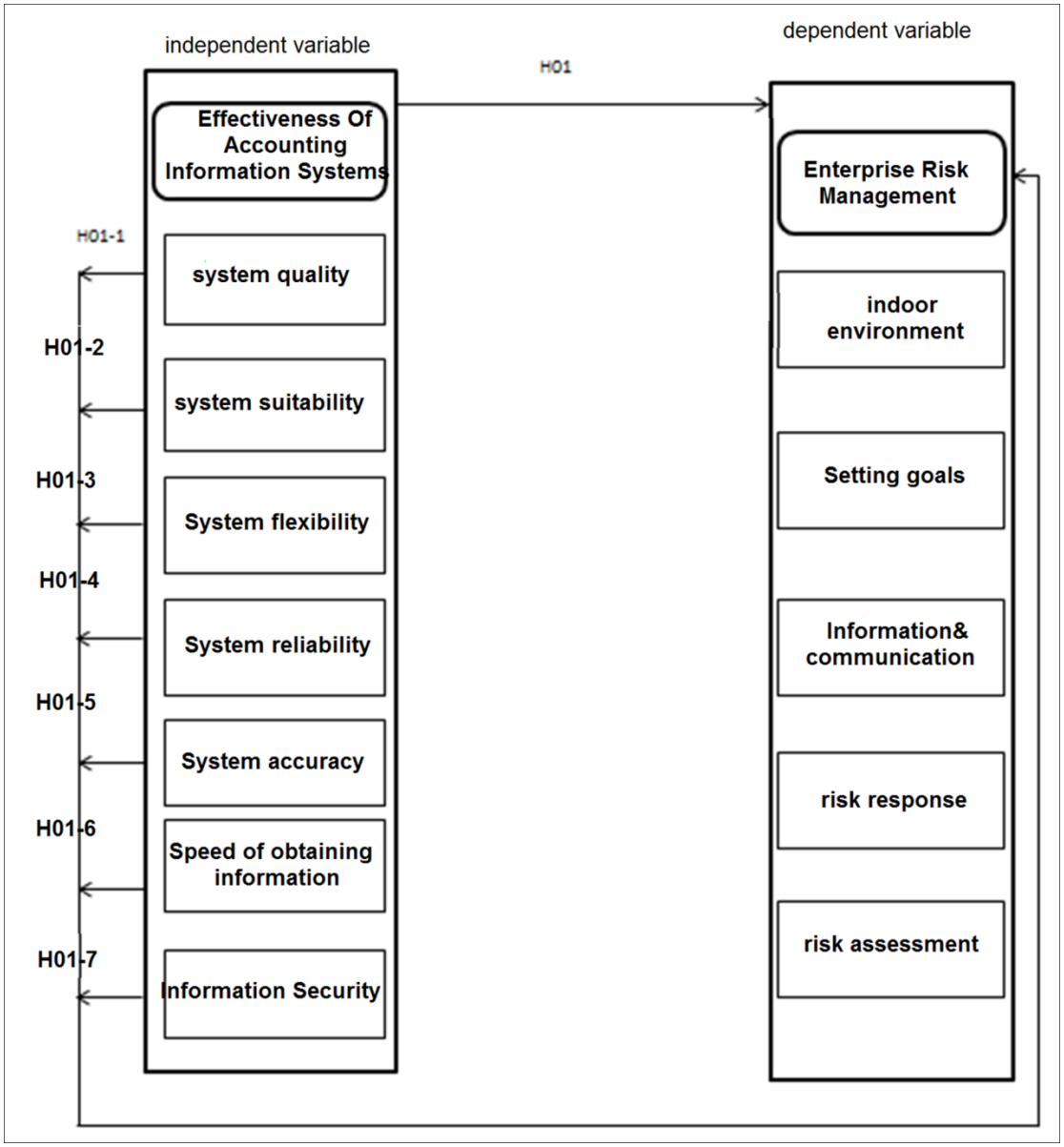

Figure 1: Study model

PART TWO: THE THEORETICAL FRAMEWORK

First: The effectiveness of accounting information systems

1.Concept of the effectiveness of accounting information systems

The effectiveness means "the extent to which the information system contributes to the achievement of organizational objectives, such as its impact on organizational performance, etc., and the degree to which the facility achieves the goals for which these systems are developed" (Mohammed and Mohammed, 2021).

In order to be effective, the system must identify users' needs for accurate information. The design of the system will serve those needs. There are a number of factors affecting the effectiveness of accounting information systems to achieve financial performance, including the accounting information systems strategy, effectiveness of accounting information systems, and the integrity of systems design and control (Fawda and Dashish, 2019).

Accounting information systems are defined as "a number of procedures, processes and systems that collect and record accounting data from business operations in appropriate records, and process detailed data from them through classification, clearance and consolidation, thereby reporting the summary accounting data to internal and external users" (Meiryani, et. al., 2020).

It was defined by Ghawali et al., 2016 as "a unified structure through which human and material resources such as accounting software and massive devices that have the ability to handle and process

a large amount of data are employed to convert worthless accounting data into data that has an impact on enhancing decisions when management wants to make a particular decision."
Accounting information systems are expressed as "the structure, unit or configuration used in the execution of accounting work, reports, books, records, accounting lists, procedures, arrangements and works through which data relating to financial economic transactions are compiled, analysed, recorded, summarized and interpreted" (Trabulsi, 2018).
According to Fazlullah et al., 2021, accounting information systems are "one of the components of the administrative organization of institutions for the collection, compilation, processing, analysis and standardization of appropriate financial information to make decisions for the management of institutions and external parties. They are one of the main components of the management information system. The difference is limited to the first to accounting data and information while the second to all data and information affecting the activity of the organizations."
Daniel & Victor, 2019, refers to accounting information systems as "a partial system of company information systems IS designed to help monitor and manage day-to-day activities related to the company's financial and economic sphere, structure and mission requirements."
It is defined as "an integrated structure within the organization that uses available resources and other parts to convert economic data into accounting information in order to satisfy the information needs of different users" (Kurtel and Al-Khatib, 2015, 61).
The effectiveness of accounting information systems focuses on the extent to which the systems achieve their objective, which is to meet the requirements of decisions at different levels of the organization, and to prepare the required reports (Solomon, 2021).
The effectiveness of accounting information systems is based on the efficient use of factors that facilitate the systems' operation (Teru, et. al., 2017) Therefore, the concept of effectiveness and efficiency must be distinguished, since effectiveness is capable of achieving the desired results. It is referred to as quality. Efficiency is capable of doing or producing something without wasting time, energy or materials. It is referred to as the required effort (Wilson, et. al., 2018).
The effectiveness of accounting information systems also indicates its ability to provide relevant, accurate and complete information in a timely manner, so that it is able to make a change in decision-making processes depending on the user's objectives and problems faced by users (Kim, 2017).
(Sousa & Oz, 2015, 68) that effectiveness is determined by the degree of achievement of the goal, as the accounting information system is less or more effective depending on the amount of achievement of the goal sought, and the degree to which better results are achieved than other systems.

2.Importance of the effectiveness of accounting information systems

Mohammed and Mohammed, 2021, identified the main objectives of the accounting information systems in commercial banks as follows:
1. Quick to do business.
2. Achieving accomplishment and accuracy in the work.
3. The economy of alimony, which is characterized by flexibility, can be applied in easy ways to fit technological achievements.
4. Achieve the principle of internal control.
5. Complete the reports and financial statements required for the purposes of the Central Bank and the Bank itself.

The importance of accounting information systems is:
1. It is an important resource for organizations and helps them shape the dimensions of the basic administrative process through applied IT systems.
2. It contributes to securing the Upper Air's needs for information that helps it to formulate its policies.
3. Generate and transfer knowledge through its responsiveness to users' needs, and integrate and evolve and expand its systems.
4. Can be used in business strategies to improve the organization's competitive position.

Secondly: Enterprise Risk Management

1.concept of Enterprise risk management

The concept of risk must be identified before starting with the identification of ERM. Risk management is the management that deals with the risk that companies can face. Hence, it is known (ISO, 2018, 1) The risk that "The impact of uncertainty on objectives This effect is a positive and negative deviation

DOI: 10.33687/jhssr.002.05.000290

from expectation, where objectives can have different aspects such as financial, health, safety and environmental objectives, which can be applied at different levels, for example at the enterprise level, At the strategy level, at the service and subvention level, and at the project level Risk is usually characterized by reference to potential events, or to a combination of events and outcomes risk is expressed through several consequences of an event, including changes in circumstances and likelihood of occurrence ".

Risk management has been shown to be necessary for organizations owing to the increased number of organizational failures uncertainty in business environments and in different industries, regulatory changes, political risks and stakeholders' expectations, All factors may indicate the importance of enhancing the multifunctional risk function Risk management has therefore been upgraded to a more holistic approach by the emergence of ERM as a modern method of strategic risk management (Andrew & Lundqvist, 2017).

In 2009, ISO introduced the Risk Management Standard (31000), which included a number of risk management elements including a definition of risk, the scope of enterprise risk management, its relationship to strategic objectives, the determination of risk management process and steps, and a number of its principles (Priyarsono et al., 2019).

Risk management as referred to (Morocco, 2020, 193) is "a scientific approach or method for dealing with risks by anticipating potential losses to the organization, and designing and implementing avoidance actions or reducing the risk potential of the organization".

ERM integrates risk and builds a holistic view of its management in the organization, in coordination between operations and individuals, as this helps reduce the organization's overall risk and increase its value (Yang et al., 2018).

ERM is defined as a strategic plan that the organization implements through its operations and activities to identify events and risks that affect the organization, work to control them within acceptable limits, and make appropriate management decisions to address them (Kazem, Nasif, 2019).

It was known (McShane, 2018) as "a process that manages the range of risks to various departments." It is a reference framework for organizations that includes a number of operational and financial activities aimed at protecting the organization from risk by reducing costs and raising returns (Dionne, 2019, 8).

(Waseem-Ul-Hameed, et al. al., 2017) It is "a broad process to detect adverse events that have an impact on the company, and it works to provide different strategies for managing these events. ERM is a vital process for mitigating potential risk. Applying ERM skill is very important as it enables management to identify different risks and respond effectively and efficiently to risk."

According to the researcher, ERM is a set of activities, processes and procedures to identify risks to the enterprise's career. and work to assess those risks and determine their degree of risk, try to mitigate their effects and reduce the amount of losses that may result from those risks by transferring some to other parties contributing to their response and reflected in improved levels of seasonal performance, and the completion of the institution's functions without material or moral loss.

2.Importance of ERM

The importance of ERM stems from the fact that it provides flexibility in managing the risks and difficulties facing the company. as it works to protect owners' rights through transparent management performance and corporate governance practices in the company, It is an effective tool that contributes to helping corporate managers assume responsibilities towards stakeholders and enables the company to deal with uncertainty related to future events and expected outcomes, ERM contains a range of processes that include anticipating, challenging and analysing the opportunities and threats of the company and its management parties to overcome threats and take advantage of opportunities. based on a comprehensive risk management system for the company as a whole through the coordination of processes, people and ranges, In addition to its contribution to identifying alternatives to risk response and enhancing the company's ability to trade between these alternatives and choose the best ones (Lechner & Gatzert, 2018).

ERM adds value to users when management and staff apply ERM skills, then there will be ease in the process of applying the system to add value to the organization (Birbirsa & Deble, 2019).

In addition, the implementation of enterprise risk management enhances the value of the business by reducing profit fluctuations, reducing the trading cost of capital, providing higher returns and enhancing efficiency (Zou, et. al., 2017).

ERM provides the organization with the most effective solutions according to market requirements, and allows for timely responses to changes in the external environment, where enterprises' activities are largely determined by the level of supply and demand for services, and assessed in terms of economic performance standards (Al-Shamsi, 2020).

PART THREE: THE PRACTICAL SIDE

First: the inspection and analysis unit

The study targeted Iraqi commercial banks' senior and middle departmental staff, who fall under the following job titles: (Senior Administrations: Director General, Assistant Director General, Middle Administrations: Department Director, Head of Section) in the Effectiveness of accounting information systems Service, Risk Management and Finance. As the researcher was unable to obtain the number of staff targeted; Because banks do not disclose them because they are considered private and confidential information about the bank. Given the varying size of Iraqi commercial banks, which is largely reflected in the bank's organizational structure and which in turn affects the number of its employees, the researcher distributed (15) questionnaires in each bank and electronically, bringing the number of distributed questionnaires (375).

The questionnaires were retrieved electronically, with a total of 328 recovered questionnaires, all of which were valid for analysis, and a recovery rate of 87.5% of the total distributed questionnaires. The following table summarizes the distribution and recovery of questionnaires.

Table 1 Summary of the distribution and recovery of questionnaires

process	number	%
distributed questionnaires	375	100
Retrieved questionnaires	328	87.5
Unrefundable questionnaires	47	12.5

Second: Test the stability of the study tool

The result of this measure is statistically acceptable if the value of the alpha kronbach coefficient is greater than the value (0.70), and the closer the value of the coefficient to the value (100%) the higher the stability of the study tool (Sekaran & Bougie, 2016). The following table shows the results of the study tool's stability test.

Table 2: Study Tool Stability Test Results

.No	dimension	alpha value
1	Quality of accounting information system	0.754
2	Adaptation of the accounting information system	0.767
3	Flexible accounting information system	0.845
4	Reliability of accounting information system	0.781
5	Accuracy of accounting information system	0.802
6	Quick access to information	0.858
7	Information Security	0.848
Effectiveness of accounting information systems		**0.944**
8	indoor environment	0.845
9	Setting goals	0.890
10	Information and communication	0.726
11	risk response	0.796
12	risk assessment	0.798
Enterprise risk management		**0.891**

DOI: 10.33687/jhssr.002.05.000290

13	Planning and organizing	0.811
14	Own and implement	0.748
15	Support and delivery	0.780
16	Follow-up and evaluation	0.843
17	guidance and monitoring	0.857
IT Governance		**0.939**
study tool		**0.971**

Table 2 shows that the study tool has high stability and is capable of achieving the study's objectives. The values of the Alpha Kronbach coefficient for the paragraphs of the effectiveness of accounting information systems ranged between (0.754 - 0.858), and alpha kronbach coefficient values for ERM dimensions ranged between (0.726-0.890) and the values of the Alpha Kronbach coefficient for IT governance paragraphs ranged between (0.748-0.857). Alpha Kronbach coefficient values for study variables ranged from 0.891 to 0.944, and the coefficient value for the study tool as a whole was 0.971. All values have emerged greater than the value (0.70).

Third: Descriptive statistics of the study tool

1.Effectiveness in accounting information systems

The variable effectiveness of accounting information systems has been measured through (7) dimensions: the quality of the accounting information system, the relevance of the accounting information system, the flexibility of the accounting information system, the reliability of the accounting information system, the accuracy of the accounting information system, the speed of access to information, and information security. The following table presents the calculation averages, standard deviations, order and level of relative importance of the changing effectiveness and dimensions of accounting information systems in Iraqi commercial banks, as follows:

Table 3: Calculation averages, standard deviations, ranking and level of importance relative to the effectiveness dimensions of Iraq's commercial banks' accounting information systems

.No	dimension	mean	standard deviation	Rank	Relative importance
1	Quality of accounting information system	4.166	0.599	3	high
2	Adaptation of the accounting information system	4.211	0.513	2	high
3	Flexible accounting information system	4.092	0.605	5	high
4	Reliability of accounting information system	4.316	0.519	1	high
5	Accuracy of accounting information system	4.316	0.549	1	high
6	Quick access to information	4.113	0.607	4	high
	Information Security	4.061	0.660	6	high
Effectiveness of accounting information systems		**4.182**	**0.457**		**high**

Table 3 shows the high level of interest in effectiveness in accounting information systems in Iraqi commercial banks, with a general accounting average of 4.182 and a standard deviation of 0.457. The computational medium values for the effectiveness dimensions of accounting information systems ranged from (4.061 - 4.316), with high relative importance for all dimensions, and standard deviation values ranged between (0.513-0.660), this confirms the high level of interest in effectiveness in accounting information systems, where it came after me (The reliability of the accounting information system, the accuracy of the accounting information system) is first in the middle of my account (4.316) each with standard deviation (0.519, 0.549), respectively, followed by (Compatibility of the Accounting Information System) in second place with a computational medium (4.211) and standard deviation (0.513), then after (Accounting Information System Quality) ranks third with a computational medium (4.166) Standard deviation (0.599), after (speed of access to information), ranked fourth with computational center (4.113) standard deviation (0.607), as follows (flexibility of the accounting

information system) Ranked fifth with a computational centre (4.092) and standard deviation (0.605), while it came after Information Security is sixth and last with a computational centre (4.061) and standard deviation (0.660).

2.Enterprise risk management

The variable effectiveness of accounting information systems has been measured through (5) dimensions: internal environment, target setting, information and communication, risk response and risk assessment. The following table presents the calculation averages, standard deviations, arrangement and relative importance of the ERM variable and its dimensions in Iraq's commercial banks, as follows:

Table 4: Calculation averages, standard deviations, ranking and relative level of importance of ERM dimensions in Iraqi commercial banks

.No	dimension	mean	standard deviation	Rank	Relative importance
1	indoor environment	4.367	0.572	1	high
2	Setting goals	4.234	0.630	2	high
3	Information and communication	3.344	0.629	5	middle
4	risk response	3.896	0.589	4	high
5	risk assessment	4.139	0.665	3	high
Enterprise risk management		**3.996**	**0.444**		**high**

Table (4) shows the high level of interest in ERM in Iraq's commercial banks, with a general average of 3.996 and a standard deviation of 0.444. The computational intermediate values of ERM dimensions ranged between (3.344 - 4.367), with relative importance between high and medium dimensions, and standard deviation values ranged between (0.572-0.665), this confirms that the level of interest in ERM varies between high and medium, coming after (Internal environment) ranks first in computational medium (4.367) each and standard deviation (0.572) and with high relative importance, followed by (goal setting) second place with computational center (4.234) standard deviation (0.630) with high relative importance, then after (risk assessment) Ranked third with a computational centre (4.139) and standard deviation (0.665) with high relative importance, it came after (for risk response) fourth with computational centre (3.896) and standard deviation (0.589) with high relative significance, whereas (information and communications) was ranked fifth and last with a computational centre (3.344) and standard deviation (0.629) and with moderate relative significance.

Fourthly: Hypothesis test

Multiple linear correlation test using link matrix

The link matrix refers to data free from the multiple linear link problem if the link value between two or more independent variables does not exceed the value (0.80) (Guajarati, 2004). The results appear as follows:

Table 5: Multiple linear correlation test results using the correlation matrix

Effectiveness of accounting information systems	Quality of accounting information system	Adaptation of the accounting information system	Flexible accounting information system	Reliability of accounting information system	Accuracy of accounting information system	Quick access to information	Information Security
Quality of accounting information system	1.000						
Adaptation of the accounting information system	0.540**	1.000					

DOI: 10.33687/jhssr.002.05.000290

Flexible accounting information system	0.396**	0.644**	1.000				
Reliability of accounting information system	0.386**	0.585**	0.777**	1.000			
Accuracy of accounting information system	0.392**	0.526**	0.684**	0.716**	1.000		
Quick access to information	0.467**	0.683**	0.689**	0.680**	0.639**	1.000	
Information Security	0.255**	0.485**	0.487**	0.493**	0.483**	0.505**	1.000

(* *) At an indicative level of 0.01

Table 5 shows that data are free of multiple linear correlation, with correlation factors ranging from 0.255 to 0.777 below value (0.80). The highest value has emerged between the two variables (the reliability of the accounting information system, the flexibility of the accounting information system), while the lowest value has emerged between the two variables (the quality of the accounting information system, and information security).

First main hypothesis test results

The first main hypothesis is to identify the impact of the effectiveness of accounting information systems in their dimensions on enterprise risk management in Iraqi commercial banks. This hypothesis states: "There is no statistically significant effect at an indicative level ($0.05 \geq \alpha$) The effectiveness of accounting information systems by their dimensions (accounting information system quality, accounting information system suitability, accounting information system flexibility, accounting information system reliability, accounting information system accuracy, information access speed, information security) in enterprise risk management by its dimensions (internal environment, target setting, information and communication, risk response and risk assessment) in Iraqi commercial banks ".

To test this hypothesis, Multiple Linear Regression was used, and the results appeared as follows:

Table 6: Template's summary of the first main hypothesis H01

dependent variable	**Form Abstract**			
	(R)	**(R^2)**	**(R^2) Adjusted**	**Standard error of the model**
Enterprise risk management	0.827	0.684	0.678	0.251

Table 6 shows a positive and strong correlation between the effectiveness of accounting information systems and enterprise risk management, with the value of the correlation factor (R = 0.827) and the value of the determining factor (R2 = 0.684), indicating that the effectiveness of the accounting information systems was explained by 68.4% of the change in enterprise risk management and that its value (31.6%) was attributable to other factors. The Adj.R2 adjusted determination factor value was

0.678 and the difference was 0.006, indicating the acceptable model variables' ability to predict the values of the enterprise risk management variable.

Table 7: Regression variation analysis of the first main hypothesis H01

ANOVA				
sum of squares	**(DF)**	**middle**	**F**	**Sig.**
43.892	7	6.270		
20.239	320	0.063	99.142	0.000
64.131	327			

* Effect D statistically at the indicative level (α≤0.05) Affiliate Variable: ERM

Table (7) shows the model's morale, with the calculated F value (99.142) and the indicative level (SigF = 0.000) below 0.05, indicating a statistically D effect of the effectiveness of accounting information systems in managing enterprise risks at the indicative level (α≤0.05) and at 7 degrees of freedom.

PART FOUR: CONCLUSIONS AND RECOMMENDATIONS

First: Conclusions

1.The results of the descriptive analysis showed the high level of effectiveness of accounting information systems in Iraqi commercial banks, as they were found to be highly reliable, accurate, convenient, quality, fast access to and security of information, respectively.

2.The results of the descriptive analysis showed the high quality of accounting information systems in Iraqi commercial banks, as they were found to have a high capacity to provide information for financial reporting, support stakeholders in preparing plans for improvement and development, and make accounting adjustments if necessary.

3.The results of the descriptive analysis showed a high level of interest by Iraqi commercial banks in ERM, showing a high level of interest in the internal environment, target setting, information and communication, and risk response and assessment, respectively.

4.The results of the descriptive analysis showed the high level of interest of Iraqi commercial banks in the internal environment, as they were found to show the highest level of interest in the staff having sufficient expertise and skills to perform the work entrusted to them, providing a management unit specialized in ERM, and following the principle of transparency in the disclosure of risks surrounding its internal and external environment.

5.The results of the descriptive analysis showed the high level of interest of Iraqi commercial banks in effectiveness of accounting information systems, showing the high level of interest in support, delivery, guidance, monitoring, follow-up, evaluation, ownership, implementation, planning and organization respectively.

6.The results of the descriptive analysis showed the high level of interest of Iraqi commercial banks in planning and regulation, as they were found to show the highest level of interest in preparing a plan for managing anticipated risks and managing their information systems according to a clear and specific strategic plan, providing the allocations and financial resources needed to operate them.

Second: Recommendations

1.To focus the attention of Iraqi commercial banks on increasing the level of effectiveness in their accounting information systems. These systems play a significant role in managing institutional risks and achieving the objectives of implementing effectiveness of accounting information systems. This is achieved through the adoption of all practices and procedures by Iraqi commercial banks' departments and the provision of requirements that contribute to the achievement of the following:

a) Continuous verification of the quality of its accounting information system, increased ability to absorb new and updated activities and processes, and continuous verification.

b) Increase the compatibility of the accounting information system in terms of enhancing its ability to provide entities and management levels with information commensurate with business requirements and in record time.

c) Achieve the highest degree of flexibility in the accounting information system to create diversity and evolution in the services provided to clients, and keep abreast of developments in different activities and processes.

d) Provide the highest credibility, transparency, reliability and objectivity outputs.

DOI: 10.33687/jhssr.002.05.000290

e) Reach the highest degree of accuracy in transaction delivery, and provide management with accurate and distinct information that supports strategic decision-making.
f) Provide internal financial and accounting information in a timely manner.
g) Provide the highest security and security of information in the information system by following a special system for the confidentiality of accounting information, and retain backups of systems and files (data) constituting the accounting system.
2.Increase the level of interest of Iraqi commercial banks in ERM by increasing the level of interest in the following:
a) Follow clear and specific standards in human resources management, and verify staff members' commitment to integrity and ethical values in internal and external transactions.
b) Precise identification of the sub-objectives and in line with the stages of work, and identification of the success factors of their specific objectives.
c) Prepare a contingency plan to ensure business sustainability and prevent disruption of electronic systems, and provide up-to-date and upgraded communication channels to communicate risk information to stakeholders.
d) Deal with risks in record time and prepare a contingency plan that is flexible in dealing with all anticipated risks.
e) Accurate identification of acceptable mucus levels, and ongoing risk assessments.
3.Increase the level of interest of Iraqi commercial banks in effectiveness of accounting information systems by increasing the level of interest in the following:
a) Adopts procedures aimed at controlling the costs of operations of information systems, preparing plans for the acquisition of technological equipment and software and establishing applicable technological standards.
b) Provide the necessary infrastructure for the effective implementation of the information system, building on the Operational Operations Manual in the use of effectiveness of accounting information systems.
c) Provide adequate support for the effective implementation of the effectiveness of accounting information systems system and take appropriate actions to manage and maintain data commensurate with the changes surrounding it.
d) Maintaining copies of the evaluation findings on effectiveness of accounting information systems used to identify the problems surrounding them, and adopting appropriate mechanisms to evaluate performance.
e) Follow clear and specific bases to monitor the performance of the effectiveness of accounting information systems system and verify its efficiency in working as planned, and periodically evaluate the outputs of the information system used.

REFERENCES

2-Basi, Al-Hamim (2020). Culture as key to e-governance success. Al-Manhal Economic Journal, 3 (2), 331-342.
3-Hussein, Wissam, Khalaf, Alaa (2019). The impact of COBIT governance on enhancing the quality of internal auditing: an applied study in the Iraqi banking sector. Tikrit Journal of Economic and Administrative Sciences, 15 (48).
4-Suleiman, Nora Suleiman Eid (2021). Developing strategic planning for Egyptian business enterprises. Scientific Journal of Business and Environmental Studies, 12 (1), 233-249.
5-Al-Azmi, Abdullah Falih Khalifa, Omar, Aladdin Abdulaziz, Daoud, Yasser Ibrahim (2022). The role of activating IT governance in securing accounting information from electronic risks in the era of digitization: an applied study on Kuwaiti commercial banks. Scientific Journal of Financial and Administrative Studies and Research, 13 (2), 1116-1155.
6-Abboud, Anwar Hashim (2019). Accounting information systems and their impact on the achievement of competitive advantage Survey of the views of a sample of employees of the National Islamic Bank. Journal of the University of Babylon Pure and Applied Sciences, 27 (2), 133-142.
7-Guali, Bashir, Bouallaq, Mubarak, Haware, Um Kalthum (2016). The impact of the Accounting Information System on the effectiveness of the media content of financial statements: a field study on a sample of economic institutions in the states of Gradia, delays and impediments. Algerian Institutions' Performance Magazine, (10), 145-164.

8-Fadlallah, Imad Abdullah, al-Sharif, Nabil M 'jihid, Qadhafi and Mohammed al-Tayeb Musa (2021). Level of effectiveness of accounting information systems in Libyan commercial banks, survey on Libyan banks. Journal of the University of Benghazi Science, 34 (1), 77-87.
9-Fouda, Shawki al-Sayed, Syed Abdul Fattah, and Al-Ghabour, Amani Saad al-Din (2019). Impact of the efficiency and effectiveness of electronic accounting information systems on improved performance appraisal in commercial banks with field study, Journal of Contemporary Business Study, 5 (6), 359-405.
10-Kazim, Taseer, Nasif, Ahmed (2019). The relationship between corporate governance and project risk management (ERM): a survey of the views of a sample of academics and professionals. Journal of the Centre for Kufa Studies, 1 (45), 619-667.
11-Kafi, Mustafa Yusuf (2018). Institutional governance. Alfa de Documentation, Algeria.
12-Al Kaikh, Faisal Al Taher Ali (2021). The impact of the use of electronic accounting information systems on improving workers' performance (field study on the North African Bank - Tripoli). Journal of Faculties of Education, (20), 337-360.
13-Kurtel, Fred, Al-Khatib, Khalid (2015). Accounting information systems and decision-making. Zamzam Publishers and Distributors, Amman, Jordan.
14-Mohammed, Hafsa Mohamed Ibrahimin and Mohammed, Al Khader Abdul Latif Al Khodr (2021). Impact of external environmental variables on the efficiency and effectiveness of accounting information systems - field study on a sample of Sudanese commercial banks. Arab Journal of Literature and Humanities, 5 (18), 283-308.
1- Andren, N., & Lundqvist, S. (2017). Incentive based dimensions of enterprise risk management. Available at SSRN Electronic Journal, 3071699, 1-48.
2- Birbirsa, Z. A., & Debele, E. N. (2019). Assessing the factor that enterprise risk management: special emphasis on tomato production value chain in East Showa Zone, Ethiopia. Global Journal of Economics and Business, 6(2), 365-374.
3- Daniel, C. & Victor, I. (2019). Impact of accounting information system as a management tool in organization. American Journal of Humanities and Social Sciences Research, 3(4), 14-20.
4- Dionne, G. (2019). Corporate Risk Management. John Wily & Sons Publishing.
5- Hamdan, A., Khamis, R., Anasweh, M., Al-Hashimi, M., & Razzaque, A. (2019). IT governance and firm performance: Empirical study from Saudi Arabia. Sage Open, 9(2).
6- ISO (2018). International Standard ISO 3100- Risk Management-Guidelines Management (2nd ed.). Geneva, ISO.
7- Javaid, M. I., & Iqbal, M. M. W. (2017, April). A comprehensive people, process and technology (PPT) application model for Information Systems (IS) risk management in small/medium enterprises (SME). In 2017 International Conference on Communication Technologies (ComTech) (pp. 78-90). IEEE.
8- Lechner, P., & Gatzert, N. (2018). Determinants and value of enterprise risk management: empirical evidence from Germany. The European Journal of Finance, 24(10), 867-887.
9- McShane, M. (2018). Enterprise risk management: history and a design science proposal. The Journal of Risk Finance, 19(2), 137-153.
10- Meiryani, L. S., Jaiat, T., & Mat, D. (2020). Accounting information systems as a critical success factor for increased quality of accounting information. Revista ESPACIOS, 41(15), 2-10.
11- Okour, Samer (2019). The Impact of the Application of IT Governance According to (COBIT 5) Framework in Reduce Cloud Computing Risks. Modern Applied Science, 13(7), 25-37.
12- Peace, N., Charity, S., & Ofobruku, A. (2018). Impact of information and communication technology on the performance of deposit money banks in Nigeria. International Journal of Management and Sustainability, 7(4), 225-39.
13- Priyarsono, D. S., Widhiani, A. P., & Sari, D. L. (2019). Starting the implementation of risk management in a higher education institution: the case of IPB university. Annual conference on industrial and system engineering, 23-24 April, IOP Publishing Ltd, Indonesia, 598(1), 1-7.
14- Soliman, M., & Zaky, A. H. M. (2018). The mediating role of IT performance: Empirical research on Egyptian Banking Sector. SSRN Electronic Journal, 9(2), 77-89.
15- Sousa, K. J., & Oz, E. (2015). Management Information Systems (7th ed.). USA: Cengage Learning.

DOI: 10.33687/jhssr.002.05.000290

16- Teru, S., Idoku, I., & Ndeyati, J. (2017). A review of the impact of accounting information system for effective internal control on firm performance. Indian Journal of Finance and Banking, 1(2), 52-59.
17- Trabulsi, R. U. (2018). The Impact of Accounting Information Systems on Organizational Performance: The Context of Saudiâ€™s SMEs. International Review of Management and Marketing, 8(2). 69-73.
18- Waseem-Ul-Hameed, F. H., Ali, M., & Arif, M. (2017). Enterprise risk management (ERM) system: implementation problem and role of audit effectiveness in Malaysia Firms. Asian Journal of Multidisciplinary Studies, 5(11), 34-38.
19- Wilson, M., Wnuk, K., Silvander, J., & Gorschek, T., (2018). A literature review on the effectiveness and efficiency of business modeling. E-Information Software Engineering Journal, 12(1), 265-302.
20- Yang, S., Muhammad, I., & Muhammad, A. (2018). Enterprise risk management practices and firm performance, the mediating role of competitive advantage and the moderating role of financial literacy. Journal of Risk and Financial Management, 11(3), 1-17.
21- Zou, X., Isa, C. R., & Rahman, M. (2017). Valuation of enterprise risk management in the manufacturing industry. Total Quality Management and Business Excellence, 330(11-12), 1389-1410.