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THE IMPACT OF ARTIFICIAL INTELLIGENCE IN SUPPORTING RISK MANAGEMENT AND PERFORMANCE EVALUATION

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Abstract:

The rapid development of technology has led to a greater reliance on Artificial Intelligence (AI) programs across various industries. As a result, this research aims to investigate the role of AI in supporting risk management within institutions and its impact on performance evaluation. The study utilized a descriptive analytical approach and designed a 38-item questionnaire with three main sections: AI and management, risks, and performance evaluation. The findings highlighted the significant role of AI in supporting both risk management and performance evaluation. The study emphasizes the importance of leveraging AI applications for decision-making processes and performance evaluation, as well as staying updated on technological advancements in the field.

Keywords: Artificial Intelligence, Risk Management ,Performance Evaluation

THE INTRODUTION

Throughout its long history, the world has witnessed numerous changes in people's lives, including globalization, economic shifts, intense competition, and their regional and global impacts. These changes have led scientists to seek modern approaches and new strategies to address the challenges faced by various organizations. As a result, performance development methods have evolved, with a greater emphasis on the human aspect of the administrative process.

Risk management now holds a prominent position on the agenda of every organization. Senior management is held accountable by the public and investors for managing risks and perceived failures in controlling them. Given the challenges in the business sector, effective risk management is crucial for informed decision-making and overall organizational success.

The risk management process is complex and often overlooked by organizations and institutions. There are risks that are hard to identify, such as those resulting from a lack of interaction between individuals, which can impact employee performance and damage an institution's reputation. The rapid development of technology in the last few decades has led to the emergence of new technologies and diverse, continuously innovative programs. Modern applications of information technology often utilize artificial intelligence and smart systems in management, benefiting from their decision-making capabilities. However, the unique nature of projects can hinder the automation of complex activities. Additionally, with the rapid development of global economies, artificial intelligence has become a crucial field of computer science, concerned with studying human intelligence and simulating it to accomplish tasks that require high deductive reasoning abilities. Modern organizations increasingly rely on artificial intelligence applications to enhance performance and achieve administrative efficiency, including in the field of accounting.

An advanced level is considered a weapon to confront future obstacles and solve performance problems, posing a strong challenge to the organization’s management and its ability to adapt to new circumstances and opportunities. The use of artificial intelligence and robotics presents numerous opportunities and challenges. With these changes, the management system and the organization can be redesigned, thus strengthening its competitiveness.

THE RESEARCH PROBLEM:

Artificial intelligence is a fundamental driver of development in all sectors. It contributes through the introduction of technology and its applications. The constantly changing economic environment has led to the emergence of risks that threaten institutional structures. It has become necessary to find ways to discover and address these risks in

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order to improve decision-making quality related to risk management, which is an important factor in strategic management. Artificial intelligence's ability to deal with big data and forecasting is a helpful factor for senior management. It can analyze market data, competitors' data, and data related to established projects. Previous projects serve as input for predicting changes in the environment.
Therefore, the problem can be summarized in the following question: "What is the impact of artificial intelligence on supporting risk management and performance evaluation?"

THE IMPORTANCE OF THE STUDY:

The Scientific Importance:

The study is important because it addresses a topic that supports scientific research. It will serve as a reference for future studies, enriching libraries with information related to the research topic and benefiting from it. Theoretical Importance: The study focuses on the relationship between risk management and artificial intelligence in evaluating system performance. It emphasizes the increasing importance of risk management and its role in the success of institutions. Risk management is crucial for avoiding risks, achieving goals, and evaluating performance. Institutional performance is essential for business outcomes. Organizations face challenges due to local and global changes, and risk management is vital for safety and risk treatment. Management today is linked to the past to identify trends and lessons learned. Renewal and change are necessary for institutions to remain competitive and to face risks, analyze them, and achieve a high level of performance.

The General Objective of the Study:

The research seeks to know the role of artificial intelligence in supporting risk management and performance evaluation.

- Introducing the concept of Risk management.
- Know the role of risk management in improving the performance of the hotel system.
- Defining the role of artificial intelligence applications in confronting risks.
- Identifying institutional performance and evaluating approaches to improving performance.

Reasons for choosing the topic:

No subject of study is devoid of motives that arouse the desire of the researcher, and the subject of risk management is considered
one of the modern trends in management science. As for the economic motives, they are due to the importance of the subject at the level of
Universities and the desire to enrich university libraries and personal motivations, which are represented by personal inclinations for the subject as it is based on modernity and deals with applications of artificial intelligence.

The Research Difficulties:

- Difficulty in effectively engaging with the research community.
- Lack of essential statistical capabilities for practical applications.
- Some employees are hesitant to respond to certain questions on the forms.

The Research Hypotheses:

Main Hypothesis: There is a statistically significant relationship (at 0.05) between artificial intelligence, risk management, and organizational performance evaluation.
Sub-Hypotheses:
1. There is a statistically significant relationship at ($\alpha \geq 0.005$) between risk management and improved performance evaluation in the organization.
2. There is a statistically significant relationship at ($\alpha \geq 0.005$) between artificial intelligence and improved organizational performance evaluation.

The Limitations of research and its constraints:

Time Frame: The study began on 1/2/202 and continued for two months
Scope: Several Iraqi institutions
Target Participants: Managers and workers in the fields of risk management and data analysis with artificial intelligence

The Study Terminology:

Artificial Intelligence: Computer programs that can perform tasks satisfactorily completed by humans (Bilal, 2019: 12)
The Performance Evaluation Process: is a comprehensive procedure that involves diagnosing both the negative and positive aspects of an organization's performance. It aims to provide the necessary treatments to correct

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deviations, avoid their occurrence, and strengthen positive aspects. Performance evaluation is important as it contributes to enhancing performance results at the organization level by identifying deficiencies and deviations, and addressing them through follow-up processes and oversight. This facilitates the possibility of addressing issues in a timely manner (Al-Nuaimi, 2020: 164).

Risk Management: is a scientific approach to dealing with risk by identifying potential losses and designing and applying procedures that reduce the occurrence of loss or the financial impact of losses that could occur (Ashmari, 2022: 41).

Chapter II
Theoretical Background and Previous Studies.

First, A Theoretical Background:

The concept of risk management involves planning and taking action before risks occur. It is a proactive way to avoid risks.

Risk management includes understanding risks, reducing risks, and sharing risks. Understanding risks means understanding the factors and their consequences. Reducing risks involves reducing the probability of risks occurring or preventing them, as well as reducing the severity of their impact. Risk sharing involves using insurance or a similar procedure to transfer some of the risk to one party or share it between two parties in certain contractual arrangements (Anderson, 2018: 23).

The risk management process consists of the following steps:

1. Identifying risks: Identifying important risks and identifying the problem or its source. Incidents resulting from the problem can lead to a problem that can be investigated and identified against risk.

Objective-based identification: Any event exposes the objectives to danger, whether completely or partially. It is considered dangerous. Classification-based identification, i.e. detailing all potential sources of risk.

Secondly, Review Common Risks: Every institution has lists of potential risks.

Third, Evaluation: It is necessary to conduct an evaluation of the risks in terms of their severity and probability of occurrence. The difficulty of assessing the risk lies in determining the coefficient of its occurrence. Information about previous incidents may not be available, and therefore there may be difficulty in evaluating the severity of the results

Fourth, Dealing with risk: Risk is dealt with by developing plans to analyze the risk and confronting it (Mahmoud, 2019: 216).

Risk management objectives: The objectives of risk management are no less important than the objectives of other functions and departments in the organization. It is enough to talk about one goal for risk management, and there are main goals and secondary goals.

The Main Objectives:

The first goal of risk management is to survive and ensure the existence of the enterprise as an entity in the economy, i.e. to perform a supportive role in the facility management pyramid. The main goal of risk management is not to contribute directly to other organizational goals. It is a guarantee that by achieving other objectives, losses that may arise due to pure risks will not be prevented. The goal is not to reduce costs, but to enhance the organization's resilience and maintain operational effectiveness of the facilities.

The Secondary Objectives:

In addition to the Objective of survival, there are several other common Objectives, including:

-Ensuring adequate resources following a loss:
- Work to avoid losses and dangers before they occur
- Reduce the cost of dealing with pure risks to a minimum
- Protect employees from serious injury and death
- Perform legal and contractual obligations, develop the organization’s work methods, and support activities
- Focus on the future and the development of decision-making methods
- Reduce fluctuations in areas of non-core activity
- Protect and develop the organization’s reputation, as well as develop and support the organization’s human resources and information base
- Maximize operational efficiency (Qando, 2018: 113)

Second: Performance Evaluation

Third: Evaluating Institutional Performance:

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It is a systematic effort to set standards of achievement in light of organizational goals and design information systems for feedback and comparing achievement with established standards. The performance evaluation process is part of the oversight to correct activity paths in the event of deviation. Institutional performance is considered the integrated system of the results of the organization's work in light of its interaction with elements of its internal and external environment, including the following dimensions:

- The performance of individuals within each department or section in the organization is measured using a set of criteria to ensure that work systems and implementation methods in each department achieve maximum productivity, minimize costs, time, and effort, and maintain high quality. This is done within the framework of the organization's general policies.
- Institutional performance within the framework of organized public policies is determined by both individual performance and the performance of organizational units, as well as the impact of the social environment, including economic and cultural factors (Abdel Fattah, 2012: 5).

The Concept of Artificial Intelligence:

Artificial intelligence consists of two words: the first, "artificial," refers to something made and unnatural, and the second, "intelligence," means the ability to understand and think. In 1955, John McCarthy, one of the pioneers of AI, was the first to define the term artificial intelligence as follows: "The goal of artificial intelligence is to develop machines that can act as if they are intelligent." Artificial intelligence can be defined as a method of making a computer, a computer-controlled robot, or a program that thinks intelligently in the same way that intelligent humans think. This involves building a computer program that engages in tasks that are completed satisfactorily by humans because they require operations of high-level mentality (Moses 2019: 20).

Types of artificial intelligence:

- Narrow Artificial Intelligence: This type of artificial intelligence can perform specific and clear tasks, such as self-driving cars or recognition programs. Speech recognition is the most common type of narrow artificial intelligence available today.
- General Artificial Intelligence: This type aims to make the machine capable of thinking and planning on its own, similar to human thinking. An example is an artificial neural network, which is concerned with producing a system of neural networks for the machine similar to those contained in the human body.

- Generative artificial intelligence is a form of artificial general intelligence known for its ability to generate new content based on a database stored in memory. One of its well-known applications is CHATGPT, and it can generate images, sounds, texts, and convert them into video clips. This power of machine learning has countless applications.

  Super artificial intelligence, on the other hand, exceeds human intelligence and can outperform specialized humans in tasks requiring knowledge, such as education and planning.

  The most important areas and applications in which artificial intelligence has been used can be summarized as follows:

  The most important areas and applications in which artificial intelligence has been used can be summarized as follows:

  Natural Language Processing:

  This involves developing programs and systems that can understand and generate human language as data enters the computer and is then understood. The main goal of natural language processing is to make the relationship between the computer and the human being more natural. It is divided into two parts: finding ways to understand the computer according to the instructions given to it.

  Natural Language Production:

  This involves the computer producing sentences in Arabic or English.

  Word recognition:

  Through sentences given to it using the keyboard and the field of speech recognition, the computer becomes able to understand human speech and can receive commands verbally.

  Robotics:

  A robot with the ability to move, understand the environment around it, and respond to commands in a flexible and sensitive manner.

  Automated programming:

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Programming is the means of implementing information in a computer, and automated programming is the production of intelligent programs that are used to help programmers in producing their programs. The goal of automated programming is to produce intelligent programs that provide a program by itself.

Computer Vision:

Providing the computer with optical sensors that enable it to recognize people and shapes in the target. The field of computer vision aims to make human experts describe images that enable computers to apply this information to similar problems (Abdel Samad, 2020: 24).

Second: Previous Studies:

Iraqi Studies:

(Kazim and Rashad: 2023) The role of internal audit in enhancing the effectiveness of risk management to achieve sustainable development, a theoretical study, Iraqi Journal of Economic Sciences, a special issue of the conference proceedings. The Sixteenth and Seventeenth International, pp. 648-662

The research objective is to understand the role of internal audit in the risk environment and the possibility of improving risk management by focusing on smart methods to achieve sustainable development goals. The study found that internal audit methods enable management to evaluate risks and enhance management effectiveness to achieve sustainable development goals, address their dimensions, and confront risks related to sustainable development. The study recommended focusing on Agile methods of internal auditing in public and private institutions in Iraq, which helps the internal auditor to facilitate his role in a flexible manner and confront the risks and difficulties related to achieving the goals of institutions

(Abd: 2023) The reality of accounting under artificial intelligence in Iraq, Tikrit Science Journal Administrative and Economic, Volume (19), Issue 63, pp. 1-12"

The study aimed to investigate the impact of technological advancements in artificial intelligence on accounting practices in Iraq. It utilized a descriptive analytical approach and distributed a questionnaire to accounting academics at universities in 2023 to assess the influence of AI on accounting functions. The findings highlighted the significance of artificial intelligence in enhancing accounting processes, improving efficiency, accuracy, and reducing costs. The study recommended that accountants should reassess their scientific and practical capabilities, stay updated with technological developments, and undergo training to enhance their skills and improve decision-making processes.

Arabic studies:

Maryam and Nour El-Din (2021) examined the role of risk management in evaluating the financial performance of an economic institution through a case study of Saidal Complex in Strategy Magazine, Volume 11, Issue 3, pp. 436-452.

The study aimed to determine the impact of risk management on evaluating the financial performance of an institution by using financial indicators. Data was collected from the financial statements of the Saidal Complex Foundation for the years 2014-2019. The results showed that the institution achieved a positive financial balance and was able to mitigate risks. One of the study's recommendations is to develop a risk management strategy to prevent bankruptcy.

(Bin Al-Dab: 0.02) The role of artificial intelligence and machine learning in enhancing fraud detection Credit Cards, Arab Monetary Fund, United Arab Emirates, p1-40.

Another study focused on the role of artificial intelligence and machine learning in enhancing the detection of credit card fraud. The study used artificial data to simulate and compare different machine learning algorithms. The sample included 200,000 credit cards and 20 variables. The study found that machine learning algorithms can detect credit card fraud with 94% accuracy. The study recommended the use of artificial intelligence and machine learning to detect credit card fraud in Arab countries and keep pace with global developments.

Lastly, another study examined the use of artificial intelligence to improve the performance of economic institutions, using Toyota Company as a model.

The study "Using artificial intelligence to improve the performance of economic institutions (Toyota Company as a Model)" by Farida and Naima in 2020, conducted by Ahmed Draya Adrar University, MA, analyzes the role of artificial intelligence in enhancing the performance of institutions, with a focus on the case study of Toyota. The study examines the use of artificial intelligence, particularly expert systems and neural networks, to improve financial and strategic performance. The results indicated that Toyota benefited from artificial intelligence techniques, which contributed to faster task completion and higher accuracy. Additionally, the study "Integrated risk management and artificial intelligence in hospitals" by Bozic in 2023, from Koprivnica General Hospital Croatia, discusses the application of artificial intelligence in integrated risk management within hospitals,

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published in the Artificial Intelligence Magazine.(Farida and Naima: 2020) Using artificial intelligence to improve the performance of economic institutions
(Toyota Company as a Model), Ahmed Draya Adrar University, MA, pp. 1-70
The study examined the role of artificial intelligence in improving the performance of institutions. The researcher relied on the case study approach of the Japanese company Toyota. The company's financial statements were analyzed to show the importance of artificial intelligence in ensuring the developmental continuity of the business organization and improving performance. The study showed that the most important applications of artificial intelligence are expert systems and neural networks that are used in terms of financial and strategic performance. The results showed that the Japanese company Toyota achieved positive results by relying on artificial intelligence techniques, and artificial intelligence applications contributed to shortening time is the result of its speed and superior accuracy in completing the required tasks.

Foreign Studies:

(Bozic,2023) Integrated risk management and artificial intelligence in hospitals, Koprivnica General Hospital Croatia, Artificial Intelligence Magazine, Volume: 7, Issue: 1,January-December 2023, pages: 63-80
The topic concerns the integration of artificial intelligence (AI) into hospital-integrated risk management (IRM). This integration offers significant benefits in enhancing risk identification, assessment, and mitigation across various areas of hospital operations. It can contribute to patient safety by enabling early detection of critical conditions, improving clinical risk management, and enhancing decision-making processes. AI also plays a vital role in information security and privacy, operational risk management, regulatory compliance, and human resources in hospitals. However, the use of AI in risk management comes with some drawbacks and risks that need to be mitigated. These challenges include data quality and bias, interpretability and transparency challenges, privacy and security concerns, low human oversight, ethical considerations, and implementation challenges. Mitigating these risks requires strong data governance, addressing bias in AI algorithms, ensuring transparency and accountability, implementing strong cybersecurity measures, and upholding ethical guidelines. To achieve successful implementation, hospitals must prioritize staff competencies, such as domain knowledge, data literacy, AI and data science skills, critical thinking, collaboration, adaptability, and ethical awareness. By developing these competencies and adhering to best practices, hospitals can improve the use of AI in IRM, improve patient outcomes, and enhance operational efficiency while effectively mitigating risks.
(2021, Biolcheva.P) The place of artificial intelligence in the risk management process, Conference Network, Business and Regional Development BF Science, Department of Industrial Business,
Bulgaria pp. 1-9
The study aims to identify the specific stages of risk management where artificial intelligence (AI) can and should be applied, either alone, in combination with expert opinion, or not at all. The use of AI is shown to greatly increase the efficiency of the entire risk management process, primarily through in-depth analyses and decisions made by risk management experts. This study is part of project, KP-06-P35-1 "Integration of risks in the management of business processes in organizations," which aims to introduce modern methods of risk management, including the integration of artificial intelligence. The application of artificial intelligence in business organizations is expected to be a significant milestone in the future. The study clarifies important features related to the application of artificial intelligence, including the availability of raw data for machine learning, a continuous data collection strategy, filtering collected data, identifying useful data characteristics, transforming data according to a specific model, choosing appropriate algorithms, evaluating multiple algorithms for accuracy, comparing with other algorithms, and determining the speed of learning of the model based on machine learning capabilities.
The Comment on the previous studies:

- The previous studies have focused on the significance of artificial intelligence and risk management in institutions to address and manage potential risks.
- They have emphasized the importance of using technology and keeping up with it. The current study aligns with previous research in terms of methodology and the use of questionnaires.
- It also highlights the importance of risk management and technology adoption. What sets this study apart is its focus on the role of artificial intelligence in supporting management.
- Previous studies have benefited from establishing the theoretical framework for the study and using statistical methods for risk and performance evaluation.

Chapter Three: Study Procedures

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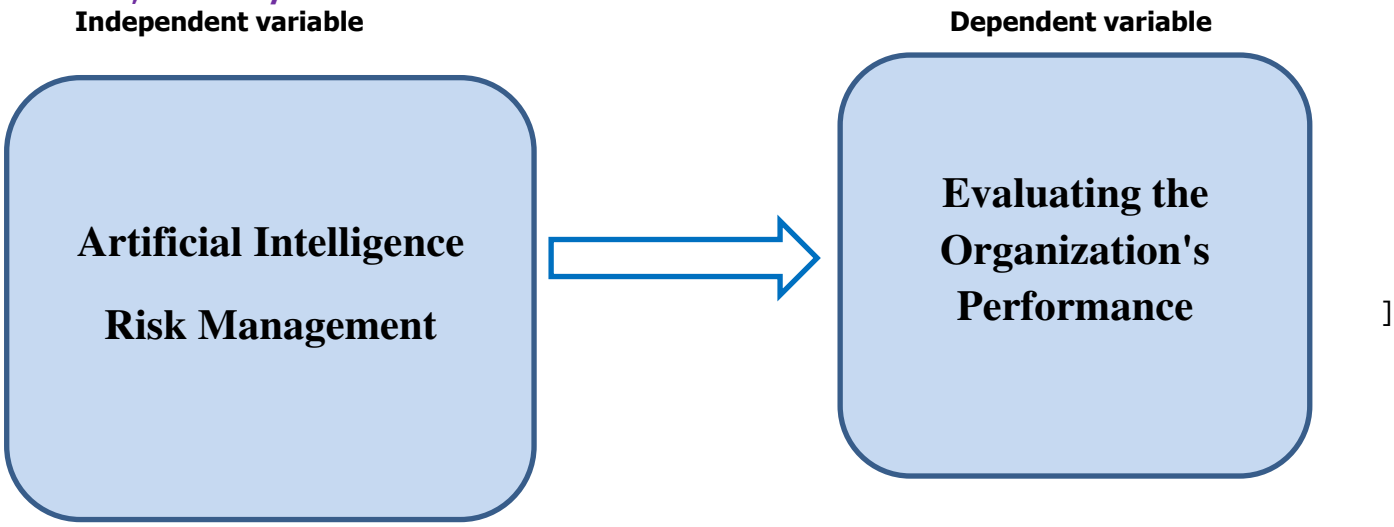
The research methodology adopted the descriptive analytical method to clarify and express concepts quantitatively and qualitatively.

The research community includes administrators working in risk management, data analysis, and artificial intelligence.

The research sample consisted of 40 individuals working in the field of risk management, data analysis, and artificial intelligence.

Fourth, The Study Model



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Fifth: The Study Tool Used:

The study utilized various tools to achieve its research objectives and test hypotheses. For the theoretical aspect, the researcher relied on a wide range of books, previous studies, and working papers. As for the applied aspect, data and information were gathered, and a questionnaire with 38 items on a five-point Likert scale was designed as the data collection tool. The questionnaire was divided into three axes: artificial intelligence, risk management, and improving performance. The validity and stability of the research tool were verified through psychometric properties. The questionnaire was applied to a survey sample of 10 individuals, and validity and reliability were confirmed.

The tool was reviewed by several faculty members with experience in the field of education to assess the accuracy and clarity of the statements in the questionnaire. Experienced workers also provided feedback on the wording of the questionnaire, and it was finalized based on their observations. The validity of the tool refers to ensuring that the questionnaire effectively measures the intended phenomena, including all necessary elements for analysis and clarity in language and structure (Obaidat, 2002: 79). The researcher assessed the validity of the tool using internal consistency validity, which involves calculating the correlation coefficients between the questionnaire items and the total score, as shown in Table 1.

Correlation Coefficient	
0.870**	Artificial Intelligence
0.955**	Risk Management
0.833**	Performance Evaluation

Table (1) shows the Pearson correlation coefficient between the questionnaire's axes, with the overall score being significant statistically at the significance level (0.001), (00005)

To ensure the reliability of the questionnaire's axes, Cronbach's alpha coefficient was calculated for all the questionnaire's axes

It was to an acceptable degree, as Table No. (2) shows. Reliability coefficient Cronbach's alpha coefficient

Table No. (2) Reliability Coefficient

Cronbach's Alpha Coefficient	Statement
0.80	**Risk management**

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0.941	**Artificial Intelligence**
0.748	**The Performance**
0.947	**The Questionnaire As A Whole**

We note from Table No. (2) that the reliability coefficient for the questionnaire's axes was strong and ranged between 0.748 and 0.94, which is higher than the acceptable limit of 0.060, which indicates the strong stability of the study too.

The Fourth Chapter
Results and Recommendations

Study Results: Results related to the main question: "What is the degree of impact of artificial intelligence on support risk management and performance evaluation?

The study examined the impact of artificial intelligence on risk management and performance evaluation. Means and standard deviations were calculated to measure agreement with questionnaire items related to the role of risk management under artificial intelligence in enhancing performance evaluation. The results are as follows:

Average and deviation scores for artificial intelligence items:

First, the paragraphs related to artificial intelligence:

Standard Deviations	Averages	Paragraphs	Arrangement
0.591	4.40	Automate routine tasks and data entry	1
0.620	4.30	Learn algorithms to analyze big data very quickly and reveal unusual patterns	2
0.709	4.10	Identify patterns and predictions using powerful algorithms	3
0.709	4.10	Providing predictive analytics programs	4
0.632	4.10	Achieving cybersecurity and data encryption	5
0.686	3.88	Create firewalls	6
0.698	4.03	Knowing changing trends in customer behavior	7
0.639	3.95	Detection of intrusion systems	8
0.599	4	Uncovering untapped opportunities	9
0.639	3.95	Providing correct and timely information	10
0.608	4.30	Cloud computing enables easy access to data and applications	11
0.694	4.08	Cloud computing helps reduce the risk of data loss	12
0.687	4.30	Providing the network with primary and basic data	13

Secondly, paragraphs related to risk management

Standard Deviations	Averages	Paragraphs	Arrangement
Risk Analysis			
0.662	4.15	Analysis of financial matters	14
0.783	4.05	Analysis of technological matters	15
0.712	4.28	Analysis of the legal environment	16
0.672	4.40	Software errors and changes	17

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		in customer requirements	
Risk Assessment			
0.723	4.20	Setting priorities for work	18
0.716	4	Allocate resources to significant risks	19
Risk Assessment			
0.660	4.22	Follow-up software work calendar	20
0.630	4.25	Follow up on any change in client requirements	21
Dealing with risks			
0.656	4.32	Develop strategies to hedge losses	22
0.683	4.49	Develop insurance strategies	23
0.648	4.30	Develop strategies for dealing with emergencies	24
0.622	4.35	Educating workers about dealing with risks	25
0.679	4.27	Monitor risks	26
Monitoring and Evaluation:			
0.694	4.32	risk assessment	27
0.670	4.25	Follow-up software work calendar	28
0.679	4.27	Follow up on any change in client requirements	29

Thirdly, the paragraphs related to performance evaluation

Standard Deviations	Averages	Paragraphs	Arrangement
0.747	4.17	The extent to which employees interact with the main goals of the organization	30
0.700	4.35	Employees' efforts to develop the organization	31
0.694	4.07	Determine the training needs of employees	32
0.751	4	Identify the organization's strengths and weaknesses	33
0.687	4.30	Potential threats and risks	34
0.648	4.30	Setting achievement standards to reduce cost and time	35
0.712	4.18	Designing information systems for feedback	36
0.506	4.50	Comparing achievement with established standards	37
0.483	4.35	Correcting the course of activities and drawing up future strategies	38

It is noted from table ( ) that all the questionnaire averages came with a high degree of agreement, which indicates the sample members agreed with all of the questionnaire's axes.

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Hypothesis Testing:
We are testing the main hypothesis which states that there is a statistically significant impact relationship (at the 0.05 significance level) between artificial intelligence applications, risk management, and performance evaluation in the organization.
We calculated the coefficient of determination, correlation coefficient, and regression coefficient in Table 6.

Table No. (6) Coefficient of determination and correlation coefficient for risk management, artificial intelligence, and evaluation the performance

Performance Evaluation					
Constant	**Regression Coefficient**	**Significance**	**Determination Coefficient R^2**	**Correlation Coefficient R**	**the performance**
1.347	0.471	0.00	0.518	0.720	**Risk Management**
	0.219	0.02			**Intelligence Artificial**

Constant	**Significance**	**Regression Coefficient**	**Determination Coefficient R^2**	**Correlation Coefficient R**	**the performance**
1.377	0.00	0.701	0.504	0.710	**Risk Management**

It is evident from Table 6 that the significance level is less than 0.05, indicating a significant effect at 5%. The Pearson correlation coefficient of 0.72 suggests a strong correlation between the independent variables (risk management and artificial intelligence) and the dependent variable (improving the performance evaluation process). The coefficient of determination is 0.518, signifying the impact of risk management and artificial intelligence on performance evaluation. This implies that 51% of the improvement in the performance evaluation process can be explained by performance, while the remaining 49% is attributed to other factors. By statistically analyzing the responses of the sample members, the study model can be estimated:

$$Y=1.347+0.471X_1+0.219X_2$$

Y:Dependent variable, Performance Evaluation.
X_1: Independent variable, Risk Management.
X_2:Independent variable, Artificial Intelligence.

Testing the first sub-hypothesis:
There is no statistically significant effect at the 0.05 level for risk management and performance evaluation.
The results were as follows: Table No. 7 - Coefficient of determination and correlation coefficient between risk management and performance evaluation.

The results from table No. 7 indicate that the significance level is less than 0.05, showing the impact of risk management on improving organizational performance. The correlation coefficient of 0.739 suggests a strong and positive correlation between risk management and performance evaluation. This emphasizes the positive role of risk management in enhancing performance. The coefficient of determination indicates that 58% of the improvement in performance evaluation is attributed to the enhancement of risk management, with the remaining percentage being influenced by other factors. Therefore, the study model can be estimated from Table 7.

$$Y=1.746+0.709X_2$$

Testing the second sub-hypothesis:
There is a statistically significant effect at the 0.05 level of artificial intelligence on performance evaluation. Based on the extracted results in Table No. 8. the coefficient of determination and correlation coefficient between artificial intelligence and performance improvement will be analyzed

Table No.8 the coefficient of determination and correlation coefficient between artificial intelligence and performance improvement .

	Performance Evaluation			
Constant	**Significance**	**Determination Coefficient R^2**	**Correlation Coefficient R**	**the performance**

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1.746	0.00	0.587	0.709	**Risk Management**

The data in Table 8 shows a significance level lower than 0.05, indicating the significant impact of artificial intelligence on evaluating and improving organizational performance. The correlation coefficient of 0.710 indicates a strong and positive correlation between artificial intelligence and performance improvement. Furthermore, the coefficient of determination shows that 50% of the performance improvement can be attributed to artificial intelligence, with the remaining 50% being due to other factors. This suggests a strong relationship between artificial intelligence and performance enhancement in the organization, The study model can be estimated:

$$Y=1.377+0.701X_2$$

THE CONCLUSIONS:

The respondents' perceptions about the importance of risk management under artificial intelligence were mostly positive, indicating high performance.

- There is a statistically significant effect at a significant level in terms of artificial intelligence's impact on improving performance and managing risks.
- Most dimensions of the artificial intelligence axis significantly contribute to confronting and managing risks, leading to a positive impact on excellence, performance improvement, and work success.
- Risk management under artificial intelligence enables institutions to detect potential risks early and analyze data easily, facilitating the evaluation process and risk confrontation.
- Organizations that focus on risk management and the application of artificial intelligence can increase their competitive advantage by improving the evaluation process and managing risks more effectively.
- Artificial intelligence also accounts for a 50.04% change in performance evaluation.

THE RECOMMENDATIONS:

- Utilizing artificial intelligence technologies in institutional operations and staying abreast of global advancements in the field of artificial intelligence.
- Promoting scientific research and establishing research centers within companies to enhance capabilities, and allocating funds for artificial intelligence applications.

The List of Sources:

• The Arabic References:

1.Abd Alfattah, Radwan Mahmoud, (2012) Evaluating the performance of institutions under performance standards balanced, Arab Group for Training and Publishing.
2.Ashmari, Sadiq Rashid, (2022) Banking risk management strategy and its impact on financial performance for commercial banks, Dar Al-Yazouri Scientific
3.Mahmoud, Khaled Ahmed Ali, (2019) Globalization and the knowledge economy in light of technological awakening and economic intelligence, Alexandria University Thought House
4.Qandu, Abdul Karim, (2018) Hedging and Risk Management: A Financial Introduction, Dar E Kutub,
5.Anderson J. Edward, (2018) Business Risk Management Translation, Issam Sayed Abdel Fattah, Arabia Group for Training and Publishing
6.Al-Nuaimi, Salah Abdel Qader (2020), Management, Al-Yazouri
7.Musa, Abdullah, Bilal Ahmed Hussein (2019) Artificial Intelligence: A Revolution in Modern Technologies, Arab Group for Training and Publishing
8.Hanna, Mahdi, (2023) Artificial Intelligence: Reality and Challenges, Dar Alan.
9.Abdel Samad, Asmaa Al-Sayyid Muhammad Karima Mahmoud Muhammad (2020) Applications of Artificial Intelligence and the Future of Educational Technology, Arab Group for Training and Publishing, Cairo.

• The Foreign References:

1.Biolcheva .P (2021)the place of artificial intelligence in the risk management process .SHS web of conference 120 Business and Regional development.
2. Bozic.V, .(2023) Intelligence risk management and artificial intelligence in hospital Journal of AI V(7)N(1) P63.

World Economics & Finance Bulletin (WEFB)
Available Online at: https://www.scholarexpress.net
Vol. 36, July, 2024
ISSN: 2749-3628,

3. Bullock.J& Young, Risk management in the AlEra2016. Navigating
the opportunities and challenges of AI tools in the public sector .BM center for business of Government.
4. Bemarce (2022)Artificial intelligence for risk management.
Politecnicodi. T (U.S.A).
5. Sthope ,T making sense of artificial intelligence and its impact of risk
management. RIMS report.

Appendices:

Questionnaire

Ladies and Gentlemen

Dear esteemed ladies and gentlemen,

We are pleased to present the questionnaire for our scientific research project titled "**The Role of Artificial Intelligence in Supporting Risk Management and Performance Evaluation**" for the academic year 2023-2024. Your careful attention to this questionnaire and objective answers are crucial for ensuring the validity of our research results.

Please be assured that your responses will be treated confidentially and used solely for research purposes.

We sincerely appreciate your cooperation and assistance.

The Researcher

The Supervisor

the Academic Year: 2023-2024

First, The Personal Data:

☐ Male ☐ Female	**The Gender**
☐ High school ☐ Bachelor's ☐ Masters ☐ Doctorate	**The Educational level**
☐ less than 30 years ☐ from 30-40 years ☐ from 41-50 years ☐ more than 56 years	**The Age category**
less than 5 years ☐ from 5-10 years ☐ from 10-15 ☐ more ☐ than 15 years	**The Years of Experience**

First, The Independent Variable: Artificial Intelligence:

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Paragraphs	Arrangement
					Automate routine tasks and data entry	**1**
					Machine learning algorithms for big data analysis super-fast and reveals unusual patterns	**2**
					Identify patterns and make predictions using powerful algorithms	**3**
					Providing predictive analytics programs	**4**
					Mitigating cybersecurity risks by encrypting data	**5**
					Create firewalls	**6**
					Knowing changing trends in customer behavior	**7**

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					Detection of intrusion systems	**8**
					Uncovering untapped opportunities	**9**
					Providing the correct information at the right time	**10**
					Cloud computing enables accessibility data and applications easily	**11**
					Cloud computing helps reduce the risk of loss data	**12**
					Providing the network with primary and basic data	**13**

Second: Paragraphs related to risk management

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Paragraphs	Arrangement
					Risk analysis	
					Analysis of financial matters	14
					Analysis of technological matters	15
					Analysis of the legal environment	16
					Software errors and changes in customer requirements	17
					Risk Assessment	
					Setting priorities for work	18
					Allocate resources to significant risks	19
					Risk Assessment	
					Follow-up software work calendar	20
					Follow- up on any change in client requirements	21
					Dealing with risks	
					Develop strategies to hedge losses	22
					Develop insurance strategies	23
					Develop strategies for dealing with emergencies	24
					Educating workers about dealing with risks	25
					Monitor risks	26
					:Monitoring and evaluation	
					Risk Assessment	27
					Follow-up software work calendar	28
					Follow- up on any change in client requirements	29

Third: Paragraphs related to performance evaluation

Strongly	Agree	Neutral	Disagree	Strongly	Paragraphs	Arrangement

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Agree				**Disagree**		
					The extent of employees' interaction with the main objectives for the organization	**30**
					Employees' efforts to develop the organization	**31**
					Determine the training needs of employees	**32**
					Identify the organization's strengths and weaknesses	**33**
					Potential threats and risks	**34**
					Setting achievement standards to reduce cost and time	**35**
					Designing information systems for feedback	**36**
					Comparing achievement with established standards	**37**
					Correcting the course of activities and drawing up strategies Futurism	**38**