

*Full Length Research Paper*

# Account auditor role in managing technology risks

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## Abstract

Focusing on the risks of the accounting information technology; the research aims for revealing the role of the accounting auditor in managing the technology's risks. These risks are caused by the complicated ambience of the accounting information technology, which became complicated because of the changes and the improvements that happened to it after the improvement of technology. The study's results have revealed the advantages of using the technology, but its risks are many and various. The technology requires the internal and the external auditors to adapt it to reduce its risks, and that's by gaining certain qualifications in the technology's field and by their procedures when they do their tasks. There are effective roles for the internal and the external auditors in facing these risks, but there are no significant variations between their roles which indicates that their roles will be reflected on the accounting results. According to the study's results, the researcher assures the importance of activating the roles of the professional associations, the co-auditing and control authorities and the institutions. And that is for the sake of providing a proper ambience to improve the auditor's role in facing the technology's risks, and this can be done by redeveloping the standards and the ethics.

**Keywords:** Internal auditor, external auditor, technology, risks.

## INTRODUCTION

The world is now relying on technology by dealing with networks and its software applications and by using computers, because it's a civilized manifestation. And also, the world is relying on the technical knowledge, which is considered the most important element of the technical field that is created by the information and communication revolution in the middle of the previous century. The modern technology has helped improving knowledge and its technical applications very quickly. In addition to that, it made the future completely different than today, which gave technology the authority to show the power among humans, objects and tools which are the elements of technology.

Technology helped the human to increase the use of the human and the financial resources. Any try to improve technology is supposed to develop the field of experiments and researches to solve the society's

issues and to rise it to a better level of behavior and civilization. However, if technology is used improperly, it will cause many risks to the society.

Auditing profession was influenced by the use of technology because of the complication that happened upon it, and because of the various risks that came with technology, which require new professional services.

### Problem of the Study

As a result of the technical improvement, the auditing profession faces serious challenges that requires the auditor wither he is an internal auditor or an external auditor to develop his tools and his services to face those risks.

The problem of the study is embodied in the following questions:

- 1) Is there a role for the internal auditor in facing the risks of the information technology's ambience?

- 2) Is there a role for the external auditor in facing the risks of the information technology's ambience?
- 3) Is there a difference between the roles of the internal and external auditors in facing the risks of the information technology's ambience?

### **Significance of the Study**

The use of technology led to a change in the method of collecting and processing the accounting information, which influenced the traditional methods of the auditing profession in dealing with that information and caused pluralism in services that can be presented. And that is to reduce the technology's risks. Arens believes that the more the organizations rely on technology in accomplishing their tasks the less privacy and accuracy will be provided for the computer systems, because the untrusted system produce a series of events that has a negative influence on the organization and its customers. So, the concern about this subject is to specify the role of the internal and the external auditor in facing the risks of using technology.

### **Purpose of the Study**

The research aims for achieving the following goals:

- 1) Describing the ambience of using the technology and managing its risks in the accounting's field.
- 2) Providing a definition for the internal and external auditors' role in managing the risks among the technical development.

### **Hypotheses of the Study**

- 1) Is there an effective role for the internal auditor in facing the risks of the information technology ambience?
- 2) Is there an effective role for the external auditor in facing the risks of the information technology ambience?
- 3) Is there a contrast between the two roles of the both auditors in facing the risks of the information technology ambience?

### **Theoretical Framework**

#### **Technology Definition and its Risks Types**

Human communities define the technology's intellectual term as the applying of any modern knowledge form to achieve a certain goal or to solve a certain problem. Technology is a Greece term that consists of two parts. The first part is "Techno" which means applying or technique or skill, and the second part is "Logy" which means science or study. According to that, the technology's linguistic definition is the science of skills or techniques, and is the process of applying the science and using it for achieving practical purposes to provide the society its needs. (Ac Gimsonet, 1984:887).

Researchers have different views about the technology's scientific definition; these views can be divided into the following four groups:

First Group: Focuses on the tools, the methods, the places and the ways that are used in converting the inputs of the organization into outputs.

Second Group: Focuses in the relation between the human and the machine. This group states that technology is represented by the tools and the methods that are used by the human in his job to complete his powers and his abilities to achieve his needs through his social circumstances. According to this relation, technology is the methods that are used by people to provide satisfaction and living (Lorensi, et al. 1997)

Third Group: This group is inspired by a major idea that defines technology as knowledge not as a machine. BALL stated that technology was a mix of knowledge that the society requested and used to achieve economic and educational purposes (Al-Janaby)

Forth Group: This group includes the previous three views. According to Balodouni, technology is represented by a group of elements that consist of skills, experiences and methods. These elements are used to achieve useful purposes; therefore, technology is methods that the individual use to adapt the continuously changing environment whether it's a physical environment or a biological environment or a social environment (Al-Shujairy). However, the use of technology is associated with several risks depending on the fields it's used in. These risks are defined as the ability of measuring the possible loss or the not possible to get (Bowenes, et al. 2003). Also, these risks are defined as a term that is used to measure the cases of uncertainty in the operating process, which influences the organization's ability of achieving its goals. Al-Rawy (1999) assured that the risks are invisible events and unwanted in the future. According to Chosheh (2001), the risks' management requires a determination and a correction for the risks, and it requires an examination and a management for the techniques that are used to adapt such risks. Which indicates that the modern technique influenced the content and the form of the administrative process, and it created big challenges for everyone. Some of these challenges are associated with the risks that may be faced by the auditor. These risks are various depending on the complexion level of the technology use. According to Arens and Loebecke (2000), the technical information ambience's risks are determined by the lack of the physical protection of devices and software, and by them being misused. And they can be determined by the environmental damages (Fire and Moisture). There is also the risk of losing the path of auditing by inserting the data to the computer and running it immediately, which prevent the auditor from seeing the auditing's path. The risk of the systematic errors, which are caused by the faulty running of a certain type of processes using the computer, which leads to a collection of distorted data for a period of time. The fraud risk is also one of the

technical information ambience's risks, that is the unlicensed access to the electronically stored files, then changing it inappropriately. All of the mentioned risks require efficient control procedures.

-The International Arab Society of Certified Accountants. The Data Auditing Committee, which is subsidiary to the International Federation of Accountants (IFAC, 2002) sorted the risks in two groups:

1) Risks caused by the information technology's infrastructure:

- The normal security procedures of protecting the data from the illegal access and from being exposed are inappropriate.
- Being exposed to high temperature, water, fire and other natural disasters.
- Not enough measures or un safety emergency plans.
- Lack of enough measures of support.
- Not enough firewalls and supervision for preventing the illegal accesses to the data.
- Not enough encoding.

2) Risks caused by the information technology's applications:

- Problems and errors in the applications.
- Untrusted and uncoordinated updates for the applications.
- Not enough standards for the inserting, outputting and the processing operations that are designed for the applications.
- Not enough security procedures for the applications that are connected with the infrastructure.

Juma'a and Khaleel (2002) have sorted the e-commerce's risks, which are caused because of a finance and a commercial contract with fake companies under the fraud's risks. Moreover, these fake companies get an illegal access to the files to transfer them and to disable the system for the sake of the money laundering. Abd Al-Wahab (2005) stated that the e-commerce's risks were caused by several factors. First of all, a lack of an international law that controls the international commercial transactions through the internet, which can cause a violation for the users' privacy by hacking. Secondly, a lack of improved proof evidence that suit the electronic media and the networks, which can give a possibility to steal the customers' credit cards' data and their electronic signatures. Finally, the possibility of violating the website and destroying the files, which can interrupt the process of completing the deals that require a check on the credibility of the networks' information. Here comes the influence of the auditing process, which is supposed to reduce the information's risks that are the main economic reason that require the auditor to improve his abilities to ensure the quality of the service he serves.

### **Internal and External Auditors Role in Managing Technology's Risks**

Most of the institutions' disasters and collapses are because of the administrative fail in protecting the customers' rights. Also, because the administration does not concern about the crisis it faces and does not deal

with them properly. The organizations face a lot of risks nowadays, the electronic technology's risks is a part of these risks; so, they need to concern about the management of the risks. "The risks management is a method or a scientific entry to deal with the risks by predicting the possible losses and by setting up procedures and applying them. These procedures are supposed to reduce the losses possibility and to reduce the financial influence to the minimum limit" (Hammad, 2007)

According to Al-rawy, the risks management is "a process of determination, examination and an economic control for the risks that threaten the project's revenues" (Al-rawy 1999)

According to the Institute of Internal Auditors (IIA), the risks management is "The possibility of applying or not applying a certain order. And it's applying a certain order that might influence the organization and an auditing process negatively" (Hearmanson & Rittenberg, 2003)

"The risks management is the field of avoiding the risk and reducing the loss in case the risk occurred. Also, it's keeping an eye out for not repeating the risk again by acknowledging its causes to avoid it in the future. Moreover, the risks management is meant to provide money that is necessary for compensating the loss so the work won't be stopped." (Al-Wardat, 2006)

The administration deals with the risks management by the following ways:

- 1) Avoiding the risk by not dealing with technology.
- 2) Accepting the risk, that includes two sections: full acceptance and partial acceptance.
- 3) Transferring the risk by applying the technology and making it secured by making a deal with specialized companies to be responsible for solving any problem and for fixing the devices.

The risks management job should include the following:

- Setting up a strategy to manage the risks.
- Cooperation on the strategic and operational level to manage the risks.
- Increasing the educational awareness included the suitable education inside the organization.
- Setting up a policy and a plan for the internal risk of the working units.
- Designing and reviewing the risks management's procedures.
- Coordinating the jobs' activities that provide advice about managing the risks inside the organization.
- Developing the procedures of facing the risks which include the emergency programs and the activity continuation.
- Preparing reports on the risks and presenting them to the administration.

Both of the internal and external auditors can play an effective role in providing an independent confirmation about the efficiency of the risks management process. In addition to the well understanding of the risks that face the organization's activities, both auditors help giving a

confirmation and a consultation on the procedures through the daily running works. However, the role of the internal and external auditor may vary from an organization to another.

The internal auditor's role includes some or all of the following:

- The internal auditor job focuses on the important risks that are determined by the administration, and it focuses on reviewing the procedures of the risks management.
- Giving the confidence for the risks management.
- Giving an effective support and participating in the procedures of the risks management.
- Facilitating the activities of determining and examining the risks, and educating the workers the risks management.
- Coordinating the risks' reports that should be presented to administration and the internal auditing committee.

The internal auditing standards assure that the internal auditing should help the organization evaluating and determining the possibility of being exposed to the risks, and it should also help improving the risks management and the controlling systems in consideration of the confirmation and consultation services. (Al-Wardat, 2006, page 200-202). Moreover, the internal auditing manager should discuss the administration's acceptance of an unaccepted risks by the organization with the operational administration and presenting a report on that for the administrative board to find a solution.

When setting up the internal auditing plan, it should be done in the term of evaluating the risks, and it should be guided by the higher management and the administrative board instructions.

The internal auditing activity should evaluate the efficiency and the effectiveness of the control, and it should include all the operational and instructional systems. This should include the following:

- The authenticity of the financial and the operational information and the ability of relying on them.
- Effective and efficient operations.
- Asset protection.
- Being committed to the laws, systems and agreements.

The previous can be done by the following three stages:

### **Risk Identification**

The risk's determination includes identifying the activities and acknowledging the risk's factors that are associated with the activities and have the highest level of importance, and it includes acknowledging the changes that might occur to the being audited activity. The risk means that there is an unclear thing that might occur and influence the goal achievement negatively; this influence is measured by weighting and chances. The risk can be

determined by the good planning, controlling and supervising.

### **Evaluating and Measuring Risks**

Evaluating the risk is defining and analyzing the risks that have a negative influence on the goal achievement for the sake of determining the methods of facing these risks. Because risks are not equal the possibility of occurring one of them varies from a risk to another, and also the fundamental risk and the control risk vary from the detection risk. This variation is because the fundamental risk and the control risk are determined among the being audited activity, but the detection risk can be determined by the auditor through his procedures.

### **Risk Control**

The organization's goals and the risks and their importance may change with time, because the methods of facing the risks that were effective in the past may become ineffective or the old risks may become impossible to occur. Also, the control activity may become ineffective or their importance might disappear; so, the administration needs to watch the efficiency of the risks management continuously to determine the system's efficiency and its suitability level. Depending on the importance of the risks and the importance of responding to these risks, the risks management's evaluating process varies in the terms of range and repetition.

When the administration make the decision to evaluate the whole risks management's framework, it should concern about fixing all the aspects of the risks management process, which includes of determining the strategy, updating the risks management's records and examining the authenticity of the operational and regulatory procedures. The risks management system's shortcomings require to be reported to the suitable administrative level and to present a report on the serious shortcomings for the higher administration or the administrative board for the sake of developing the organization's performance.

Speaking of the external auditor's role through the technology's improvement, he can serve the following services:

#### **1) Integrated services of the system's confidence:**

Knowing more about the technical information ambience adds more requirements for the auditor to reduce the risks and their control cost. As a development for this service, the American and the Canadian councils set up suitable standards to add confidence to the electronic information system, and that's by testing all the controlling methods of data sending, testing them and receiving. Also, by discovering the errors and performing the suitable immediate solutions on them, which ensure

providing trusted information for all parties in time. After testing the electronic system's controlling processes the auditor must write a report on these processes to add confidence to the electronic financial systems and to the ability of relying on them. Serving this service requires complete auditing services framework (Dahmash and Abu-Zer 2005). Lotfi (2005) assures that the complete auditing requires an expansion for the information technology database and requires developing the auditing tools.

## **2) Continuous Electronic Auditing:**

Serving the previous services yearly became not enough, because many organizations look for making their financial statements for every single stage not only the yearly ones, which requires a continuous auditing. In comparison with the paper information, information technology helped the electronic and the numerical information to be more flexible, easier to contain, easier to be transferred from a device to another and easier to be saved, summarized and organized. These digital information requires to be continuously audited electronically. Ali and Shihata (2004) defined the continuous auditing as an organized process for collecting the electronic evidence to a neutral technical opinion about the authenticity of the reports and the data that are prepared in unpaper immediate accounting circumstances. In addition to giving a neutral electronic opinion, the continuous auditing is giving a validity stamp of the continuous auditing that appears in the company's website.

## **3) Web Trust Services:**

This service was provided by the American institute of CPAs in 2003 to add the confidence to the website for the customer for the sake of ensuring the security and the authenticity of the website's data. This service requires the auditor to make sure that the customer is committed to five principles, which are providing applications that protect the devices and the software from the illegal access, providing applications that make sure that the system is available for being used efficiently, the safety of the operating process to make sure that the accuracy and the date of the data are complete and providing privacy applications. The principle of providing privacy applications is to provide a full protection for the private information (Arens, 2005). Ensuring the previous principles requires the auditors to have suitable qualifications; so, they can get the suitable license to serve this service, which made several institutes in America and Canada hold proper tests in order to give the auditors the suitable license.

## **Previous Studies**

Tittanen (2001) conducted a study entitled 'The Role of User Support Services in Modern Auditing' The study showed that using technology in auditing helps building an electronic base for the customers and helps choosing

the auditing sample more efficiently, which reflects on the authenticity of the sample's results. Also, the study assured that a group of supporting elements such as education and practicing; in addition to preparation are the start of improving the auditors' skills. All of these aspects should be improved subjectively. The study came to a result that the existence of such supporting services makes the profession more productive and helps avoiding several risks that are caused by the lack of efficiency.

Ratcliff, R. & Reding K. (2002) conducted a study entitled "Information Technology, Internal control and financial statement audit" The study noted that the electronic systems need only a small number of control procedures that are done manually. And most of the control activities are combined with the applications of the electronic systems such as the electronic verification of the credit card and the protection of the accounting records, which require the auditor to improve his methods.

Khadash and Seyam (2002) conducted a study entitled "Auditors' receptiveness for Using information Technology in Auditing a Field Study at Great Auditing Offices in Jordan" the study aimed for showing the importance of using the information technology in auditing the accounts and for testing its influence and revealing its disadvantages. The study came to a result which is accounts auditors in Jordan are convinced about the importance of using the information technology in auditing and about the efficiency and the cost decrease that the information technology would provide them. However, their use of the information technology has not reached the requested level, because of several obstacles which are the manual accounting application in some companies that are under auditing, the lack of experiences and skills of some auditors and the lack of the laws that organize the use of the information technology in auditing and in accounting.

Al-Jebaly (2002) conducted a study entitled "Modern Trends of Review in Terms of Technology Changes in Accounting Information Systems" this study investigated the modern trends in the terms of the technology changes in the accounting information systems, and whether these trends are positive or negative among the modern developments in the information technology's changes. It studied also the size of the developments that are necessary for the review operation and for preparing the auditor for being up to date with the developments and the changes of the information technology. Moreover, the study focused on the aspect of rehabilitating the references. Although there is a big gap that needs a lot of efforts to rise the auditing profession to the scientific level, but the study came to a result that there is a strong need for development, this development is represented in the auditors' need for developing their skills and their abilities to face the technology's developments. Also, there are a lot of subjects that need

more scientific and practical preparation for the internal and external auditors to adapt the technology's development, and the most important subject is the e-commerce.

Robert, L.; Braun, H. & Davis, E. (2003) conducted a study entitled "Computer Assisted Audit Tools and Techniques: Analysis and Perspectives" The study studied the importance of auditing by using the modern techniques. The study came to a result that the auditor must use different programs in the auditing operations, because these programs allow the auditor not only to apply the traditional auditing procedures but also to make the auditing process more effective. Also these programs will make the auditing process easier and faster, which can make the auditor give an opinion not at the end of the year but in the first quarter of the year or in the middle of the year because of the computer's high speed in testing the data. The study recommended increasing the auditor's training on using the computer to increase his ability in achieving his tasks better and to increase the trust in his results.

Al-Thnaibat (2003) conducted a study entitled "Use of Information Technology's Effectiveness in Auditing Process in Jordan" The researcher studied the fields of the use of the information technology in auditing, and he studied its influence on the auditing process's efficiency and effectiveness. The study came to a result that the account auditors in Jordan use the information technology in the fields of planning, documenting and recording the information. Although the technology helped improving the auditing operation's efficiency by reducing the spent time on the calculating and writing operations, the employees numbers that are used in the auditing offices and by reducing the auditing process's cost which leads to improve the auditing process's quality, but the average of the use of technology in the fields of planning, documenting and recording the information is low.

The study recommended the following:

- 1) The Jordanian association certified public accountants must hold training courses for the members to acknowledge them about using technology in auditing.
  - 2) The researcher recommended to consider using information technology in auditing as a requirement and a national benefit to rise the auditing services level and to rise the profession members' competitiveness nationally and internationally. And that is in line with the international trend towards the computerization of education, services and others.
  - 3) According to the importance of the information technology's role in auditing, using technology in auditing should be considered from the primary requirements for the quality control, and the profession board should take into account the exams that it hold to permit the auditors.
- Spira & Page (2006) conducted a study entitled "Risk Management the Reinvention of Internal Control and the Changing Role of Internal Audit" Focusing on the self-

regulation of the procedures as a part of the institutional control's resources and policies, the study studied the nature of the internal control jobs through the institutional control in England. This study reviewed the reports' changes which are required to be revealed according to the requirements of the institutional control. The institutional control provide the right opportunity for determining the risks of the reports' changes, and it provides the new role for the internal auditor to reduce the risks' influence. The study came to a result that the self-evaluation of the risks, which might be done by the internal auditing system or by an independent risks management, requires determining the risks or defining them and then analyzing them to know their causes, which needs suitable procedures to control them.

Johar et al (2012) conducted a study entitled "Influence of Technology Use Risks on External Auditor's Job, Field Study in Some Jordanian Auditing Offices" This study studied the influences of information technology and the risks that might be faced and how these risks could influence the auditor's work's quality standards. The study came to a result that the most faced risk is the risk that is caused because of not enough control procedures, and the most influenced quality standard is the efficiency standard.

The current study of the previous studies position:

The current study agrees with the previous studies about the relation among the internal and external auditors and the risks managements through the use of technology. But the current study addressed the relation from one side, whether form the internal auditor's side or the external auditor's side. So, what distinguishes this study is that it compared between the internal and the external auditors, and it compared between their roles in managing risks through the information technology.

## STUDY METHODOLOGY

The research's society consists of internal and external auditors.

### 1) External auditing

50 questionnaires were distributed on the external auditing offices in Jordan. After recovering 38 questionnaires, 30 of them were accepted and 8 of them were rejected because there information was not complete.

### 2) Internal auditing

A questionnaire was distributed among (50) internal and external auditors in Jordan. After recovering 40 of them, 30 questionnaires were accepted: that is for equating the number of the sample's members with the external auditors in a way that suits the used statistical methods and to make the comparison's results convergent.

According to [Table 1](#), the most repeated academic qualification for the internal auditor is the bachelor degree with the percentage of 73% approximately. And the most

**Table 1:** Information Demography Description

Variables	Internal auditor		External auditor		Summation	
	Repetition	Percentage	Repetition	Percentage	Repetition	Percentage
Academic qualification						
Account control diploma	3	10%	20	66.7%	23	38.3%
Accounting Bachelor	22	73.3%	1	3.3%	23	38.3%
Accounting Master	5	16.7%	9	30%	14	23.4%
Accounting PhD	-	-	-	-	-	-
Other	-	-	-	-	-	-
Summation	30	100%	30	100%	60	100%
Years of Experience						
Less than 5	7	23.3%	6	20%	13	21.7%
5-10 years	12	40%	11	36.7%	23	38.3%
11-15 years	8	26.7%	10	33.3%	18	30%
More than 15	3	10%	3	10%	6	10%
Summation	30	100%	30	100%	60	100%

repeated academic qualification for the external auditor is the account control diploma with the percentage of 67% approximately, which shows the big concern about the qualifications of the external auditor and the concern about the qualifications of the external auditor because the cares more about him.

Speaking of the years of experience, the most repeated experience for both auditors is 5-10 years with the percentages of 40% for the internal auditor and 38% for the external auditor. The 11-15 years of experience comes after the 5-10 years of experience with the percentages of 27% for the internal auditor and 30% for the external auditor. That shows the concern about the experience level of the both auditors.

### Description of Questionnaire's questions

Through this part the questionnaire's questions will be described by using the average, the standard deviation and the percentage. The percentage was calculated by the ratio of the average to the maximum value of the used answer's scale, which is 5. According to the table number (2) that contains the questions that clarify the roles of the internal and external auditors in managing the risks of technology, the answers shows that the highest average for the internal auditor is question number 10 through the control procedures of the assets; these procedures are considered traditional. Question number 8 that is about the percentage of the authenticity of the computerized information, which is 85.4 %. And through the researcher's visits to the sites of the auditors' jobs, it turns out that this procedure is associated with the payroll system in the first place and then with the storage system. The minimum average is showed in the question number 16, which is about the auditor's role in making sure that the website is protected from the unlicensed

accesses to the devices, programs and applications. These unlicensed are caused by the lack of the auditor's experience in the computer's uses and their requirements. Speaking of the external auditor, the maximum average of ensuring the authenticity of the operated information by the computer is showed in the question number 8, and its percentage is 93.4%. Question number (21) is about the authenticity of the inputs and the control procedures, and the percentage is 92%. By the researcher's question about training courses of using the computer he noticed that there is a big interest from the auditors. The minimum average is showed in the question number (14) which is about the auditor making a report on the procedures of the electronic system's control after testing it to add the trust to the financial and the electronic systems and the ability of relying on these systems. The percentage of this question's answer is 62.8%. After comparing the two questions 14 and 21 to each other, the average of the averages for the internal auditor's answers is 3.82 with the percentage of 76% approximately, and 3.8466 with the percentage of 77% for the external auditor approximately, which shows that their roles are equal. However, the internal auditor's role focuses on the management supporting procedures in reducing the risks.

### Hypotheses Testing

In this section, the theories that are put by the researcher will be tested. The researcher used the test T for one sample to ensure the authenticity of the theories.

**First hypotheses:** The external auditor has an effective role in facing the technology ambience's risks. According to [Table 2](#), the average of the questions that are about the internal auditor is 3.824. And by applying the T test, the importance of the average can be noticed, which

**Table 2: Responses on the questionnaire**

N	Questions	External Auditor			Internal Auditor		
		Mean	Standard deviation	Percentage	Mean	Standard deviation	Percentage
1	The auditor determines the risks that come from the computerized activities and from the job's policies, and he gives them the priority.	4.17	0.592	83.4%	4.07	0.828	85.4%
2	The administration works on assigning the limits of the acceptable risks.	3.77	0.774	75.4%	4.07	0.691	81.4%
3	The auditor's job focuses on the important risks that are determined by the administration and focuses on reviewing the risks management's procedures inside the organization.	3.97	0.669	79.4%	3.87	0.629	81.4%
4	The auditor gives the trust for the risks management.	3.67	0.661	73.4%	4.07	0.691	80.6%
5	The administration provides the effective support, and it participates in managing the risks.	3.80	0.761	76.0%	4.07	0.828	85.4%
6	The administration eases the determination and the testing of the risks, and it acknowledges the workers about the risks managements.	3.63	0.718	72.6%	4.00	0.910	82.6%
7	The auditor makes sure that the administration receives frequent reports on the risks management's results.	3.83	0.791	76.6%	3.87	0.900	74.6%
8	The auditor ensures the authenticity of the operational and the financial information, and he ensures the ability of relying on them.	4.27	0.640	85.4%	4.37	0.809	93.4%
9	The auditor ensures the efficiency and the effectiveness of the computerized procedures.	4.17	1.053	83.4%	4.10	0.803	84.6%
10	The auditor ensures the procedures of the assets' protection by security devices to detect the fire and the smoke.	4.30	1.022	86.0%	4.10	0.885	87.4%
11	The auditor ensures the compliance with the laws, the systems and the deals.	4.13	1.008	82.6%	4.00	0.947	80.0%
12	The administration defines and analyses the risks that are associated with achieving the organization's goals to determine the way of facing the risks.	3.83	0.986	76.6%	4.23	0.858	84.6%
13	The administration control the effectiveness of the risks management system continuously to determine how the system is effective and reliable.	3.90	0.923	78.0%	4.23	0.728	84.6%
14	The auditor writes a report on the electronic systems control procedures after testing them.	3.77	0.817	75.4%	3.14	1.274	62.8%
15	The auditor collects the electronic evidence to give a neutral technical opinion about the authenticity of the reports and about the information that are prepared through a computerized accounting information system.	3.83	0.986	76.6%	3.90	0.724	78.0%
16	The auditor makes sure that the website is protected from the risks of the unlicensed access to the devices or the programs and the applications.	3.40	0.724	68.0%	3.27	1.202	65.4%
17	The auditor ensures the independency of the workers in the computer sections.	3.97	0.928	79.4%	3.90	1.137	78.0%
18	The auditor ensures the preparation of the workers for using the computer in the organization.	3.60	1.003	72.0%	3.88	1.040	77.6%
19	The auditor makes sure that there are programs for protecting the devices and the data from hacking.	3.73	1.048	74.6%	3.80	0.900	76.0%
20	The auditor makes sure that the administration agrees on the computerized programs' changes.	4.03	0.999	80.6%	3.80	0.961	76.0%
21	The auditor ensures the authenticity of the inputs and of their control procedures.	4.00	0.983	80.0%	4.27	0.740	92.0%
22	The auditor ensures the authenticity of the electronic operating orders.	3.93	0.828	78.6%	3.40	0.724	68.0%
23	The auditor ensures the authenticity of the outputs, and he keeps an additional copy of the important files.	3.73	0.961	74.6%	3.75	0.861	75.0%
24	The auditor makes sure that there are procedures for the questioning about the discovered mistakes.	3.97	0.809	79.4%	4.07	0.740	81.4%



means that there is a role that has a statistic significant for the internal auditor. This theory is accepted because the importance of the average is less than 0.05.

**Second hypotheses:** The external auditor has an effective role in facing the technology ambience's risks. According to the data of the one sample T test, the average of the questions that are about the external auditor is 3.8466, and the importance of the average is 0.000, which means that there is a role that has a statistic significant for the external auditor. This theory is accepted because the importance is less than 0.05.

**Third hypotheses:** There is a contrast between the roles of the internal and external auditors in facing the technology ambience's risks. To test the size of that contrast, the researcher used the contrast analysis ANOVA. According to ANOVA, there are no differences that have statistic significant because F's value is 0.054, and it is not statistic significant on the 0.05 level. F's importance is 0.817, which means that the answers are identical for the internal and external auditor; so, the theory is rejected.

## RESULTS AND RECOMMENDATIONS

### First: Results

1) Regardless the advantages that the use of technology achieved, its risks are big and various; they require the internal and the external auditor to reduce these risks by their qualifications and procedures.

2) To determine the aspects of weakness and strength in the auditors' performance, the ambience of using the technology and its factors that influence the present and the future of the auditing profession should be studied to use this technology in achieving a better performance.

3) The results showed that there are no serious differences between the internal and the external auditor in facing the information technology's risks, but the external auditor is more qualified to face these risks.

4) The research showed that the internal auditor's concern focuses on the internal control risks, and the external auditor focuses on the risks that are associated with his goals to give a neutral opinion about the financial records.

5) The results showed that the research accepted the first and the second theories, and it rejected the third one.

6) The results showed that the internal and the external auditors cares about testing the organizing control procedures more than caring about the applications' control procedures, which means that the auditors still need to improve their qualifications in using technology and facing its risks.

### Second: Recommendations

1) Activating the role of the professional organizations and the control institutions in providing the suitable climate to improve the auditor's role in facing

technology's risks by updating the laws and the ethical rules is necessary.

2) Increasing the concern of the various institutions about the internal qualifications by describing his tasks in a way that suits the international standards is necessary, and increasing the concern about developing the auditor's qualifications by training courses about the technology's ambience and its risk is also necessary.

3) Using modern software such as the expert systems that helps the auditor to understand how to serve the new services is necessary.

4) The institutions' concern about the internal control systems and about their elements adaption should be increased in a way that keeps a pace with the uses of technology in operating its various activities.

5) Increasing the concern about the internal auditing staffs by putting the suitable laws that organize their jobs and their qualifications in a way that keeps them with a pace with the technology's developments is necessary.

6) Increasing the concern of the institutions clarifies the instructions, the standards and the procedures that are required for organizing the required security procedures, and it connects the accounting systems with the administrative systems to enhance the process of making decisions.

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