

THE RISKS OF ELECTRONIC ACCOUNTING INFORMATION SYSTEM IN THE CENTRAL BANK OF LIBYA

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ABSTRACT

Electronic accounting information systems of systems that face many risks that may affect the achievement of the objectives of those systems are considered, due to its dependence on the computer, where the synchronization of the great development of computers and information systems with the development of information technology and the rapid spread of this information and use it electronically, and the owner of this development in the use of electronic information many risks and problems that affect the information security, whether those risks were intended or unintended (internal and external) So aim of this research to study and identify the risks that threaten the accounting information systems in the Libyan environment within the Central Bank of Libya, and investigate in the most important reasons that lead to the occurring of these risks, and to investigate the procedures that prevent the occurring of these risks and researcher will be use the special questionnaire to serve the research objectives, and depends researcher in the methodology of this study on applied study to determine the risk of accounting information for the security of information and the reasons for these risks and actions that can be taken to counter the risks of the Central Bank of Libya through the sources of books, articles and papers published in scientific journals and specialized scientific messages judicial and reports issued by the Central Bank of Libya in the past years and also by distributing questionnaire will designed for distribution to the study sample in the study population and then the researcher will be analyzed this data using a program SPSS, and the study population of the Central Bank of Libya consists, and the study sample of individuals who represent the nature of their work within the bank's relationship with the search topic, This included managers and department heads, accountants, internal auditors and the Controller General of the Central Bank of Libya, in addition to the IT department staff in the bank for achieve the goal of this the study, verification of the role of protective measures to reduce the risk of electronic accounting information systems.

Keywords: The risks of electronic accounting information system.

Introduction

The current era is the era of information and communications revolution, the information is the most important attribute the last decades with the development of information technology has led to an increase in the size of Information that must be addressed and stored and provided to the system greatly complicating the process control and control, has spread application of information technology in various fields and at all Levels, and has become the use of computers in the accounting information processing is a necessary step very important for the production and consumption of information in the enterprise.

The rapid development of information technology and the widespread systems and software friendly to the user, in addition to the desire of enterprises in the acquisition and application of the latest electronic systems and programs defended Essential to the use of computers and perform many of the tasks and accounting jobs faster And more accurate, but on the other hand, this may be the tremendous technological progress carries with it many of the significant risks related to the security and integrity of electronic accounting systems, because the development of the Computing and information technology is not accompanied by a similar development in the practices and controls, Nor did it keep pace with a similar development in the knowledge, experience and awareness of employees to those installations, and may be exposed of Accounting Information Systems to the risks threaten the security and reliability and credibility of financial and accounting data provided by these systems to the Banks, which stems importance of electronic accounting information systems in banks than in other institutions in terms of material value, which comes as a result of the great development of the information industry computer technology large and reliable in the preparation of reports and save the financial statements which led to easy to copy, modify and change that data and files stored computer memory, and this thing is not accompanied by a similar development in the practices and controls applied in those banks which robbed Ali affect values and financial data extracted reflecting on the negative in the decision any decisions in senior management. (Huria Shaban Asharief 2006)

Therefore, the accounting information system in any bank must include a means of monitoring and controls The data until the submission of reports containing reliable information by system users Information. Accountants and has an important role in the development and evaluation of control and safety standards in the accounting information system. They work closely with systems designers during the development of the accounting information system until they are sure the control and safety standards appropriate and adequate, and the introduction of computers in the information system affects The means of control

and safety data, despite the advantages created by the automation of data accuracy. The speed, the special control problems may lead to the ease of data manipulation and inaccuracy. Output.

Here, a new and important responsibility in front of a large information management systems in banks show a the need to provide the means and methods necessary to ensure the continuity of the work of these systems correctly, and careful planning to cope with all the dangers that could lead to a malfunction work in that event, to be able to restart as soon as possible, and called this important function very necessary protection and security of information systems, and aims to protect this function computerized resources, Dangers of intended and unintended, and threats that can lead to non-operations, Allowed such modification or exposure data or software.

Problem Statement

The use of the electronic systems one of the important means in the modern means of information which are increasingly used by different economic units in general and accounting information systems, in particular technologies.

With so many web applications in different fields of accounting, the electronic publication of reports and financial statements represents one of the most important uses. Since there are many problems that can arise as a result of use of the electronic systems in various fields, in general, the emergence of these problems and their impact on the effectiveness of accounting information systems report is an important factor to be taken into consideration and study and analyze the risks in light of the so-called accounting information security. Which constitutes one of the main branches, and here comes the problem of the research into the possibility of identifying the risks of electronic accounting information systems.

Research Objectives

This study aims to:

1. Identify the nature of the risks that threaten the security of information systems, accounting Electronic banking environment and the rates of recurrence.
2. To identify the causes of the various risks that threaten the security of information systems electronic accounting at the banks.
3. Identify the protective measures adopted by banks To reduce the risks that threaten the electronic accounting information systems.

The Importance Of Study

The importance of this study of the importance of the subject itself and are summarized in the following points:

1. That electronic accounting information systems have become vulnerable to various risks that threaten the health and reliability, credibility and confidentiality, integrity and availability of the extent of Financial and accounting data provided by those systems, leading to easy The occurrence of such risks.
2. The existence of a clear confusion and lack of distinction between the risk of information systems security and inadequate Controls for the security of those systems of many researchers.
3. Most previous studies have focused on the risks related to the security of information systems Phases of the introduction and operation of the data, and completely ignored the risks associated with phase Important and vital stages of the system which is the output of the computer.
4. This study focuses on the importance of the risks facing the security of information system's Accounting banking sector and thus enables banks to benefit from the results of this study.
5. This will be reflected study to improve the performance of banks with regard to control Risks reinforcing their role in society and increase confidence in the banking system In general.
6. This study considered complementing to the previous of studies about subject of study.

Research Question

The problem the study is answering the following questions:

1. What are the risks that threaten the security of accounting information in the electronic banking systems?
2. What are the reasons for the different risks that threaten the security of accounting information systems occur electronic at the banks?
3. What protection followed by the banks to reduce risk measures that threaten accounting information systems?

Research Methodology

The methodology of this study in a study applied to identify risks that threaten the security systems Electronic accounting information and the reasons for the occurrence of such risks and actions that can be followed to face risks in the banks have adopted it in the following sources:

1. Secondary sources:

Secondary sources consist of books, articles and papers published in scientific journals. Specialized court.

2. Primary sources:

The primary sources in the adoption of the researcher to the questionnaire which will be prepared it specifically for this study and I will study list of risks that have been reached in previous studies, where it will distributed a questionnaire on the number of banks and will be assembling of questionnaires and I conduct descriptive analysis Statistical Package for the Social Sciences (SPSS).

The Limits Of Study

1. Human limit:

This included the heads of departments, accountants, internal auditors and general managers and financial controllers, in addition to the information technology department staff in banks. Financial controllers.

2. Reduce spatial:

The study will be limited to Central Bank in Libya only.

Research Hypotheses

1. The following risks do not occur frequently in banks

- Risks related to data entry.
- Risks related to the operation.
- Risks related to outputs.
- Risks related to the environment.

2. The reasons for the occurrence of risks that threaten the accounting information systems in electronic in Banks to:

Reasons related to the staff of the bank as a result of lack of experience and awareness and training.

Reasons related to the management of the bank as a result of the lack of clear policies and written and the weakness

Procedures and applicable regulatory tools.

3. There are no adequate protection measures to counter the risks of accounting information systems electronic in Banks.

And in this study will be use descriptive analysis of the study hypotheses and test hypotheses using statistical methods and using the program Statistical Package for the Social Sciences (SPSS).

The Theoretical Framework And Previous Studies

Considers electronic accounting information systems of systems that face many risks that may affect the achievement of the objectives of those systems; and due to the dependence on the computer, where the synchronization of the great development of computers and information systems with the development of information technology and the rapid spread of this information and use it electronically, and have the owner of this evolution in the use of many of the risks and problems that affect the information security risks, whether those were intentional or unintentional electronic information. Risks unintended more dangerous to the effectiveness of the performance of the systems are considered. The danger of information security problems in several aspects, including reducing the performance of computer systems, or completely sabotage; which disables the vital services of the facility, while the other side includes the confidentiality and integrity of information where available and eavesdrop on confidential information or change to a large material or moral damage may result.

Over the past two decades, the banking industry in Libya has experienced very significant development, which was the direct result of various factors, one of the most important being the implementation of new accounting information systems (AIS) and associated technologies. Most banks consider information technology (IT) as a route for service quality improvement, while others perceive it as a cost-effective expansion strategy (Kim and Davidson, 2004). There is a general consensus regarding the importance of understanding the patterns of IT adopted by bank customers (Pikkarainen, Pikkarainen, Karjaluoto and Pahnla, 2004), and several studies (Applegate, McFarlan and McKinney, 1999; Kim and Davidson, 2004) emphasize that financial institutions such as banks are distinguished from other businesses in their reliance on IT. As early as the 1980s, Porter and Millar (1985) found that banking was one of the most information intensive sectors. Banks tend to use IT to improve the quality of their services, increase efficiency and customer satisfaction, and offer wider choices with lower costs to the customer. In other words, banks are using IT for competitive advantage, and this requires from the banks the work on the provisions of the management control on banking business in order to maintain the security of banking information systems. Accordingly, this study is to identify the various risks that threaten the security of accounting information systems Electronic and identify the reasons for their occurrence and protection measures in place to address those risks.

AIS provide valuable information to a range of external users and internal users of accounting data (Romney and Steinbart, 2003). One function of AIS is to produce financial statements such as the Statement of Comprehensive Income, the Statement of Financial Position and other reports used by managers, creditors, current and potential investors and others. The data produced by AIS is considered an essential source of key information for the organization. It plays a major role in informing financial decisions either operational or regarding investment or funding. These decisions contribute to improving the bank's position and give competitive advantage, reflected in the market value of the organization, and therefore its sustainability in the marketplace. The banking sector is among the different economic sectors where the use of AIS has increased significantly in recent years, as it has contributed to banking operations, reducing cost and time and improving the quality of services delivered to the customers. (Omar Sharkasi and Martin George Wynn 2011).

This is the subject of the importance of risk accounting information electronic systems of the important topics and relatively modern, as it is by reviewing previous studies and research on the subject, we find that there is a scarcity in the Arab world on this subject with the availability of a few studies in the Western world and this, if anything it shows the relative modernity of the subject, despite the vital importance for many enterprises and banks. It should be noted that the recent research, which has in the subject was targeted to identify the potential risks that may face or threaten the security of those systems and to identify the causes and try to develop a list of the most important risk that the electronic accounting systems security, and then trying to test how substantial those and the importance of risks in practice through a series of field studies has in this regard, and that by identifying the rate of recurrence and the size of financial losses resulting there from. And of the most important studies in this field:

Study dr. Daw Hla and Susan Peter Teru (2015) title:” Efficiency of Accounting Information System and Performance Measures”.

Aimed this study is to examine the efficiency of Accounting Information System on performance measures using the secondary data in which it was found that accounting information system is of great importance to both businesses and organization in which it helps in facilitating management decision making, internal controls ,quality of the financial report ,and it facilitates the company’s transaction and it also plays an important role in economic system, and the study recommends that businesses, firms and organization should adopt the use of AIS because adequate accounting information is essential for every effective decision making process and adequate information is possible if accounting information systems are run efficiently also, efficient Accounting Information Systems ensures that all levels of management get sufficient, adequate, relevant and true information for planning and controlling activities of the business organization.

Study Reem Okab (2014) title: The Role of Accountants in E-accounting Information Systems’ Lifecycle at the Jordanian Banking Sector.

This study has aimed to identify the role of the accountants in the E-accounting information system lifecycle in the most important economic Jordanian sectors, which take advantage of the information technology in order to provide and invest the banking services; the banks seek to own software which can be developed in accordance with the development of the E- banking services as well as their needs of the data and reports. Such matter requires the participation of the accountants in the E-accounting information system lifecycle, contributing to achieve various advantages such as the reduction of the risks related to the systems as well as the appropriateness of the accounting information systems. The study identifies the role of the accountants in the main activities in the E-accounting information system lifecycle. The study has concluded that the accountants play a role in the different stages of the E-accounting information system lifecycle. Furthermore, it has found that the accountants faced various limitations hindering their participation; such limitations include a lack of skill and knowledge related to the information technology.

Study Aimen Ashnti (2013) title: “the effect of Using Accounting Information Systems (AIS) to improve effectiveness and efficiency of internal audit in the Jordanian Industrial Sector”.

The paper sought to demonstrate the role and importance of AIS to assist optimizing the use of human, technological and material resources and importance of using AIS in improving effectiveness and efficiency of internal auditing in the Jordanian Industrial Sector. The target was to identify the reality of implementing AIS, and increase the awareness of management and internal auditors of the importance of applying AIS in the Jordanian Industrial Sector (JIS).

The study population consisted of all public industrial companies listed on Amman Security Exchange. A questionnaire for a final sample of (60) respondent from the managers and the internal auditors working the industrial Jordanian companies. The study concluded that the application of AIS improved the effectiveness of internal auditing through compliance with the laws and policies identified in advance and by providing necessary timely.

Study Omar Sharkasi and Martin George Wynn (2011) title: “Deployment evaluation of accounting information systems in Libyan commercial banks”

Aimed this study to evaluating the deployment of accounting information systems in the Libyan commercial banks and this study was conducted on 14 commercial bank in Libya

And it has answered the following questions:

1. What is the extent and nature of AIS investment in the Libyan commercial banks?
2. Has investment in AIS been accompanied by significant change in business processes? If so, what role has this played in improving business performance in the Libyan Commercial banks?
3. What information systems strategies are being pursued by the Libyan commercial banks and are there any common themes in this respect in the banks that are studied?

And this study showed several contributions to the knowledge of AIS investment and business performance in the Libyan commercial banks. To the best of the authors’ knowledge, no previous study has been conducted in this specific area. The study provides a point of reference for subsequent studies in North Africa and the Arab world, and illustrates the benefits achieved by IS investment in Libya, thereby highlighting the opportunity for similar investment elsewhere in other commercial banks (both in Libya and elsewhere), and in other industry sectors in the region. These research findings may prove useful for the CBL as well as Libyan commercial bank managers, as case examples of what can be achieved, and what the key issues are in implementing AIS. In particular, the need for comprehensive training programmers for new technologies stands out as a critical success factor for benefits delivery. This should therefore help shape future training policies developed by the CBL. AIS investment in Libya had not been studied qualitatively before. This study was therefore unique in giving participants an opportunity to state their opinions about the importance of IS deployment in Libyan commercial banks, and to identify some of the problems that arise during the use of these packaged software systems. In addition, the research has shown that models formulated for application in the developed world can usefully be used and adapted to assess IS in a developing world commercial context. These models could therefore be further developed, and their application adapted to other business contexts. In summary, the study contributed to the existing limited studies on AIS investment conducted on Libyan commercial banks. It clearly showed that there has been significant investment in modern AIS, that these systems have been implemented reasonably effectively, but that there is significant scope for harnessing their potential to improve business processes and bottom-line benefits; and that investment in training and up-skilling of the workforce is a key element in achieving this. The opportunity to further explore and study AIS investment in Libyan commercial banks remains. This study was conducted while the adoption of advanced systems is still in its relative infancy in the Libyan commercial banking sector, and there is still incomplete network linkage between most of the

banks and their branches. It might be that different results would be obtained if this study were repeated after completion of such networks, with the Libyan commercial banks utilising the full capacities of their advanced systems. Despite its limitations, it is believed that these research findings provide a useful insight into the business processes and IT investment in Libyan banks and provide a starting point for future research.

Study Abu-Musa (2001) Title is "A conceptual Foundation for Organizational "Information Security Awareness"

The objective of this Study; to explore and test the significant risks that threaten the security of information systems, accounting electronic in the banking sector the Egyptian Arabic Republic , where it was the work of a survey of all the major banks operating in the Arab Republic of Egypt to get to know the opinions of each of the heads of computer departments and automated heads of the audit departments Interior, with regard to the important, which threaten the security of information systems, the risks of electronic in the banks they work for. The study results suggest that the input unintentional data by employees of banks, destruction unintentional data by employees of banks, the introduction of a computer virus into the system, natural disasters are man-made, the participation of some employees to use the same password, as well as directing data and information to persons not authorized to receive it for them is one of the most important facing the security of electronic accounting information systems in Egyptian banks. It should be noted that in all cases the heads of internal audit departments have given higher estimates of the rates of those risks occurring in the banks they work compared to estimates heads of computer departments automated, study results suggest that there are no fundamental differences between different types of banks but with regard to pass unauthorized its data / system by outside parties (hackers information).

Study Whitman (2003) Title "Enemy at the Gate: Threats to Information Security"

And it has focused this study on the answer to three paragraphs, the first relating to limit threats to information security, and the second concerns the degree of seriousness of these threats, and the third related to the number of times they occur (a month), where the researcher has made an assessment of a number of research articles in the field of information security, and limit threats to the security of Amuallomat.hat the researcher doing a survey of thousand employees, mostly from the information systems managers, managers and supervisors. The study showed that the threat is real, high seriousness, and under threat systems are difficult to protect, and the study focused on the administration should be informed more on information security threats, and must consciousness is increasing in all areas, and that the level of public understanding of the security inherent information through its relationship with the environment in which it operates.

Study Abu-Musa (2004) Title is "Important Threats to Computerized Accounting Information Systems" An empirical Study on Saudi Organizations.

And this is applied study to identify the significant risks that threaten the security of accounting information electronic systems in the Saudi firms, and I have the results of the study showed that a high proportion of enterprises that participated in the survey had suffered a significant financial loss; as a result of some of the infringements on the security of the accounting by the information systems, both by internal parties or third parties, as the study showed that many of these manipulations and misappropriations and encroachment on the security of accounting information systems have been discovered by accident; due to inadequate and effectiveness of the tools and controls in place, and that most of the misappropriations and manipulations were discovered have been resolved internally to preserve the reputation of the company and improve its image in the market were not disclosed or report them to the public. As for the extent of the realization of the Saudi firms significant threats to the accounting information and the frequency of those risks by the occurrence of systems, study results indicated that the most important risks that threaten the security of accounting information electronic systems in the Saudi firms are: the intentional and non-intentional introduction of incorrect data by facilities staff , the introduction of computer viruses to the accounting system, the participation of employees to use the same passwords, obliterate or destroy computer outputs, unauthorized disclosure of data and information via the display on screens or printed on the leaves, as well as directing publications and information to persons not authorized to have access that information.

Through access to previous studies, the researchers classified the risks faced by the electronic accounting information systems in general into four main categories:

First, the risk of input

It risks related to the first stage of the system, a data entry to the automated system and the stages are those risks in the following items: -

1. Input inadvertent (unintentional) data improperly by staff.
2. Intentional introduction (intended) to the data improperly by staff.
3. Unintentional destruction of data by employees.
4. The deliberate destruction (meaning) of data by employees.

Second, run the risk of data

It risks related to the second phase of the stages of the system is the stage of the operation and processing data stored in computer memory, and those risks are the following items:

1. Access the illegal (unauthorized) of data and system by staff.
2. illegal access to data and system by people from outside the facility.
3. Participation of many employees in the same password.
4. The introduction of a computer virus for the accounting system and the impact on the operation of the system data.
5. Intercept and access data from servers to users' computers.

Third, the risks of computer output.

Those risks related to the output stage of the data processing operations and issued by this stage of the lists of accounts or reports of magnetic tapes and files, and how to receive those outputs and those risks are the following items: -

1. Obliterate or destroy certain items of output.
2. Create outputs false / incorrect.
3. The data / information theft.
4. Make copies are not authorized (licensed) by the output.
5. Unauthorized disclosure of data through display on screens or printed on paper.
6. Printing and distribution of information by unauthorized persons so.
7. Publications and information distributed error is directed to persons not entitled to receive a copy of it.
8. Hand over sensitive documents to people who do not meet the security point of view for the purpose of tearing or disposal.

Fourth: environmental risks

It risks that occur due to environmental factors, such as earthquakes, storms, floods, hurricanes, and related to disrupted electricity and fires; and, whether natural disasters or abnormal, it may affect the accounting system work may lead to the work of equipment downtime and stopped for long periods, which affect the security of and the safety of the electronic accounting information systems.

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