Banks are financial institutions whose business is to accept deposits, make loans and advances out of these deposits, and the deposits are withdrawable on demand as and when made by the depositor. Thus banks conduct financial business employing the funds accumulated by them through deposits. Audit of the banks financial transactions which involve the use of depositor’s money is, thus, called for due to the very nature of the deposite funds. The nature and characteristics of bank funds are such that impose an obligation for a vigil on their proper utilization and certification by a competent authority, independent of the influence of the banker, that the utilization of funds has been safe and sound in such a manner that infuses confidence and satisfaction amongst the depositors at large.

Change in the nature and characteristics of funds accumulated by bank through deposits occur from the fact that such funds represent the savings of the depositors which they have parted with in the hands of the banks in order to seek security and earn a reasonable return on the deposits. But as the savings get transferred from the saver (depositor) to the banking institution, the deposits (savings) assume characteristics which they did not possess till they were in possession of the saver. Savings institutionalized by banks develop ‘fiduciary characteristics’, ‘return characteristics’, ‘liquidity characteristics’ and ‘investment characteristics’.

When the saver entrust the deposit to the custody of banker, the latter holds it as trust money. The banker assumes the fiduciary duty to ensure security of savers deposits in order to pay back the entrusted money on demand from the depositor.
‘Return characteristics’ imposes the obligation on the banker to pay a certain fixed amount of ‘interest’ to the depositor whose savings the banker is utilizing to carry on its business. The liquidity characteristics of institutionalized savings mandate that the entrusted deposit money should be kept all the time in a state of availability for the depositor. Finally accumulated deposits build up a huge pool of funds which develop investment characteristics. These funds can be invested to the deficit economic units, the industry. Investments fetch pretty return to the bankers with which they manage and run their business establishments as well as satisfy the return motive of the depositors (savers).

Thus, the savings having been institutionalized turn the individual interest into a public interest and, hence, the government comes to involve itself to protect and safeguard the interest of the society as arising from the characteristics of the deposit funds. The tool applied by the governments to safeguard the depositor interest is the audit of the financial transaction of the bank carried out through independent, competently qualified and often government approved persons in accordance with certain prescribed rules and regulations. Audit of bank account has, therefore, been made mandatory by the governments through legislation enacted to this effect. Jordan is no exception and the country has enforced audit of banks funds and financial transaction carried out over a period of a year. The banks on their part also establish audit function internally which is a continuous process of keeping strict vigil to ensure that banking operations are free from errors, frauds, misappropriations and other malicious abuses of banking procedures and practices.

**Statement of Problem**

The present study is accordingly, devoted to a detailed probe into the auditing practices followed by banking sector in Jordan. It also focuses on the use of
information technology for auditing in Jordanian banks. The study has set the scope to evaluate the nature, adequacy, and effectiveness, uniformity of audit patterns, auditor’s contribution to good relationship, and the degree of success of prevailing audit practices in Jordan. Lastly, the study suggests measures to rectify deficiencies wherever they occur in the system and to bring about improvement in the practices of bank audit in Jordan.

**Literature Review**

However, prior to embarking upon the study itself, a survey of available and pertinent published work on the subject of this study is made. This would enable to have an insight into the work as also the specific aspect of banks which have been covered in the work. The review of literature presented below recounts the work so far done in the field of present study, the nature of the work, the aspects dealt with as well as a brief outcome emerging from such write ups and studies.

1. Parwal and Kapoor (1981), in their book entitled “Auditing theory and practice”, present the theoretical text of auditing for the learners and those scholars and academics who are teachers and taught of the subject to prepare themselves for teaching and examination. The book is a good guide for the uninitiated in knowing about the subject of auditing. The work contains practical material that explains the application of auditing principles to the practical situation. 1

2. Gabah Ahmad Sameer (1985), in his book entitled ‘Modern Direction in Control and Auditing for Information Electronic System”, discusses the techniques of control and auditing applied for electronic information system and points out how improvement can be brought about to have a better effective system of control and auditing through application of
electronic information programmes. The author recommends some modern
technology based direction to this end.\textsuperscript{2}

Contemporary Studies, Practices and Cases” makes a mention of various
standards and practices observed in modern times for auditing of financial
records of organization by auditors in general. He also cites cases of
practical nature with reference to specific accounting and vouching
problem and its fixation with application of auditing methods and
principles. Various systems of auditing programs adopted by organizations
for internal as well as periodical check on maintenance and recording of
account has also been included in this work.\textsuperscript{3}

enlightens on the use of information technology in auditing. He deals with
the program of auditing process explain the preparation of paper work as
well as formulation of certification and choosing of their components and
confirmation of the results. Application of information technology has also
been described with reference to formulation of memories, report writing,
calculation and estimation of bank credit transaction, interest rates,
conformance between files and computerized financial data so as to
discover any contradiction between them.\textsuperscript{4}

Control in Banks”, has devoted his educative work to auditing practices
and standards related to bank specifically. The book makes a general
review of the measures exercising control on accounts in the banks as well
as it deals with the general principle of auditing of bank accounts. He
emphasizes a routine auditing practice and a system that ensures an automatic cross-check of accounts transaction by more than one individual in the organization. Such a system eliminates all chances of financial malpractices and makes the accounts keeping smooth and fair.\(^5\)

6. Gupta, Kamal (1990), in his book entitled “Contemporary Auditing” sets out theoretical framework of auditing as applied to both general type of organization as well as to specific nature of organization like insurance companies, banks etc. As a text book it serves well scholars of accounts and auditing and can be a good guide to the practicing professionals in the field of auditing.\(^6\)

7. Mark Penno (1990), in his article entitled “Auditing for Performance Evaluation”, formulates a principal-agent setting to study how an internal audit function can produce near best results. The quantity of verifiable information produced by the internal audit function is constrained by either the time an internal auditor can spend verifying evidence or the time that the employees have available to make such evidence verifiable (e.g. time spent on paper work). The article makes a study of the effectiveness of the policy taking into consideration both the limited resources available to the internal audit function and the constraint in which a salaried employee is permitted to present a limited amount of documentary evidence for audit. But this policy may not be successful in public view if internal auditor’s independence is compromised. Employees are motivated to use financial reports audited by external auditors. However, inadequacies in financial reports may be mitigated by allowing employees discretion over accounting alternatives.\(^7\)
8. Ellis D., Barker R., Potter S., and Pridgeon C. (1996): in their study entitled “the Evaluation of Information System: A Protocol for Assembling Information Auditing Package”, mention that auditing is potentially useful technique for evaluation; management and development of information system. However, existing audit literature is highly variable. But audit must meet standards of explicit quality. They conclude that information auditing is a highly diverse field and wide variety of objectives can be achieved. Methods, analysis, and presentation forms are numerous and must be carefully selected to complement the objectives with appropriate technique so that the results are credible. 

9. Agile Ameal (1996), in his case study “Extent to Which Jordanian Banks Use Information System as a Competitive Tool”, found that Jordanian banking sector use effectively the information system as a competitive tool and that it was linked with banks competitive strategy. The study, moreover, found that information system further provided the banks with competitive advantage as it helped to enhance the value of the services provided to customers.

10. E. Koskivaara (2000), in his article entitled “Artificial Neural Network Models for Predicting Patterns in Auditing Monthly Balances”, builds an ANN-based monitoring tool which forecasts and recognizes patterns when auditing financial accounts in monthly balances. He illustrated how an auditor may use an ANN model to support the planning of auditing by a graph on the computer screen that signals that either no further audit is required or further audit is required. The neural network application (NAA) succeeded in predicting the future account values as well as in
monitoring the material errors. The study concluded that ANN method could provide improvement in the efficiency and effectiveness in auditing financial records.\textsuperscript{10}

11. Mustapha Kamal Alden (2001), in his book entitled “Advance Study in Accounting and Auditing”, provides a text for study of advance financial accounts, their nature, principles and methods of recording with practical example of such accounts for scholars and accounts professionals. The book also deals with auditing principles and methods in a theoretical manner and explains the standard and practices of auditing, different types of accounts as well as precautions to be taken by auditor and their rights and obligations in conducting the audit of financial accounts and statements of various organizations.\textsuperscript{11}

12. Aizalden Zirena (2002), in her dissertation on the “Impact of Information Technology on Decision Making in Jordanian Banking sector”, by using a sample of 164 top managers in these banks found that computer based information system applied in Jordanian banking sector had a positive impact on top management decisions. It was more effective, provided accurate and appropriate information availability, time saving and ensured best use of human resources. She also found that MIS does allow more accurate and flexible decisions through its capability in manipulating information input and output.\textsuperscript{12}

and preparing various financial statements annually prepared by the organizations. The book also provides material to gen up the learners about the auditing techniques of various accounts as also the methods and systems that can be usefully employed to keep an all the year round check on financial accounts so as to plug the chances of malpractices in financial transactions recorded in the book of accounts.\textsuperscript{13}

14. Alwardat Abdul Allah khalaf (2006), in his book entitled “Internal Audit between Theory and Practice”, goes intensively to deal with the internal audit systems and their efficacy for various organizations. The book stresses the need for internal auditing in organizations more importantly in large size concerns dealing in financial transaction with great frequency exposed to risks of financial irregularities. The book also makes a relative study of internal audit on theory as well as in practice and brings to fore the incongruousness between them. The book finally counsels effective measures to strengthen the internal auditing system and methods as well as reconciliation of internal audit in theory and practice.\textsuperscript{14}

15. Obaidat, Ahmad (2007), in his article entitled “Auditors’ Compliance with International Standards in Auditing”, examines the degree of compliance of Jordanian auditors with ISA. According to statistical test results the study resulted in null hypothesis which means that Jordanian auditors complied with all auditing standards. The result was confirmed by the World Bank Report. Achievement of this result was due to strict conditions and requirement of Jordanian Laws regulating the audit profession to be assigned to a Certified Public Accountant (CPA) as well as imposing strict legal liabilities. The study recommended that there
should be more attention by auditors and institutions regulating the audit profession in Jordan towards compliance with audit standards, especially those concerning internal auditing and imposing on auditor’s responsibility to detect fraud in financial transactions and statements at the appropriate stage. Comprehensive steps should be taken to improve the ISA compliance in Jordan.\textsuperscript{15}

16. Abed Alrahem Alqadomy, and Ihab Nazme (2008), in their article “Banks to Apply Decisions of the Commission on BASEL II Internal Control” stress that in order to avoid the potential needs and challenges that could jeopardize market position banks need to ensure that they have a comprehensive implementation approach in place. Banks also need to consider how BASEL II’s challenges and opportunities could affect their business and their customer relationship over time. The study traces the extent to which banks in Jordan apply Basel’s principle for internal control. On the basis of ANOVA, T-test and F-test –applied, the study concludes that all banks in Jordan highly apply the principles of BASEL II, and that no significant difference exist between national Arabic banks and international Banks at Jordan in applying these principles.\textsuperscript{16}

17. Al Anezi Samiah (2008), in her article entitled “Extent of Commitment of Jordanian Banking sector to the Internal Control Requirement of the Electronic Commerce Activities from the External Auditor’s Point of View” measures compliance with the internal control requirement of the electronic commerce activities on the basis of four parameters, viz. managerial, legal, security & protection, and technology. She surveyed 45 external auditing offices of Jordanian Banks through a well designed
questionnaire to test her hypothesis. The study concluded that Jordanian banking sector are committed to only three internal control requirements of the electronic commerce activities viz. managerial, technological, and security and protection. They are found not committed to the legal and legitimating requirements because of the lack of laws which control the e-commerce activities. Recommended that banks must adopt legal & legitimating policies to enhance their legal situation, re-engineer their processes and structures to control the speed of technology development in e-commerce enrolment, enhance their technological infrastructure and develop their program and procedures of security to compete successfully in the market.17

18. Gun Ho Lee (2008), in his study “Rule-Based and Case Based Reasoning Approach for Internal Audit of Banks” stresses that finding suspicious problems in a commercial bank is a time and effort consuming process. There has been auditor’s inconsistent judgment even for same problems as the pervious cases in the existing audits. The systematic approach in this study can consistently and efficiently audit even specific and time – urgent problems. Since the output of audit is related to punishment of employee, it is very sensitive for all concerns to deal with a matter. Consistent dealing might be objective and be acceptable for the audits. The successive use of system and the output quality of the system mainly depends on a plenty of pervious cases stored and how the case- based and rule- based issues are well constructed and managed. An efficient internal audit system simplifies and improves the auditing process and enforces bank standards which in turn contribute to stabilize business management.18
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19. Helme Ahmad (2009), in his book entitled, “Development of Auditing Standards – International Affirmation and Moral Ethic Rules”, deals with the development of auditing standard, their need and application as well as the utility and the benefits accruing from them. The text of the book stretches to the international affirmation of the standards developed for auditing the financial accounts of various organizations. The book also enlightens on the moral ethic rules of auditing and stresses that observance of these rules of ethics in auditing is the cornerstone of the success of any auditing standard, system or method.19

Research Gap

The above review of the earlier studies on auditing standards procedures and practices bring to fore the gap that distinguishes the present research work from the work so far done. The up-to-date pertinent published literature scanned here in the form of books and articles both domestic and foreign relates to auditing text and practices useful for teachers and taughts as well as audit professionals. There is complete absence of any study done so far relating specifically to the auditing practices of banks in Jordan. Hence this research project has been undertaken with a view to studying the auditing practices obtaining in banks of the Kingdom of Jordan and to highlight their effectiveness, uniformity of patterns, impact on relationship and compatibility with the standard auditing practices followed by banking institutions. The scope of the study comprises an examination of internal and external auditing administration, their effectiveness, their strength and weakness and the measures required to tweak the auditing practices in the banks of Jordan.
RESEARCH OBJECTIVES

The main objectives of this research study are as under:

(1) To ascertain the audit procedures/system and practices in the banking sector of Jordan.

(2) To determine if these audit procedures are compatible to standard auditing practices followed in the banking sector of Jordan.

(3) To evaluate the effectiveness of internal audit procedures in the banking sector of Jordan.

(4) To identify the information technology used in auditing practices in the banking sector of Jordan.

(5) To evaluate the prospects of auditing practices in Jordan sector banks.

(6) To ascertain the uniformity of auditing pattern in the banking sector of Jordan.

(7) To assess the impact of audit practices on the relationships between stakeholders.

(8) To put forward some suggestions for the improvement in auditing practices in the banking sector of Jordan.

RESEARCH HYPOTHESIS:

The review of literature and the pilot study facilitates the following hypothesis.

Ho1: Auditing practices in the banks of Jordan are effective.

Ho2: Uniform patterns of internal auditing are used in the banks of Jordan.

Ho3: There is effective relationship between auditors, bank employees and Customers.
Ho4: Auditors feel responsibility to work in the bank.

RESEARCH QUESTION:

(1) Are there any significant differences between the mean score of studied variables (effectiveness) uniformity, relationships and responsibility with consideration of experience categorized?

(2) Are there any significant differences between the mean score of studied variables with consideration of gender?

Research Methodology

The study uses both primary and secondary sources for collecting facts and figures relating to the topic under research. Secondary data includes previously published pertinent literature, books, articles, periodicals, bulletins, magazines and specialized journals. Such information provides the basis for building up the theoretical and conceptual framework of the study.

Primary data is used to make the study up to date and realistically representative of the facts of auditing practices as prevailing in Jordanian banking sector and the degree of confidence and trust the Jordanian society reposes in the auditing standards and practice followed by the banks. Primary information and data are based on a field study. They are obtained right from the horse mouth through a well designed questionnaire to elicit information necessary to the requirements for testing the hypothesis of the study. The questionnaire will be served on each member of the universe based on the sample of banks and customers chosen through statistical random sampling technique. Administration of the questionnaire is being done through mail to the member of universe. Bank official will be personally interviewed for discussion on various aspects of bank audit. The information thus collected shall
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be classified, analyzed and interpreted through application of statistical tools and logical inferences drawn for the purpose of the study.

Beside the above primary and secondary source of information, the study makes use of informal channels of extensive discussion and critical comments of academics and professionals in the field of banking industry and auditing practices. Their view and comments have also been incorporated which have greatly enriched this study in its contents and outcome.

Data Analysis and Hypothesis Testing Methods

Statistical tools used for analyzing the data and testing study hypotheses are as under:

1. Working out frequency rates and percentages relevant to the questionnaire paragraphs.
2. Calculating standard deviations and mean in all questionnaire paragraphs.
3. Using the sample test for testing the general hypotheses.

Plan of research

The study is spread over seven chapters each devoted to the subject matter as elaborated hereunder. The first chapter is devoted to ‘Introduction’. It explains the topic of research, its significance and implications. It also deals with the need of auditing programs in banks and the imperative that auditing should conform to the internationality accepted norms and standards in order that those concerned with banks repose full confidence and satisfaction in the conduct of financial business by the banks.

The second chapter presents review of the literature. It goes through the pertinent published work so far done by scholars, academicians and professional in the area of commitment to auditing practices and compliance with the standard of
The review of literature brings to fore the gap emerging from these works for further research. The gap justifies the problem of research which this study has set for itself as no work has been done so far specifically on the topic of research under current study. Also spelled out in this chapter are the objectives of the study, the hypothesis to be tested, the scope of study, the methodology and limitation of study and the full view of the plan of work envisaged for conducting this study up to the completion.

The third chapter enlightens on the evolution development and growth of the banking sector in Jordan with special emphasis on the commercial banking segment in Jordanian banking industry. The chapter comprises two sections. The first section presents an overview of the Jordan’s economy and dwells upon the development and growth of the various economic sectors in Jordan as well as presents the economic indicators that highlight the current status of Jordan’s economy. The second section traces out the evolution of banking in Jordan starting from foreign-owned banking sector and progressing up to the formation of Jordanian owned national banks. Also highlighted is the current growth of their assets, expansion of deposits as well as loans and advances, the rate of capital formation, and there contribution to Jordan’s economy.

The fourth chapter is devoted to a detailed study of the auditing and internal control practices of banking sector in Jordan. It assesses the nature and types of auditing practices as obtain in Jordan’s banking sector. Also it goes into the internal audit control system, internal audit programmes and procedures, the organization for internal audit control, the functioning and effectiveness of such control. The study ascertains whether the internal control systems, programmes and procedures followed
in Jordan banking sector meet the international standards. Shortcomings if any are identified and highlighted.

The fifth chapter discusses the Information Technology applications and Audit in banking Sector of Jordan. It assesses the depth and extent of the application of Information Technology and the nature of IT audit control in Jordanian banking sector. The effectiveness of the use of this Technology is gauged. The age and stage of the Information Technology is also taken into account so as to determine its compatibility with the requirements of modern day internal audit controls enforced in the banks internationally.

The sixth chapter makes a critical analysis of the work done, as a whole, in this study. Through application of statistical tools, as described in the methodology, the data collected and used in the study is coordinated and interpreted.

The seventh and the final chapter is devoted to a critical examination of the interpretation in order to draw logical conclusions. The outcome has its bearing on the hypothesis which is tested positive or negative. Based on the conclusions, the recommendations have been formulated. A pragmatic practical and long-range view has been taken for fixation of the negative aspects emerging through this study and the corrective suggestions have been made to overcome them accordingly.

**Limitations of research**

The study has the handicap of the following limitations:

1. It was difficult to collect necessary data from all over the country. Yet best endeavors have been made to collect latest information and data from as many sources as possible, especially from the Central Bank of Jordan.
2. Primary data has been collected through a questionnaire served through mail by the researcher. Some persons reluctantly divulged their mind to answer the
questions while others lacked confidence in answering the questions. Hence the possibility of some biased and irresponsible information creeping into interpretation relied on for analysis and interpretation in this study cannot be ruled out.

3. In some cases, the data related to the study have not been available in the form and at the time required for this study.

**Scope for Further Research**

The study focuses only on one aspect of the complex functions of the banks in Jordan and that too relating to the banking sector segment. It simply deals with probing the auditing practices of banking sector in Jordan, leaving aside a number of other practices followed and prevalent in banks in the sphere of banking sector. Thus, a wide scope is available for further research in respect of banking sector of Jordan.

With the afore explained plan of work, this study proceeds further. The next chapter is devoted to present an overview of the banking sector in Jordan.
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