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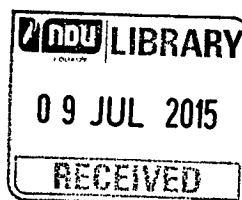
**The Audit Expectation Gap in the Lebanese Commercial  
Banking Sector**

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**A Thesis Submitted in Partial Fulfillment of the  
Requirements for the Degree of the Master of Business  
Administration (M.B.A.)**

**NDU-Lebanon  
2014**



## Approval Certificate

### The Audit Expectation Gap in the Lebanese Commercial Banking Sector

BY

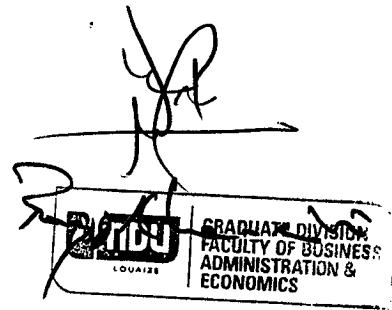
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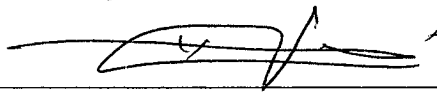
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## DECLARATION

I hereby declare that this thesis is entirely my own work and that it has not been submitted as an exercise for a degree at any other University.

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Lara Nabil Ghafary

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## ABSTRACT

**Purpose** – The purpose of this thesis is to attempt to investigate the potential existence of an Audit Expectation Gap (AEG) in the Lebanese Commercial Banking Sector and assess the understanding of bank employees of the standards of internal audit as promulgated by both the Institute of Internal Audit and the Lebanese Central Bank.

**Design/methodology/approach** – Deductive in nature, this thesis uses a questionnaire survey to examine the existence of a significant AEG in different areas of audit.

**Findings** – The thesis finds evidence that an AEG exists in the areas of fraud detection and risk. However, the study suggests that the gaps in those areas seem to be hard to bridge irrespective of the differences in the educational and professional status.

**Research limitations/implications** – This research can be extended through assessing the reasons behind the current status of education not being able to bridge the AEG.

**Practical implications** – At a practical level, this thesis highlights the existence of a significant gap in the understanding of bank employees of the role of internal auditors. This knowledge can be used by proper authorities to introduce actions that might help in having better informed employees in the commercial banking sector with regards to the role of the internal audit function.

**Originality/value** – The paper contributes to the existing literature by presenting evidence of the existence of an AEG in the Lebanese commercial banking sector. This paper is also of originality since it studies the existence of an AEG with respect to the role of the Internal Audit function within a bank.

**Keywords** – Audit Expectation Gap, Internal Audit, Lebanon, Lebanese commercial banks.

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## **Chapter 1**

### **Introduction**

#### 1.1 General background about the topic

The profession of Auditing is thought to date back to the year 4,000 B.C. (Ramamoorti, 2003). Brown (1905, p.74) observed that the advance of civilization has made it necessary for one man to be entrusted with the property of another, and thus the apparent inevitability to check upon the fidelity of the former was the first step towards building the function of Audit. Over time, trades, businesses, unions and organizations underwent increasing expansion and growth. This has made it gradually more difficult for those organizations to be able to maintain the efficiency and control over their operations, and management found that it is no longer possible to visually observe all of its operating areas. To deal with this new problem, new staff people were appointed to be especially responsible of reviewing and reporting to the management what was happening within their organization. These people came to be known as "internal auditors". The function of internal audit varied greatly over the years, and it has been struggling to be viewed and considered as an added value to the company and as a partner in the company's achievements, instead of just being viewed as a watchdog over the operations (Ramamoorti, 2003). Internationally, the year 2010 witnessed the 2010 Global Internal Audit Survey conducted by The Institute of Internal Auditors Research Foundation in 22 languages and based on the results of the survey; the Institute of Internal Auditors announced many revisions to the International Standards for the Professional Practice of Internal Auditing. Although the standards of internal audit have undergone major corrections, the investors and the public still have higher expectations towards internal auditors. This profession has been distressed with high levels of accusations and litigations over the years. Whenever a company is found to be in a position of serious financial difficulty, it is generally the auditors that are believed to be liable for not expecting or foreseeing this risk (Godsell, 1992). In many cases, the auditor will be performing in accordance with the auditing standards set by the IIA and still be held

accountable for any business failure, which means that any failure will ultimately be declared as an audit failure (Almer and Brody, 2002). In short, auditors' and non-auditors' views differ in interpreting the role and scope of work of the auditor. This has created what is known to be "The Audit Expectation Gap".

## 1.2 Need for the study

The Audit Expectation Gap (AEG) is not a new concept. The term was first introduced to the literature by Liggio (1974); however the concept can be traced back further, as far as the birth of audit in the nineteenth century (Humphrey and Turley, 1992). Since then, every researcher on the subject has given this concept his own definition; the Audit Expectation Gap is defined in this thesis as the gap between what employees perceive the role of the internal auditor to be, and what the Standards of Internal Audit indicate his or her role to be. Previous studies have shown the existence of an AEG in the world of audit, studied the difference in its magnitude, identified the factors contributing to it, and suggested possible solutions to reduce it. Many researchers have studied the AEG with respect to the role of the external auditor, however very few have focused on the role of an internal auditor within an organization. This study will focus on the AEG with respect to the role of the internal auditor. This aspect was chosen as an area of focus in this thesis since the internal audit function is having increasing interest in every sector all over the world. The Basel Committee on Banking Supervision, for example, issued a Consultative document on December 2011, under the name "The Internal Audit Function in Banks" and in this document, it insisted that every bank should have a "permanent internal audit function". Although the committee does not have the authority to enforce them, but its recommendations are mostly put into effect through national regulations and laws that are based on the committee's recommendations. In Lebanon for example, the Central bank of Lebanon (BDL) has issued on the 15<sup>th</sup> of December of the year 2000 the Basic Decision No. 7737 relating to "Internal Control and Internal Audit in banks and financial institutions" and enforcing the establishment an internal audit unit that meets many conditions and standards. This decision was amended pursuant to the Intermediate decision No. 10707 of April 21, 2011. Another Basic Decision numbered 9956 of July 21, 2008 related to the establishment of the Audit

Committee was also issued by BDL. Such decisions show the interest that BDL has in the profession of internal audit and in its role within the banks. One main research was done in Lebanon by Sidani (2007) and studied the gap between the understanding of auditors of their profession and the perceptions of others, especially in the area of the auditor's role in fraud detection. His study targeted users of the financial information who are non-accountants and who hold different managerial positions in many of sectors of the Lebanese economy, however, he recommended further study.

### 1.3 Purpose of the study

The increasing interest in the profession of internal audit in the Lebanese commercial banking sector in addition to the absence of a study focusing on the existence of an AEG in this sector, and the absence of a study showing the way bankers view the profession of Internal Audit, have lead to the target of this thesis. This thesis attempts to investigate the potential existence of an Audit Expectation Gap in the Lebanese Commercial Banking Sector and assess the understanding of the bank employees to the standards of internal audit as promulgated by both the Institute of Internal Audit and the Lebanese Central Bank. The research questions to be targeted in this thesis are the following:

- Do Lebanese employees of commercial banks accurately understand the standards of internal audit?
- Is there an Audit Expectation Gap in the Lebanese commercial banking sector?
- Is there any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level?
- Is there any significant linear relationship between the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level?

This thesis will address these questions and attempt to answer them throughout the subsequent chapters.

#### 1.4 Thesis Outline

The remainder of this thesis is divided into four main chapters. The next chapter, The Literature, focuses on offering a complete and general knowledge about the area of study, Internal Audit. It defines the Audit Expectation Gap and talks about previous studies and models addressing the researched topic in different countries and introduces factors that enlarge or reduce the Audit Expectation Gap. It finally introduces the target of this thesis and the importance of performing such a study. Chapter three in the thesis, The Methodology, describes the steps taken to address the research aim. It provides a complete and clear description of the methods followed throughout the research and outlines the reasons behind choosing a particular approach to solve the research questions. It also illustrates the strategies used to collect and analyze the data. This chapter addresses the philosophical angle of the study, the reasoning approach, the population and the sample, and the research strategy, design and methodology are also clarified. Chapter four of the thesis, The Analysis, evaluates and explores the data collected through the data collection tool. The correlations between different variables is shown and explained, the results of the analysis are explained from the descriptive and inferential statistics angles. The last chapter, The Conclusion, presents a final wrap up of the entire thesis, summarizes the process of work and sums up the main findings of the study. This chapter also discusses the validity and limitations of the study. Finally the possibility of future research on the topic is argued along with the final remarks on the topic.

## **Chapter 2**

### **Review of Literature**

The study of literature is an important part of any thesis because it investigates the main theories in the field of study, and thus helps in discovering what knowledge exists related to the researched topic. Increasing this knowledge will ultimately lead to the generation of original ideas and will show the relevance of the topic as compared to previous studies. When the existing literature on the topic has been reviewed, the researcher will be able to extract the key factors to be used in building a data collection tool. This will justify the proposed methodology and help in avoiding duplication of results.

To reach a full understanding of the topic, a thorough and in depth study of the related literature is needed, and this is the only way to truly understand the significance of the researched topic. Without such an understanding, the study will be fragile, unreliable and most probably worthless. A serious study should have a strong base, the strongest of which is the previous knowledge acquired in this specific area of research. Building up on this solid knowledge, and starting from where others have left off, will almost certainly insure an original, relevant and valuable research.

The remainder of this chapter is divided into four parts. The first introduces and defines the general area of research, Internal Audit. The second part defines the Audit Expectation Gap. The third talks about previous studies and models addressing the researched topic in different countries and it introduces factors that enlarge or reduce the Audit Expectation Gap. The last part of this chapter offers a conclusion to summarize all the previous points.

## 2.1 State of knowledge in the area of Audit

The word 'Audit', first originated in the early 15<sup>th</sup> century, from the Latin word *auditus* "a hearing", the past participle of the word *audire* "hear", since the act of officially examining the accounts was originally an oral procedure (Audit, n.d.). However the profession of Auditing is thought to date back to the year 4000 B.C. (Ramamoorti, 2003). From this angle, Brown (1905, p.74) observed that "the origin of auditing goes back to times scarcely less remote than that of accounting... Whenever the advance of civilization brought about the necessity of one man being entrusted to some extent with the property of another, the advisability of some kind of check upon the fidelity of the former would become apparent."

In the years prior to the incorporation of The Institute of Internal Auditors in 1941 in the United States of America, organizations underwent unmatched growth and expansion. This has made it gradually more difficult for those organizations to be able to maintain the efficiency and control over their operations. The responsibilities of the organizations further expanded and management found it no longer possible to visually observe all of its the operating areas. Management could not have the sufficient personal contact with every individual who reported to them, whether directly or indirectly. To deal with this new problem, new staff people were appointed to be especially responsible of reviewing and reporting to the management what was happening within their organization. These people came to be known as "internal auditors." The internal audit function has been varying greatly over the years, whether in the number of people assigned to perform this function within the organization, or in the scope and the nature of its work. In some of those organizations, the internal auditors strictly check the routine operational and financial activities and emphasize mainly on security, compliance, and fraud detection. In others, internal auditors are expected to analyze and appraise more substantive operational and financial activities and thus they are entrusted with higher levels of status (Ramamoorti, 2003).

Historically, organizations viewed the Internal Audit function as a policeman or even a watchdog, which means that it was viewed only as an entity that is forced upon the



company to monitor its employees and operations. Over the years, this profession has been struggling to be viewed and considered as an added value to the company and as a partner in the company's achievements. In fact, the profession of internal audit has gone through many changes over the years, it has been working relentlessly to prove its professionalism and its potential to add value to the company. The shift in internal audit from the Second World War till our days can be summarized as a shift from validation of transactions, to what we call today system auditing (Ramamoorti, 2003).

Today, the Internal Auditor is not only a controller, but also an advisor. The Institute of Internal Auditors (IIA) has developed a definition of internal auditing that is considered to be globally accepted; it is as follows:

“Internal Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes” (The Institute of Internal Auditors, 2014).

The profession of Internal Audit gets its comprehensive guidance from the International Professional Practices Framework (IPPF) set by the IIA. The IPPF identifies the official definition of internal auditing, the Code of Ethics, the Position Papers and Practice Guides, the Practice Advisories, the International Standards for the Professional Practice of Internal Auditing (the Standards), and developmental and practice aids. The conformance of all members of The IIA and Certified Internal Auditors with the Standards and the Code of Ethics set by the IPPF is mandatory.

Internationally, the year 2010 witnessed the 2010 Global Internal Audit Survey: *the* most comprehensive global study to ever be conducted on the practice of internal auditing. This study was based on a survey conducted by The Institute of Internal Auditors Research Foundation (IIARF) in 22 languages and included responses from participants in more than 107 countries. Those practitioners in internal audit were asked to express their views towards the *Standards*. Based on the results of the survey, in late 2010, the IIA declared twenty six revisions to the International Standards for the Professional

Practice of Internal Auditing. Of those twenty six revisions that were announced, fifteen standards were changed, three new standards were added, and two standards were entirely deleted. Six of the glossary definitions were also revised. The changes took effect on January 1, 2011. According to the report issued in October of 2010 by the IIA, some of the major focus areas in the next five years for internal auditing were introduced and auditors were recommended to place less emphasis on some other areas (The Institute of Internal Auditors, 2010). Although the standards of internal audit have undergone major corrections, the investors and the public still have higher expectations towards internal auditors. This profession has been distressed with high levels of accusations and litigations over the years. Whenever a company is in serious financial difficulty, it is generally the auditors that are believed to be liable for not expecting or foreseeing this risk (Godsell, 1992). In many cases, the auditor will be performing in accordance with the auditing standards set by the IIA and still be held accountable for any business failure, which means that any failure will ultimately be declared as an audit failure (Almer and Brody, 2002). In short, auditors' and non-auditors' views differ in interpreting the role and scope of work of the auditor. This has created what is known to be "The Audit Expectation Gap".

## 2.2 Previous research

The Audit Expectation Gap (AEG) is not a new concept. The term was first introduced to the literature by Liggio (1974); however the concept can be traced back further, as far as the birth of audit in the nineteenth century (Humphrey *et al.*, 1993). Since then, every researcher on the subject has given this concept his own definition. Liggio (1974), for example, distinguished between the users of the financial statements and the independent accountants and defined the AEG as the difference in the way each of them observes the levels of expected performance. The Cohen Commission Report (American Institute Certified Public Accountants, 1978) defined the gap as that between what the auditors themselves should and can expect to accomplish in a certain situation, and what the public needs and expects them to do. Other studies, like Monroe and Woodliff (1993), explained the AEG as the difference in the beliefs concerning the responsibilities/duties of auditors. They also took account of the difference in

expectation between auditors and the public as to what should be communicated in the audit reports. Some researchers identified the gap as the difference between what the public usually expects and what the auditors believe (McEnroe and Marteens, 2001; Guy and Sullivan, 1988; Gramling *et al.*, 1996; Koh and Woo, 1998), while others said the difference is between what the public expects and what the actual profession entails (Jenning *et al.*, 1993; Sikka *et al.*, 1998; Lowe, 1994; Dixon *et al.*, 2006). According to Power (1998), the gap is the product of an idealization of the profession by the public, which is far past the actual performance practices set for this profession. Eden *et al.* (2003) explains that the public expects the auditors to evaluate the performance of the management and to be able to uncover all errors within the business; however, auditors might consider that their role is to evaluate the fairness of the financial reporting. However, Porter (1993) had a different definition and a completely different view on the subject. She noticed that previous definitions did not account for sub-standard performance by auditors. She did propose that the gap should be named the “audit expectation-performance gap” and is defined as “the gap between society’s expectations from auditors and auditors’ performance, as perceived by society” (Porter, 1993). Researchers De Martinis and Burrowes (1996) and Shaikh and Talha (2003) adopted definitions including the performance of auditors as a cause to the AEG.

When comparing all the previous definitions of the AEG set by different researchers, it can be deduced that there are four different approaches to defining the gap:

- Gap due to unreasonable expectations by the public towards auditors
- Gap due to substandard performance by auditors
- Gap noticed by comparing the views of public to views of auditors
- Gap noticed by comparing views of public to what the profession entails

Table 1 gives a general view of what was the approach of each researcher.

	Unreasonable Expectations by Public	Substandard Performance by Auditors	Views of Public versus Views of Auditors	Views of Public versus Profession
Liggio, 1974			×	
Cohen Commission, 1978	×	×		
Guy and Suliva, 1988			×	
Porter, 1993	×	×		
Monroe and Woodliff, 1993			×	
Jennings <i>et al.</i> , 1993				×
Lowe, 1994				×
Gramling <i>et al.</i> , 1996			×	
De Martinis and Burrowes, 1996		×		
Koh and Woo, 1998			×	
Sikka <i>et al.</i> , 1998			×	×
Power, 1998				×
Mc Enroe and Marteens, 2001			×	
Shaikh and Talha, 2003		×		
Eden <i>et al.</i> , 2003			×	
Dixon <i>et al.</i> , 2006			×	

Table 1: Comparative table of the definitions of the AEG by different researchers

In their study, Lee *et al.* (2009) identify the factors contributing to the AEG into six categories. The first is the complicated nature of an audit function, and because of this, the public finds it hard to fully understand the roles and duties of auditors. The audit function is affected by many external factors, such as the socioeconomic factors, the technological developments and many other events. The audit function is very dynamic and willing to change over time to better serve businesses. For example, the traditional role of auditors was mostly that of conformance and shifted with time to playing an enhancing role. The fact that the audit function went through extensive reforms due to

being affected by various external factors makes auditing complex and hard to understand.

The second factor contributing to AEG according to Lee *et al.* (2009) is the conflicting role of auditors, which is mainly caused by big audit companies diversifying their services into offering consultancy services and tax or corporate finance works. Auditors started playing several roles simultaneously for the same client, which sometimes created a conflict of interest and a rise of opposing needs, policies and expectations. This conflict has negative implications on the independence of auditors and thus compromising the reliability of the profession.

The third factor is the hindsight evaluation of auditors' performance. This is caused by the difficulty for the public in differentiating between a good audit and a bad audit. The main kind of assessment done by the public is a hindsight evaluation. When a company falls, most of the times the reasons behind this fall are diverse and complex. But usually, a fall will cause the public to blame the auditors and relate the business failure to an audit failure. The hindsight evaluation is made after an event has taken place and is thus unfair. This misinterpretation of the quality of performance is likely to help in the creation of an AEG.

The fourth factor is the time lag in responding to changing expectations. When a corporate crisis occurs, the public changes its expectations and requirements of the profession of auditing. Those new expectations should lead to new standards and practices in audit. Although the new standards usually meet the expectations of the public and improve the quality of an audit, they are still criticized for not reacting rapidly enough to keep pace with the ever-changing social and business environment. This time lag between facing the problem and reacting to it has made the audit profession mostly unable to live up to those public expectations.

Also among the factors contributing to an AEG is the self-regulating process of the profession of auditing. The absence of a regulating external authority to the profession in addition to the fact that clients are usually unable to measure clearly the quality of an audit have compromised the trust of the public in the audit function. Since this

profession is self-regulating, it might be assumed that an auditor will offer the minimum level of quality accepted by the client in order to maximize personal gains.

Finally, the last factor contributing to the AEG according to Lee *et al.* (2009) is the naivety, unreasonable expectations, and ignorance of non-auditors. When the expectations are unreasonable, the performance is deemed inadequate and hence undermining the contribution of this whole profession in the society. Although the audit function is always changing to match the public expectations, some of those expectations are irrational to match either because they will not be cost-beneficial or because they are simply too unreasonable to apply. A combination of all the above factors has created a gap which is neither the public's nor the auditor's fault. This gap was mentioned and studied by many researchers in many different countries. However, Porter (1993) was the first researcher to suggest that all previous views to the AEG were too narrow because they left out one major component. The factor that she added is the performance of auditors which, if not accomplished properly, may increase noticeably the AEG. Accordingly, Porter (1993) had a new structure to the AEG and she claimed that it should more appropriately be named the 'Audit Expectation-Performance Gap'. The main reason behind this naming is that she viewed the gap as one between the expectations of the society of the auditors and the society's perception of the performance of auditors. Consequently, her analysis indicated the audit expectation-performance gap with two major components: "a gap between what society expects auditors to achieve and what they can reasonably be expected to accomplish, designated the reasonableness gap; and a gap between what society can reasonably expect auditors to accomplish and what they are perceived to achieve, designated the performance gap" (Porter 1993, p.50). She then subdivided the performance gap into two parts, the "deficient standards" which is the gap between what the society can reasonably expect of auditors and what the existing duties of auditors are, as defined by the law and as required by the professional standards. The second part is called the "deficient performance" which is the gap between the existing duties of auditors as defined by law or professional standards and the perceived performance, as perceived and expected by the society. The structure of the audit expectation-performance gap as set by Porter (1993) is shown in Figure 1.

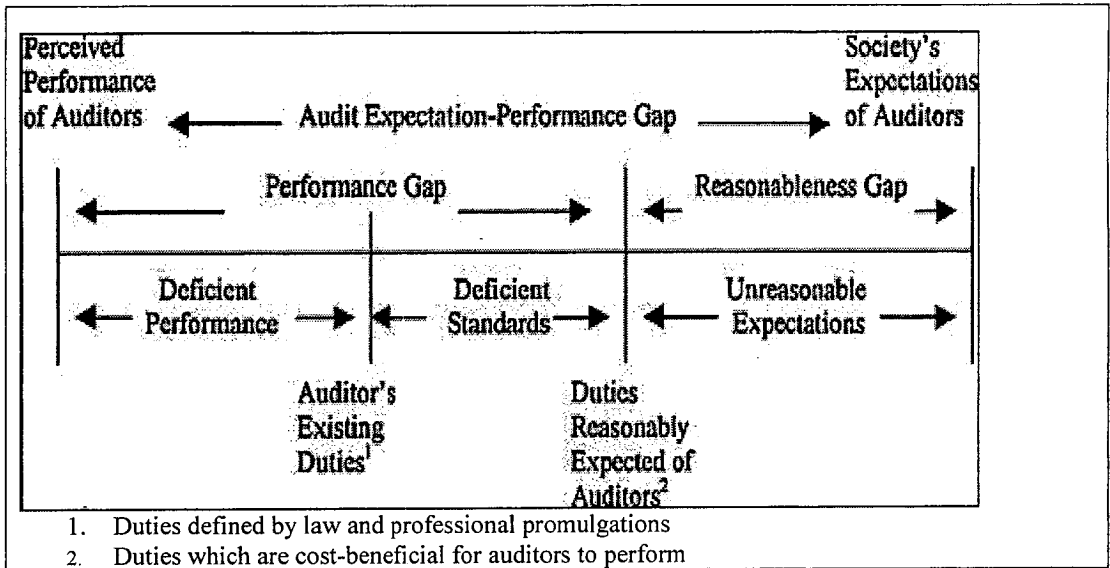


Figure 1: The structure of the audit expectation-performance gap as set by Porter (Source: Porter (1993))

However, every researcher before and after Porter's study had his or her own view on the subject and not many adopted her view on this issue. For example, Baron *et al.* (1977) and Libby (1979) investigated the magnitude of the expectation gap between auditors and users of the auditing reports. The results of Libby show that the magnitude of this gap is low and users' awareness level was high, which means that this gap could be overlooked. While Baron *et al.* (1977) revealed major differences in the USA pertaining to the auditors' responsibilities for uncovering illegal acts. Jennings *et al.* (1991) studied the views of judges to investigate an expectation gap in this field. The conclusion reached was that a gap does exist and judges expect more from auditors than auditors think. In a similar study, Lowe and Pany (1993) and Frank *et al.* (2001) both found that the expectations of potential jurors and auditors concerning knowledge about audit, the general attitudes about the profession and the auditor's role differed substantially, proving the existence of an expectation gap. In another study, Lowe (1994) found that judges expected so much of auditors and that an expectation gap existed between judges and auditors. When targeting a different sector, Epstein and Geiger (1994) did survey a group of US investors and found that they do seek high levels of assurance with respect to the financial statement and that they held auditors to an unreasonably high level of assurance that no material misstatement is present on

different aspects of financial reporting. The survey results suggested that there seems to exist an expectations gap between investors and auditors in the level of the assurance that an audit provides and suggested that such a gap can be partly narrowed down through educating the public in regards to the role of an audit and about the inherent limitations that are present within every audit function. In a related work, McEnroe and Martens (2001) uncovered the presence of an expectation gap between US investors and auditors and suggested that education seems to be the key to narrow down this gap. Gramling *et al.* (1996) studied the difference between what students, considered as informed users, and auditors perceive as pertaining to audit responsibilities and found significant differences. The same approach of targeting students and studying the effect of their education in audit by comparing their knowledge in what the profession entails before and after they finished the course, was done by Monroe and Woodliff (1994) in Australia. Their results show that a gap existed before acquiring the education and that receiving audit-related education is effective in reducing the AEG. Also in Australia, Beck (1974), Low (1980) and Schelluch (1996) proved the existence of an expectation gap. Gay *et al.* (1997) showed that a reasonableness gap exists and that education and experience had a big effect on moderating the views of non-auditors towards the duties of auditors. The AEG was also studied in Malaysia by Fadzly and Ahmad (2004), in Iran by Pourheydari and Abousaiedi (2011) and Hassase-yegane and Khaleghi (2004), in Oman by Hussain (2003), in Singapore by Low *et al.* (1988) and by Best *et al.* (2001), in Hong Kong by Leung and Chau (2001) and in China by Lin and Chen (2004). All those studies revealed the existence of a gap in all those countries. Dixon *et al.* (2006) revealed the presence of a considerable expectation gap in Egypt. Haniffa and Hudaib (2007) investigated the existence of an expectation gap in Saudi Arabia. The results show the presence of a performance gap in regards to the roles of auditors specified by law. Siddiqui *et al.* (2009) performed the study in Bangladesh and gave evidence that audit education seem to significantly reduce this audit expectation gap.

The AEG was studied in the United Kingdom by Humphrey *et al.* (1993), Manson and Zaman (2001), and Dewing and Russel (2002). Their results showed the existence of an AEG in the country, which came at contradicting Lee's (1970) result that showed



similarities between the views of auditors and audit beneficiaries and thus denied the presence of a gap.

Sidani (2007), in his study about the audit expectation gap in Lebanon proved the existence of a significant “reasonableness gap” between the understanding of auditors to their profession and the perceptions of others, mainly in the areas of the responsibility of the auditor in regards to fraud detection. His study targeted users of the financial information who are non-accountants and working in various managerial positions in different sectors of the Lebanese economy.

Many researchers on the topic have suggested possible solutions to reduce the Audit Expectation Gap. The solutions as categorized by Lee *et al.* (2009) are summarized in Table 2.

<b>Suggested Solutions</b>	<b>Education</b>	<b>Expanded Audit Report</b>	<b>Structured Audit Methodologies</b>	<b>Expansion of Auditors’ Responsibilities and Enhancement of Auditors’ Performance</b>
<b>Expected Effects</b>	<ol style="list-style-type: none"> <li>1. Better understanding of audit function</li> <li>2. Realistic expectations</li> <li>3. Reduces AEG</li> </ol>	<ol style="list-style-type: none"> <li>1. Offers better understanding of nature, scope, extent, purpose, procedures, and responsibilities of the audit mission</li> <li>2. Reduces AEG</li> </ol>	<ol style="list-style-type: none"> <li>1. Helps improve auditors’ performance</li> <li>2. Better performance satisfies the clients</li> <li>3. Reduces AEG</li> </ol>	<ol style="list-style-type: none"> <li>1. Expand audit services to meet public demands</li> <li>2. Establish independent office to monitor the profession</li> <li>3. Reduces AEG</li> </ol>
<b>Limitations</b>	<ol style="list-style-type: none"> <li>1. Not possible to educate all the public</li> <li>2. Audit is complex; it is not possible to explain it to public through mass communication</li> </ol>	<p>Auditors are less motivated to expand the audit report because it is not part of the requirements of an Audit Report</p>	<ol style="list-style-type: none"> <li>1. Not always feasible to standardize</li> <li>2. May not be cost-beneficial</li> <li>3. May have dysfunctional effects on the mission</li> </ol>	<ol style="list-style-type: none"> <li>1. Higher costs of auditing</li> <li>2. Auditors’ expertise may not cover all areas</li> <li>3. Should undergo case-by-case feasibility studies</li> </ol>

Table 2: Solutions to the AEG as categorized by Lee *et al.* (2009)

The above mentioned solutions may look effective on theoretical grounds; however, Lee *et al.* (2009) believe that each has its limitations that might render it impractical or unfeasible to apply.

### 2.3 Conclusion

The review of literature discloses the existence of an audit expectation gap in the world of audit; it shows that there is a difference in magnitude of the AEG and a difference in the vision of researchers as to the cause and the elimination of this gap. As for the study done in Lebanon, Sidani (2007) revealed that there exists an AEG; however, he recommended further study. The review of literature shows that no study has focused on the existence on the AEG in the Lebanese commercial banking sector, and that no study has shown the way bankers view the profession of Internal Audit and its importance within the bank. The review of literature also showed very few studies that examined the AEG with respect to the profession of Internal Audit. This thesis will target the existence of an AEG in the Lebanese commercial banking sector, and will attempt to investigate the existence of an AEG between what bank employees perceive the role of the internal auditor to be, and what the Standards of Internal Audit indicate his or her role to be. So this thesis defines the Audit Expectation Gap as the gap between what employees perceive the role of the internal auditor to be, and what the Standards of Internal Audit indicate his or her role to be. The following chapter describes the steps taken to address the research aim and describes methods and strategies followed throughout the research.

## **Chapter 3**

### **Procedures and Methodology**

#### **3.1 Introduction**

This chapter describes the steps taken to address the research statement. It provides a complete and clear description of the methods followed throughout the research and outlines the reasons behind choosing a particular approach to solve the research questions. It also illustrates the strategies used to collect and analyze the data. By the end of this chapter, the methodology chosen should be able to provide all information required to solve the problem at hand.

To properly frame this research, the following chapter is divided into seven parts. The first addresses the philosophical angle of the study. The reasoning approach is explained in the second part. The population and the sample are explained in the third and fourth parts consecutively. Then the research strategy and methodology are clarified. The research design is finally detailed before giving a final conclusion in the last part of this chapter.

#### **3.2 Philosophical Angle**

Generally, there are two research philosophies, the positivism and the phenomenology. Positivism is the philosophical system that was first initiated by Auguste Comte in the early 1800s while phenomenology was developed by Edmund Husserl in the 1890s. Each of those systems has opposing beliefs pertaining to the role of the researcher in the study and to the overall method followed within the study. Positivism is a philosophical system that focuses on identifying and measuring phenomena. In it, inferences are only meaningful if they can be measured or verified through experience. Mostly, linear causality is assumed, so from this position, the study presumes that there are no effects without causes and no causes without effects. Positivism takes little account of feelings, interpretations or beliefs and it separates the observer from the observed. Results under

this system can usually be generalized, which means that what is true here and now can be true at any other place and time (Easterby-Smith *et al*, 1991).

Phenomenology on the other hand views the world from a completely different angle. Researches using this system are concerned with what the phenomenon means rather than simply identifying and measuring it. Human experience in this system is among the most valuable sources of data. Of course, the researcher here is inseparable from the study and inferences are interpreted in terms of the meanings, interpretations and reflections people bring to them (Easterby-Smith *et al*, 1991).

This study seeks an objective truth through the use of rational methods; it involves a large sample and employs mathematical models, theories and hypotheses to reach a conclusion that can be generalized. To be able to reach such an outcome, a positivist philosophical system was followed.

### 3.3 Reasoning Approach

In any study, there are two main ways to reach a conclusion. The first is through deductive reasoning, and the second is through inductive reasoning. Each of these approaches follows a different path to reach the final goal. Deductive reasoning is when a researcher starts with the general information and uses it to reach the specific information needed. Sometimes this type of reasoning is called the top-down approach, because, as the name suggests, the researcher starts at the top, where the information is broad and general, and makes the way down to the specific and precise information. When a research follows this type of reasoning, it usually starts with a very general theory about the topic of interest. This is then narrowed down by choosing a more accurate hypothesis to be tested. The next step is usually testing the hypothesis by collecting data, which ultimately leads to either accepting or declining the original theory (Babbie, 2001).

Inductive reasoning, however, works in quiet the opposite direction. It is the bottom-up approach. Specific observations are used and built upon to reach the broader theories and generalizations. The researcher thus studies the specific observations and notices

certain patterns. A hypothesis is then built on those regularities. The hypothesis is used as a building block for the general theory to be developed (Babbie, 2001). In this study, a broad theory is adopted and then studied and tested further using a top-down trail. This deductive reasoning approach helps in reaching an exact and precise conclusion.

### 3.4 Population

The review of literature shows the existence of an audit expectation gap in the world of audit; it shows that there is a difference in magnitude of the AEG and a difference in the vision of researchers as to the cause and the elimination of this gap. Today, the Internal Audit is attracting attention in the world of banking. The Basel Committee on Banking Supervision issued a Consultative document on December 2011, under the name “The Internal Audit Function in Banks” and in this document, it insisted that every bank should have a “permanent internal audit function”. Although the committee does not have the authority to enforce them, but the recommendations are mostly put into action through national regulations and laws that are based on the committee’s recommendations.

In Lebanon for example, the Central bank of Lebanon (BDL) has issued on the 15<sup>th</sup> of December of the year 2000 the Basic Decision No. 7737 relating to “Internal Control and Internal Audit in banks and financial institutions”. Article 4 of this decision is as follow:

“All banks and financial institutions must establish an internal audit unit that meets the following conditions:

1. It must be entirely independent from the body entrusted with the operations, have no executive responsibilities within the bank or financial institution, and be objective when fulfilling its duties.
2. It must be granted full powers when carrying out audit operations.
3. Its staff must be qualitatively and quantitatively commensurate with the bank or financial institution’s size, the diversification of their activities and the nature of risks that any of the faces or may face” (BDL, 2014).

Article 7 of the same Basic Decision states the following about the Unit of Internal Audit within the bank:

"The primary duties of the Unit shall be, for indicative purposes but not restrictively:

1. To assess the effectiveness of internal control.
2. To review the effectiveness of risk assessment, management and reduction methods.
3. To review the accuracy of accounting entries and financial statements and reports, including those required by Banque du Liban and the Banking Control Commission.
4. To verify the effectiveness of the mechanism and procedures adopted by the Compliance Department to control compliance with laws and regulations.
5. To review the efficiency and effectiveness of the work performed by the Compliance Unit established pursuant to the provisions of Basic Decision No 7818 of May 18, 2001, regarding the procedures for fighting money laundering and terrorism financing.
6. To assess the efficiency of the Corporate Governance systems and their complementary policies and procedures; to verify, at all the bank's levels, compliance therewith by all the services, units and branches; to prioritize their implementation when the bank expands abroad and when the bank undertakes acquisition or merger operations." (BDL, 2013).

This decision was amended pursuant to the Intermediate Decision No. 10707 of April 21, 2011 and to the Intermediate Decision No. 11322 of January 12, 2013. Another Basic Decision numbered 9956 of July 21, 2008 related to the establishment of the Audit Committee was issued by BDL. Such decisions show the interest that BDL has in the profession of internal audit and in its role within the Lebanese banks.

With this growing interest, it is important to know if bankers in Lebanon view the internal audit function with a fair and reasonable eye. The only study done in Lebanon regarding the AEG was by Sidani (2007). He proved that there exists an AEG; however,

he recommended further studies. To our knowledge, very few studies have approached the AEG from an Internal Audit approach, nor has one focused on the existence of the AEG in the Lebanese commercial banking sector, nor has a study shown the way bankers view the profession of Internal Audit and its importance within the bank. This thesis targets the existence of an AEG in the Lebanese commercial banks. Thus, the target population in this study is the “Employees of the Lebanese Commercial Banks”.

### 3.5 Sample and Sampling Procedures

The population of this study is the Employees of the Lebanese Commercial Banks. The banking sector in Lebanon is made of two main categories, namely the commercial banks and the investment banks. Our study will exclude the investment banks because the majority of those are subsidiaries or affiliates to commercial banks. There are three types of commercial banks in Lebanon; Lebanese, Lebanese with Arab or foreign control and Arab or Foreign banks. Since our interest is strictly in Lebanese banks; Arab and foreign banks are also excluded from the population. So in summary, the population of this study is the employees of the Lebanese commercial banks. In this study, the Lebanese commercial banks are grouped into two categories as shown in the table below:

Category	Number of Banks in Category
Lebanese Banks S.A.L	26
Lebanese Banks S.A.L. with Arab or Foreign Non-Arab Control	10
<b>Total Number of Lebanese Commercial Banks</b>	<b>36</b>

Table 3: Categories of Lebanese commercial banks

(Source: Categories of Banks (n.d.), (list updated 29 April, 2013), Compiled by the author)

All banks within our population will be targeted. This means that at this point, our sample is still a census. All thirty six commercial banks will be included within our study. However, the number of observations taken from each of the banks differs. Since our population is the Employees of Lebanese Commercial Banks, the number of observations taken from every bank represents 1% of its total number of employees working in Lebanon. Banks with a staff less than 100 employees will be sampled with one questionnaire. Table 4 below shows the number of employees in every bank in Lebanon and it shows the sample taken from every bank.

Bank	Number of Employees in Lebanon	Number of Employees Expected to be Surveyed
Banque Audi Sal - Audi Saradar Group	2854	29
BLOM Bank Sal	2073	21
Byblos Bank Sal	1979	20
Societe General de Banque au Liban Sal	1586	16
Fransabank Sal	1526	15
Credit Libanais Sal	1508	15
BankMed Sal	1411	14
Bank of Beirut Sal	1172	12
BanqueLibano-Francaise Sal	1040	10
BBAC Sal	747	7
B.L.C. Bank Sal	692	7
First National Bank Sal	676	7
Al-Mawarid Bank Sal	431	4
CreditBank Sal	406	4



Bank	Number of Employees in Lebanon	Number of Employees Expected to be Surveyed
Lebanon and Gulf Bank Sal	368	4
Jammal Trust Bank Sal	356	4
IBL Bank Sal	316	3
Societe Nouvelle de la Banque De Syrie Et Du Liban Sal	275	3
BanqueMisrLiban Sal	269	3
Lebanese Swiss Bank Sal	244	2
Fenicia Bank Sal	240	2
Federal Bank of Lebanon Sal	232	2
BanqueBemo Sal	227	2
Banque de l'Industrie et du Travail Sal (BIT Bank)	214	2
Emirates Lebanon Bank Sal	198	2
Ahli International Bank Sal	176	2
Al Baraka Bank Sal	164	2
MEAB Sal	163	2
Standard Chartered Bank Sal	117	1
North Africa Commercial Bank Sal	114	1
National Bank of Kuwait (Lebanon) Sal	109	1
BanquePharaon&Chiha Sal	105	1
Near East Commercial Bank Sal	95	1
Syrian Lebanese Commercial Bank Sal	68	1

Bank	Number of Employees in Lebanon	Number of Employees Expected to be Surveyed
Banque de Credit National Sal	25	1
Total Sector	22,176	223

Table 4: Number of employees per bank  
(Source: Baz, 2012)

By doing so, we are aiming for a random stratified sample.

### 3.6 Research Strategy and Methodology

After choosing the sample out of the pre-determined population, data is collected from the individual banks within this sample. The conditions are not controlled and the variables are not manipulated. The participants are all treated similarly. The data collected from the sample will be used to make an inference about the whole population. The research strategy that best fits the goals of this study is a survey and is thus our strategy of choice. The survey approach may employ many methods to collect the required data. However, the method used in this study is a questionnaire. This method will help in covering a wider geographical area and has a cost and time advantage over other methods.

### 3.7 Research Design

The research method adopted in this study was inspired by that used by Schelluch (1996). The design of the questionnaire used is almost identical to the design of Schelluch's questionnaire; however, the questions are different due to the fact that the aim of that study, measuring the messages communicated by a short-form audit report, is completely different from the aim of this study. The questionnaire used is shown in Appendix A. Similar to that developed by Schelluch (1996), the questionnaire that was used in this study consists of two main sections. The first section is mainly addressed to

collect demographical data about the participants. Other than the age and gender, the subject was asked to fill out information regarding his or her work and educational level. In this section, a number of Semantic Differential questions are designed as bipolar statements and are separated by a seven point scale. The respondents are expected to choose the number from the scale that best identifies their level of agreement with one statement or the other.

This study aims to find the degree of difference between what bankers, expect the audit profession to deliver, on one hand, and what the internal audit profession in general and in Lebanon in particular entails, on the other hand. To do so, statements are taken from the International Standards for the Professional Practice of Internal Auditing (Standards) (The Institute of Internal Auditors, 2013), from the Basic Decision No. 7737 issued by the Central Bank of Lebanon (BDL) to identify the role of internal audit in the Lebanese banks, and statements taken from the questionnaire set by Schelluch (1996). Each of these statements is put on one side of the scale, and the opposite of each of the statements is put on the other side of the scale. Each respondent would choose a number from the scale that best describes his perception of the role of the audit function in the bank regarding every particular statement.

The participant is not told that each question has a statement taken from the standards, and thus is not trying to fill in the right response, rather, solely indentifying his or her perception of what should be the role of auditors. The second section is made up of 17 statements and they are as follows:

The first question states the following: "The Internal auditor is independent from the body entrusted with the operations". This statement relates to the Standard number 1100 which says that the internal audit activity should be independent; and to Section 1 of Article 4 of BDL's Basic Decision No. 7737 dated 15/12/2000, which states that the internal audit unit "must be entirely independent from the body entrusted with the operations". It is important to mention this statement in the questionnaire because the concept of independence in internal audit is vital for the success of this function as it ensures the freedom from any condition that might threaten the internal audit's ability to carry out its responsibilities in an unbiased manner.

The second question states that: “The Internal auditor is objective in performing his/her work”. This statement relates to the Standard number 1100 which says that the internal auditors should be objective in performing their work; and to Section 1 of Article 4 of BDL’s Basic Decision No. 7737 dated 15/12/2000, which states that the internal audit unit must be objective when fulfilling its duties. It is important to mention this statement in the questionnaire because objectivity produces a mental attitude that is unbiased and allows internal auditors to believe in the product of their work and ensures that no compromises on quality are being done (The Institute of Internal Auditors, 2013).

Question number three states the following: “The Internal auditor cannot have executive responsibilities within the bank”. This statement relates to the Standard number 1120 which says that the “internal auditors must have an impartial, unbiased attitude and avoid conflict of interest”; and to Section 1 of Article 4 of BDL’s Basic Decision No. 7737 dated 15/12/2000, which states that the internal audit unit must have no executive responsibilities within the bank. It is important to include this statement in the questionnaire because if the internal auditor has executive responsibilities within the bank, then he or she might have a competing personal or professional interest which makes performing his or her duties impartially and objectively much more difficult and this will eventually lead to undermining the confidence in the auditor (The Institute of Internal Auditors, 2013).

The fourth question states that: “The Internal auditor cannot assess specific operations for which he/she was previously responsible”. This statement relates to the Standard number 1130.A1 which says that the “internal auditors must refrain from assessing specific operations for which they were previously responsible”. If the auditor does provide assurance services for operations or activities he or she had been responsible for performing in the past year, it is assumed that objectivity will most probably be impaired (The Institute of Internal Auditors, 2013).

The next question in the questionnaire states the following: “The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities”. This same statement was mentioned in the Standard number 1130.C1;

such an activity is not considered impairment to the auditor's objectivity or independence (The Institute of Internal Auditors, 2013).

The sixth question states that: "The Internal auditor must possess the needed competencies to perform his/her individual responsibilities". This statement is a reflection of the Standard number 1210. It encourages auditors to obtain needed qualifications, skills and professional certifications in order to demonstrate their proficiency (The Institute of Internal Auditors, 2013).

The following question states the following: "The Internal auditor has full powers when carrying out internal audit operations". This statement is mentioned in Section 2 of Article 4 of BDL's Basic Decision No. 7737 dated 15/12/2000. It is important for the internal audit function to have full powers because it ensures its authority and objectivity.

Question number eight of the questionnaire states that: "The Internal auditor is not expected to have the competencies to detect and investigate fraud". This statement relates to Standard number 1210.A2 which says that "the internal auditor must have sufficient knowledge to evaluate the risk of fraud to occur or the manner in which it is managed by the organization, but the auditor is not expected to have the expertise of a person who's responsible primarily to detect and investigate fraud" (The Institute of Internal Auditors, 2013).

The ninth statement states the following: "The Internal auditor does not guarantee that all significant risks are identified". This is taken from the Standard number 1220.A3 which distinguishes between the internal auditors being alert to the significant risks facing the company and between guarantying the company is risk free. This standard states that even if assurance procedures are "performed with due professional care", it is not guaranteed that all the significant risks will thus be identified (The Institute of Internal Auditors, 2013).

Question number ten is as follows: The Internal auditor does not design the organization's ethics related objectives. Standard number 2110.A1 states that the "internal audit activity must evaluate the design, implementation and effectiveness of the

organization's ethics related objectives, which means they are not responsible of designing those objectives” (The Institute of Internal Auditors, 2013).

The next question states that: The Internal auditor does not design risk management processes. This statement relates to the Standard number 2120 which says that “the internal audit activity must evaluate the effectiveness and contribute to the improvement of risk management processes”; and to Section 2 of Article 7 of BDL’s Basic Decision No. 7737 dated 15/12/2000, which states that the internal audit unit must “review the effectiveness of risk assessment, management and reduction methods”. It is important to mention this statement in the questionnaire because risk management is often confused with internal audit. The Standards and BDL focus on differentiating between them and give the internal auditors a specific role to play regarding the risk management process.

Question number twelve is similar to the question number 2.01 in the questionnaire prepared by Schelluch (1996) and it states that: “The Internal auditor is not responsible for detecting all fraud”. This statement also relates to Standard number 1210.A2 which says that the internal auditor “is not expected to have the expertise of a person whose prime responsibility is to detect and investigate fraud”.

The next question states the following: “The Internal auditor is responsible for the soundness of the internal control structure of the entity”. This statement relates to the Standard number 2130.A1 which says “that the internal audit activity must evaluate the adequacy and effectiveness of controls”; and to Section 1 of Article 7 of BDL’s Basic Decision No. 7737 dated 15/12/2000, which states that “the internal audit unit must assess the effectiveness of internal control”.

The fourteenth and fifteenth questions respectively state that: “The Internal auditor is not responsible for maintaining accounting records”, and “The Internal auditor does not have responsibilities for producing the financial statements”. Both those statements relate to the Standard number 2130.A1 which says that “the internal audit activity must evaluate the adequacy and effectiveness of controls regarding the reliability and integrity of financial and operational information”; and to Section 3 of Article 7 of BDL’s Basic Decision No. 7737 dated 15/12/2000, which states that the internal audit unit must

“review the accuracy of accounting entries and financial statement and reports”. To summarize, the auditor is not responsible for the production the financial statements but is responsible for ensuring the adequacy of controls that guarantee the integrity of the accounting records (The Institute of Internal Auditors, 2013).

Question number sixteen is as follows: “The Internal auditor exercises judgment in the selection of the auditor procedures”. The Standard number 2210.A3 says that internal auditors must assess the criteria set by management to evaluate risk management, governance and controls. The internal auditors must use those criteria if they find them adequate, or work with the management to change them if they find those criteria inadequate (The Institute of Internal Auditors, 2013).

The last question states that: “The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities”. This question relates directly to Standard number 1210.A1 which says that the “chief audit executive must obtain competent advice and assistance if the internal auditors lack the knowledge, skills, or other competencies needed to perform all or part of the engagement” (The Institute of Internal Auditors, 2013).

This tight association between the questions used and the standards demonstrates a robust construct validity. Other validity issues will be dealt with subsequently. Table 5 below offers a summary of the relationship between the questions included in the data collection tool and their equivalent standards.

Question Number	IIA Standard	BDL Decision Decision-Section-Article
2.01	1100	7737-1-4
2.02	1100	7737-1-4
2.03	1120	7737-1-4
2.04	1130.A.1	-
2.05	1130.C1	-
2.06	1210	-
2.07	-	7737-2-4

Question Number	IIA Standard	BDL Decision Decision-Section-Article
2.08	1210.A2	-
2.09	1220.A3	-
2.10	2110.A1	-
2.11	2120	7737-2-7
2.12	1210.A2	-
2.13	2130.A1	7737-1-7
2.14	2130.A1	7737-3-7
2.15	2130.A1	7737-3-7
2.16	2210.A3	-
2.17	1210.A1	-

Table 5: Summary of relationship between questions and standards

### 3.8 Conclusion

This chapter described the methods followed throughout the research. It differentiated between the two main philosophical systems followed in most studies and highlighted the positivist philosophical angle as the system to be followed in this study. It also explained the difference between the two main reasoning approaches and analyzed the grounds for choosing deductive reasoning as the preferred approach in this research. This chapter also discussed the targeted population to this study and “employees of the Lebanese commercial banks” was decided upon as a fair goal population. The sample was also discussed, and a total of two hundred and forty two employees out of thirty six Lebanese commercial banks are to be the random stratified sample of the population to be studied in this research. With regard to the research strategy and methodology, a survey was considered the best approach and the data will be collected using a questionnaire. The questionnaire to be used was described and detailed in the last part of this chapter. The next chapter analyses the data collected through the questionnaire and it shows the main results and conclusions after the needed tests were run on the data.



## **Chapter 4**

### **Findings**

#### **4.1 Introduction**

This chapter analyzes the data collected through the questionnaire. The data collection tool was administered to employees of Lebanese commercial banks. A total of two hundred and forty two replies were submitted, entered into the SPSS statistical tool and analyzed. This chapter is broken down into three main parts. In the first part, the analysis framework is described. In the second part of the chapter, the results are disclosed and analyzed using correlations between different variables, descriptive and inferential statistics. Finally, in the last part of the chapter, the conclusion is given to show the main findings of the statistical studies.

#### **4.2 The Analysis Framework**

When data is collected, it is manipulated using three main types of statistics. The first type is the descriptive statistics. This approach mainly aims at summarizing the sample; it describes the groups and subgroups of the sample and forms a type of initial picture of the sample. This approach is used to attempt to answer the research questions asking whether there exists an Audit Expectation Gap in the Lebanese commercial banking sector and whether Lebanese employees of commercial banks accurately understand the standards of internal audit. As for the second type of approach, the correlations, the relationship and the level of dependence between the two variables are described. Through this approach, the research question regarding whether there is any significant linear relationship between the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level will be answered. The last type of statistics used in this study is the inferential statistics; those mainly aim at drawing conclusions out of the data under study by testing the hypotheses and even reaching certain decisions. This approach will help in answering the

research question asking whether there is any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level. The data was collected and then entered into the SPSS statistical tool. Doing this helps in manipulating the data and in relating variables in such a way that assists in the process of reaching a certain conclusion based on the acquired information. The data was studied by using three main approaches. The first approach is by using descriptive statistics, the second is by using correlations and the third is through the inferential statistics.

#### 4.3 Descriptive Statistics

A missing variable check was performed and a total of ten values related to different variables were found. Each missing variable was replaced by the value of the mean of the ten observations surrounding this missing value. The logic behind this is that it is assumed that the ten variables surrounding this missing value are observations taken from employees of the same bank and thus have a high probability of having similar opinions. After replacing the missing variables, the data consists of two hundred and forty two observations and each observation encompasses replies to eight demographic questions and seventeen replies to questions relating to the internal audit function at banks. The table below shows which questions had missing variables replaced:

Question Number	Question	Number of Replaced Missing Values
2.04	The Internal auditor cannot assess specific operations for which he/she was previously responsible.	1
2.05	The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities.	1
2.07	The Internal auditor has full powers when carrying out internal audit operations.	1
2.13	The Internal auditor is responsible for the soundness of the internal control structure of the entity.	1

Question Number	Question	Number of Replaced Missing Values
2.14	The Internal auditor is not responsible for maintaining accounting records.	1
2.15	The Internal auditor does not have responsibilities for producing the financial statements.	1
2.16	The Internal auditor exercises judgment in the selection of the auditor procedures.	2
2.17	The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities.	2

Table 6: Replace Missing Variables

The observations used in this study are taken from banks in the Lebanese commercial banking sector. When planning the sampling technique, it was decided that every bank would be targeted and a sample equaling to 1% out of its total number of employees will be attempted. When the collection of the data started, all banks were targeted and visited. Some banks were responsive and their responses were included in the sample. However, some other banks could not be reached or preferred not to cooperate and fill out the questionnaire due to various reasons. The expected sample with respect to the whole sector was made up of two hundred and twenty three observations while the actual sample came out to be made up of two hundred and forty two observations. As it was mentioned, some banks could not be included in the sample due to their unresponsiveness, and they are the following:

- Standard Chartered Bank Sal
- North Africa Commercial Bank Sal
- National Bank of Kuwait (Lebanon) Sal
- BanquePharaon&Chiha Sal
- Near East Commercial Bank Sal
- Syrian Lebanese Commercial Bank Sal
- Banque de Credit National Sal
- Emirates Lebanon Bank Sal

- IBL Bank Sal
- CreditBank Sal
- Lebanon and Gulf Bank Sal

The next table shows the number of employees of every bank, and the number of questionnaires filled by every bank. It is compared to the number of observations that was expected at the beginning of the study, which represents 1% out of the number of employees.

Bank	Number of Employees of the Bank	Expected Sample	Actual Sample
		1% of Number of Employees	
Banque Audi Sal	2854	29	27
BLOM Bank Sal	2073	21	20
Byblos Bank Sal	1979	20	21
SGBL Sal	1586	16	17
Fransabank Sal	1526	15	15
Credit Libanais Sal	1508	15	62
BankMed Sal	1411	14	14
Bank of Beirut Sal	1172	12	12
BanqueLibano-Francaise Sal	1040	10	8
BBAC Sal	747	7	4
B.L.C. Bank Sal	692	7	4
First National Bank Sal	676	7	11
Al-Mawarid Bank Sal	431	4	2
CreditBank Sal	406	4	0
Lebanon and Gulf Bank Sal	368	4	0
Jammal Trust Bank Sal	356	4	3
IBL Bank Sal	316	3	0
Societe Nouvelle de la BSL Sal	275	3	3
BanqueMisrLiban Sal	269	3	2
Lebanese Swiss Bank Sal	244	2	1

Bank	Number of Employees of the Bank	Expected Sample	Actual Sample
		1% of Number of Employees	
Fenicia Bank Sal	240	2	2
Federal Bank of Lebanon	232	2	2
BanqueBemo Sal	227	2	2
BIT Bank Sal	214	2	3
Emirates Lebanon Bank Sal	198	2	0
Ahli International Bank Sal	176	2	4
Al Baraka Bank Sal	164	2	1
MEAB Sal	163	2	2
Standard Chartered Bank Sal	117	1	0
North Africa Commercial Bank Sal	114	1	0
National Bank of Kuwait (Lebanon) Sal	109	1	0
BanquePharaon&Chiha Sal	105	1	0
Near East Commercial Bank Sal	95	1	0
Syrian Lebanese Commercial Bank Sal	68	1	0
Banque de Credit National Sal	25	1	0
Total Sector	22,176	223	242

Table 7: The expected and actual sample  
(Source Data: Bilanbanque 2011)

As it is shown in the table, the actual sample fell short of the expected sample in some banks; the expected numbers were matched in some bank, and were exceeded in others. However, in total, the expected sample was matched and the actual sample equals 1% of the total population. The table below shows the banks that were included in the sample. It also shows the number of observations taken from every bank. The two hundred and forty two observations collected were distributed as follows:

Banque Audi Sal - Audi Saradar Group	27
BLOM Bank Sal	20
Byblos Bank Sal	21
Societe General de Banque au Liban Sal	17
Fransabank Sal	15
Credit Libanais Sal	62
BankMed Sal	14
Bank of Beirut Sal	12
BanqueLibano-Francaise Sal	7
Bank of Beirut and Arab Countries Sal	4
B.L.C. Bank Sal	4
First National Bank Sal	11
Al-Mawarid Bank Sal	2
Jammal Trust Bank Sal	3
Societe Nouvelle de la BSL Sal	3
BanqueMisrLiban Sal	3
Lebanese Swiss Bank Sal	1
Fenicia Bank Sal	2
Federal Bank of Lebanon	2
BanqueBemo Sal	2
Banque de l'Industrie et du Travail Sal (BIT Bank)	3
Ahli International Bank Sal	4
Al Baraka Bank Sal	1
Middle East and Africa Bank Sal	2
<b>Total Sample</b>	<b>242</b>

Table 8: The Sample

The banks that were targeted in the sample are subdivided into two groups, either they are in the group of Lebanese commercial banks or they belong to the group of Lebanese

commercial banks with Arab or Foreign control. Grouping the respondents into those two divisions was considered of importance because it was assumed that the internal audit at banks with Lebanese control might have a different approach and a different vision than that of internal auditors at banks with foreign or Arab control. This assumption will be approved or rejected after further study. The following table shows both groups of banks and it shows the distribution of the sample among those two groups.

Type of Bank	Bank	Number of Observations	Total Number of Observations
		Out of 242 Observations	By Type of Bank
Lebanese Banks	Banque Audi Sal	27	169
	BLOM Bank Sal	20	
	Byblos Bank Sal	21	
	SGBL Sal	17	
	Fransabank Sal	15	
	BankMed Sal	14	
	Bank of Beirut Sal	12	
	BanqueLibano-Francaise Sal	7	
	BBAC Sal	4	
	B.L.C. Bank Sal	4	
	First National Bank Sal	11	
	Al-Mawarid Bank Sal	2	
	Jammal Trust Bank Sal	3	
	Lebanese Swiss Bank Sal	1	
	Fenicia Bank Sal	2	
	Federal Bank of Lebanon	2	
	BanqueBemo Sal	2	
	MEAB Sal	2	
BIT Bank	3		
Lebanese Banks with Arab or Foreign Control	Credit Libanais Sal	62	73
	Ahli International Bank Sal	4	
	Al Baraka Bank Sal	1	
	Societe Nouvelle de la BSL Sal	3	
	BanqueMisrLiban Sal	3	

Table 9: Number of observations by bank type

Since the sample is not normally distributed, both parametric and nonparametric types of tests were performed, and the results are shown later on in this chapter. The tables below show the way the data is distributed according to demographic variables. The first of those variables is the gender. The frequency of the gender is as follows:

Variable		Frequency out of 242 variables	Percent out of 100
The gender of the respondent	Male	130	53.7
	Female	112	46.3

Table 10: Frequency by gender

As it is shown in the table, the data is almost equally divided between the two genders. The gender is used in later tests to show whether it affects the way the internal audit is viewed within a bank. The next table shows the frequency of distribution of the data according to the age of the respondents. The age was gathered in a metric form and then transformed into an ordinal variable using two approaches. In the first approach, the age was distributed into three groups and it is shown in the table below:

Variable		Frequency out of 242 variables	Percent out of 100
The age of the respondent	Between 20 and 29 years old	130	53.7
	Between 30 and 39 years old	89	36.8
	Above 39 years old	23	9.5

Table 11: Frequency by age 1

In the second approach, the observations are divided into 2 groups as shown in the following table:



Variable		Frequency out of 242 variables	Percent out of 100
The age of the respondent	Below or equal to 30 years old	153	63.2
	Above 30 years old	89	36.8

Table 12: Frequency by age 2

Although the Kurtosis measure of the age of the respondents was between -3 and +3, allowing for parametric tests to be implemented, the data was subjected to both parametric and nonparametric tests with regards to the age of the participants. Those tests are shown later on in the chapter.

The next variable to be addressed is the whereabouts of the respondent. It is now known that all observations were taken from bank employees. However not all bank employees have the same exposure, training, or contact with auditors. It is possible that employees at the headquarters of the bank might have different views towards the profession of internal audit than employees at branches. Table 13 shows the distribution of the observations according to the whereabouts of the respondent.

Variable		Frequency out of 242 variables	Percent out of 100
The whereabouts of the respondent	Branch	56	23.1
	Headquarters	186	76.9

Table 13: Frequency by whereabouts

Due to the uneven distribution of the respondents between the headquarters and the branches, both parametric and nonparametric tests were performed. The next table shows the frequencies of the type of position of the participants. Every respondent was asked to fill in his or her position within the bank. The positions were then grouped into three types. The departments of Accounting, Finance, Audit and Risk Management are considered as one group. All other departments were considered as operational departments, but a differentiation was made between operational departments within the headquarters of the

bank and the operational departments at the branches. The type of work of employees within the departments of Accounting, Finance, Audit and Risk Management might suggest a deeper knowledge in the field of internal audit than for employees with operational positions. Similarly, operational positions within the headquarters of the bank might have a different view to internal auditors than operational positions at branches. Those possibilities implied grouping the positions into three types and their frequencies within the data are as follows:

Variable		Frequency	Percent
		out of 242 variables	out of 100
The type of the respondent's position	Operational - Branch	56	23.1
	Operational - Headquarters	131	54.1
	Accounting, Finance, Audit and Risk Management	55	22.7

Table 14: Frequency by type of position

Further tests were performed on this variable. Results are showed later on throughout the chapter. The following tables show the distribution of the data according to the years of experience in the banking sector and according to the years of experience of the respondent within his or her current position. The number of years was gathered as a metric number and then grouped to several groups. Both parametric and nonparametric tests were performed and results are shown later. The number of years of experience might be related to the knowledge an employee has about the profession of internal audit. Those two tables show the distribution according to the two variables.

Variable		Frequency	Percent
		out of 242 variables	out of 100
Years of experience in the banking sector	0 to 5 years	119	49.2
	6 to 11 years	92	38.0
	12 to 17 years	17	7.0
	Above 17 years	14	5.8

Table 15: Frequency by experience in banking sector

Variable		Frequency	Percent
		out of 242 variables	out of 100
Years of experience in current position	0 to 3 years	131	54.1
	4 to 7 years	82	33.9
	Above 7 years	29	12.0

Table 16: Frequency by experience in current position

Education may be one of the demographic factors that could also affect the knowledge of a bank employee regarding the profession of internal audit. The respondents were distributed as follows:

Variable		Frequency	Percent
		out of 242 variables	out of 100
Education level of the respondent	Secondary Level	2	0.8
	Bachelor Degree	99	40.9
	Masters Degree	139	57.4
	Doctorate	2	0.8

Table 17: Frequency by education level

Another demographic factor that could be related to the knowledge of respondents regarding the profession of internal audit is the professional certifications acquired by the employees. The respondents were grouped into two groups, those having professional certifications and those with no professional certifications. The frequencies are as follows:

Variable		Frequency	Percent
		out of 242 variables	out of 100
Certification	No Certification	182	75.2
	Certification	60	24.8

Table 18: Frequency by certification

Parametric tests were performed regarding the availability of certifications and the results are explained later in the chapter. At this point, the demographic variables are all studied

and linked to the answers of respondents relating to internal audit. The second part of the questionnaire is made up of seventeen Semantic Differential questions. They are designed as bipolar statements and are separated by a seven point scale. The respondents are expected to choose the number from the scale that best identifies their level of agreement with one statement or the other. The statement next to number 7 in the scale is the statement which complies with the standards of internal audit. So the closer the answer is to number 7, the better is the respondent's knowledge is regarding this particular issue. The answers are studied using four approaches. The first approach is to analyze the frequency of every response within the sample. The second approach is to analyze the Score of every respondent individually and then compare his or her results with the entire sample. The third is to study the correlations between different variables. The last approach is to analyze the same question over the entire sample and relate the answers of every question to the demographic variables and thus test whether demographics have an effect on the replies given to every particular question. Table 19 below shows the questions used in the data collection tool. There are seventeen questions and respondents were asked to give a reply between 1 and 7 to every question. The closer the answer is to 7, the better the individual's knowledge regarding internal audit is. For every question, the table will show the mean, the standard deviation, the Kurtosis measure, the mode and the frequency (out of two hundred and forty two observations) to every answer.

2.01 The Internal auditor is independent from the body entrusted with the operations			2.02 The Internal auditor is objective in performing his/her work		
Mean		4.86	Mean		5.99
Standard Deviation		2.058	Standard Deviation		1.30
Kurtosis		-1.014	Kurtosis		2.73
Mode		7	Mode		7
Answer	Frequency	Percent	Answer	Frequency	Percent
1	23	9.5	1	2	0.8
2	23	9.5	2	7	2.9
3	23	9.5	3	6	2.5
4	21	8.7	4	13	5.4
5	28	11.6	5	29	12.0
6	53	21.9	6	77	31.8
7	71	29.3	7	108	44.6

2.03 The Internal auditor cannot have executive responsibilities within the bank			2.04 The Internal auditor cannot assess specific operations for which he/she was previously responsible		
Mean		4.76	Mean		4.05
Standard Deviation		2.195	Standard Deviation		2.212
Kurtosis		-1.395	Kurtosis		-1.508
Mode		7	Mode		7
Answer	Frequency	Percent	Answer	Frequency	Percent
1	22	9.1	1	36	14.9
2	37	15.3	2	47	19.4
3	24	9.9	3	31	12.8
4	20	8.3	4	25	10.3
5	14	5.8	5	16	6.6
6	42	17.4	6	32	13.2
7	83	34.3	7	55	22.7

2.05 The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities			2.06 The Internal auditor must possess the needed competencies to perform his/her individual responsibilities		
Mean		4.54	Mean		6.04
Standard Deviation		1.983	Standard Deviation		1.354
Kurtosis		-1.048	Kurtosis		2.675
Mode		6	Mode		7
Answer	Frequency	Percent	Answer	Frequency	Percent
1	28	11.6	1	3	1.2
2	21	8.7	2	5	2.1
3	24	9.9	3	10	4.1
4	35	14.5	4	15	6.2
5	29	12.0	5	16	6.6
6	63	26.0	6	72	29.8
7	42	17.4	7	121	50.0

2.07 The Internal auditor has full powers when carrying out internal audit operations			2.08 The Internal auditor is not expected to have the competencies to detect and investigate fraud		
Mean		5.25	Mean		2.21
Standard Deviation		1.758	Standard Deviation		1.627
Kurtosis		-0.404	Kurtosis		1.472
Mode		7	Mode		1
Answer	Frequency	Percent	Answer	Frequency	Percent
1	8	3.3	1	115	47.5
2	18	7.4	2	58	24.0
3	19	7.9	3	23	9.5
4	26	10.7	4	22	9.1
5	40	16.5	5	6	2.5
6	52	21.5	6	9	3.7
7	79	32.6	7	9	3.7

2.09 The Internal auditor does not guarantee that all significant risks are identified			2.10 The Internal auditor evaluates the design of the organization's ethics related objectives		
Mean		3.47	Mean		4.62
Standard Deviation		1.943	Standard Deviation		1.953
Kurtosis		-1.031	Kurtosis		-1.043
Mode		2	Mode		7
Answer	Frequency	Percent	Answer	Frequency	Percent
1	44	18.2	1	20	8.3
2	50	20.7	2	29	12.0
3	43	17.8	3	18	7.4
4	30	12.4	4	41	16.9
5	27	11.2	5	34	14.0
6	24	9.9	6	47	19.4
7	24	9.9	7	53	21.9

2.11 The Internal auditor contributes to the improvement of risk management processes			2.12 The Internal auditor is not responsible for detecting fraud		
Mean		5.07	Mean		3.64
Standard Deviation		1.797	Standard Deviation		2.069
Kurtosis		-0.56	Kurtosis		-1.232
Mode		6	Mode		1
Answer	Frequency	Percent	Answer	Frequency	Percent
1	10	4.1	1	48	19.8
2	23	9.5	2	41	16.9
3	18	7.4	3	38	15.7
4	27	11.2	4	28	11.6
5	36	14.9	5	30	12.4
6	66	27.3	6	23	9.5
7	62	25.6	7	34	14.0

2.13 The Internal auditor is responsible for the soundness of the internal control structure of the entity			2.14 The Internal auditor is not responsible for maintaining accounting records		
Mean		4.91	Mean		4.59
Standard Deviation		1.713	Standard Deviation		2.112
Kurtosis		-0.236	Kurtosis		-1.211
Mode		6	Mode		7
Answer	Frequency	Percent	Answer	Frequency	Percent
1	16	6.6	1	31	12.8
2	9	3.7	2	23	9.5
3	21	8.7	3	23	9.5
4	42	17.4	4	31	12.8
5	46	19.0	5	21	8.7
6	62	25.6	6	54	22.3
7	46	19.0	7	59	24.4

2.15 The Internal auditor does not have responsibilities for producing the financial statements			2.16 The Internal auditor exercises judgment in the selection of the auditor procedures		
Mean		5.39	Mean		4.66
Standard Deviation		1.864	Standard Deviation		1.745
Kurtosis		-0.175	Kurtosis		-0.634
Mode		7	Mode		6
Answer	Frequency	Percent	Answer	Frequency	Percent
1	13	5.4	1	16	6.6
2	16	6.6	2	17	7.0
3	12	5.0	3	25	10.3
4	26	10.7	4	47	19.4
5	32	13.2	5	45	18.6
6	41	16.9	6	54	22.3
7	102	42.1	7	38	15.7
2.17 The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities					
Mean		4.88			
Standard Deviation		1.827			
Kurtosis		-0.383			
Mode		6			
Answer	Frequency	Percent			
1	21	8.7			
2	13	5.4			
3	17	7.0			
4	31	12.8			
5	51	21.1			
6	60	24.8			
7	49	20.2			

Table 19: Descriptive Statistics per question



Below are some notes that relate to the previous table:

- In three out of the seventeen questions asked, respondents have perceptions completely opposite to the standards of internal audit. Bank employees seem to believe that auditors should have the competencies to investigate fraud, should be able to detect fraud and should guarantee that all risks are identified.
- The question with the highest mean is the one stating that "The Internal auditor must possess the needed competencies to perform his/her individual responsibilities"; with a mean of 6.04 and with 50% of respondents replying with 7.
- The question with the lowest mean is the one stating that "The Internal auditor is not expected to have the competencies to detect and investigate fraud"; with a mean of 2.21 and with 50% of the respondents replying with 1.
- In the statement "The Internal auditor is objective in performing his/her work", more than 88% of the respondents replied with an answer greater than or equal to 5 and less than 7% replied with an answer less than or equal to 3.
- In the statement "The Internal auditor is not expected to have the competencies to detect and investigate fraud", less than 10% of the respondents replied with an answer greater than or equal to 5 and more than 80% replied with an answer less than or equal to 3.

With this, it is possible to say that an Audit Expectation Gap seems to exist between what Lebanese commercial bank employees seem to believe the role of the internal auditor is, and what the standards of internal audit frame the role of this profession to be. The main gap appears to be in the areas relating to whether auditors should have the competencies to investigate fraud, should be able to detect fraud and should guarantee that all risks are identified. This analysis has helped in answering the research question asking whether there exists an Audit Expectation Gap in the Lebanese commercial banking sector.

To start the second part of the analysis, every respondent is to be studied separately. At this point the second section of the questionnaire which includes seventeen questions related to internal audit is also studied. The answers to the questions are between 1 and 7. An average of all the answers of every respondent is calculated and the answer is considered the Score of the respondent. The following formula was used:

Score = (the sum of the answers to question number 2.01 to question number 2.17) / 17

The values of the Score of the two hundred and forty two respondents are shown in Appendix B.

The tests show that the Kurtosis value for the Score is -0.302. This value, being between -3 and +3 indicates that the data is normally distributed and this is also shown in the Figure 2 below:

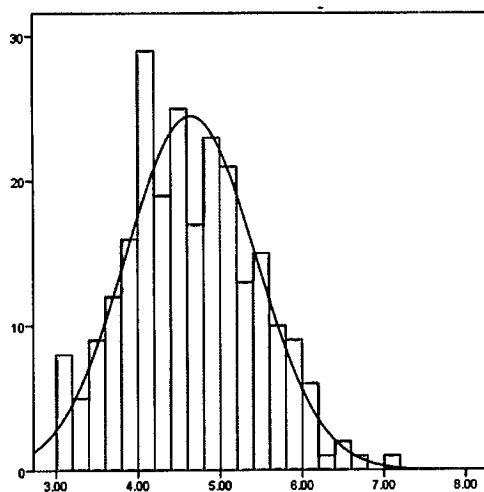


Figure 2: Distribution of the Score

Since the seven point scale used has a neutral answer, which is 4, it is assumed that any value for Score greater than 3 and less than 5 shows that the respondent is confused and does not have a clear and finite answer concerning the question, or in this case towards internal audit in general. The respondents were grouped into three groups:

- The first group with Score values greater than or equal to 1 and less than or equal to 3, the group is assumed to have ideas which contradict to the standards of the profession of internal audit.
- The second group with Score values greater than 3 and less than 5, the group is assumed to be confused and does not have a clear and finite answer about the profession of internal audit.

- The third group with Score values greater than or equal to 5 and less or equal to 7, the group is assumed to have relatively adequate knowledge about the profession of internal audit.

The table below shows how the respondents were distributed among the three groups and thus shows the frequencies and percentages:

Group	Frequency	Percentage
	Out of 242	Out of 100
$1 \leq \text{Score} \leq 3$	1	0.4 %
$3 < \text{Score} < 5$	162	67 %
$5 \leq \text{Score} \leq 7$	79	32.6 %

Table 20: Frequency by Score

As the table shows, the majority of Lebanese commercial bank employees appear to be confused in regards to the profession of internal audit and seem to lack a clear and finite opinion about the role of an internal auditor within the bank. This analysis has helped in answering the research question asking whether Lebanese employees of commercial banks accurately understand the standards of internal audit, and it is thus possible to say that Lebanese commercial bank employees seem to lack a complete and full understanding of the role of an internal auditor within the bank.

#### 4.4 Correlations

The Spearman's rank correlation coefficient is a nonparametric measure of the statistical dependence between two variables. It describes the relationship and the level of dependence between the two variables. A perfect positive correlation will show a +1 value, meaning that when the independent variable increases by a value of X, the dependent variable will also increase by the same value X. While a perfect negative correlation will show a value of -1, meaning that when the independent variable increases by a value of X, the dependent variable will decrease by the same value X. Valid coefficient values of correlation are between -1 and +1, with the value of 0 indicating that when the dependent

variable changes, the dependent variable has no tendency to either decrease or increase. This coefficient was studied between the questions asked to respondents and all the metric demographic variables in our study, and the results are shown in Table 21 below.

	Age of the respondent	Years of experience in the banking sector	Years of experience in the current position	Education level of the respondent
The Internal auditor is independent from the body entrusted with the operations	0.10	0.12	0.01	0.18**
The Internal auditor is objective in performing his/her work	-0.10	-0.02	-0.06	0.13*
The Internal auditor cannot have executive responsibilities within the bank	0.01	0.04	0.02	0.27**
The Internal auditor cannot assess specific operations for which he/she was previously responsible	0.07	0.07	-0.07	0.15*
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	0.04	0.01	0.02	0.01
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	-0.02	0.02	-0.05	0.30**
The Internal auditor has full powers when carrying out internal audit operations	-0.04	-0.01	-0.03	0.18**
The Internal auditor is not expected to have the competencies to detect and investigate fraud	0.11	0.09	0.06	-0.04

	Age of the respondent	Years of experience in the banking sector	Years of experience in the current position	Education level of the respondent
The Internal auditor does not guaranty that all significant risks are identified	0.11	0.04	-0.01	0.08
The Internal auditor evaluates the design of the organization's ethics related objectives	0.15*	0.13*	0.09	0.05
The Internal auditor contributes to the improvement of risk management processes	0.07	0.07	0.00	0.10
The Internal auditor is not responsible for detecting fraud	0.06	0.10	0.08	0.16*
The Internal auditor is responsible for the soundness of the internal control structure of the entity	0.05	0.14*	0.05	0.06
The Internal auditor is not responsible for maintaining accounting records	0.20**	0.13	0.01	0.04
The Internal auditor does not have responsibilities for producing the financial statements	0.15*	0.16*	0.06	0.07
The Internal auditor exercises judgment in the selection of the auditor procedures	0.09	0.10	0.05	0.02
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	-0.01	0.03	0.03	0.11

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 21: Correlations

The tests show a significant correlation between some of the variables. The age of the respondent has a statistically significant correlation with three questions out of the seventeen questions asked, the highest significance is with the question stating that "The Internal auditor is not responsible for maintaining accounting records" and the correlation is positive with a coefficient of 0.20. As for the second demographic variable, the years of experience in the banking sector, the tests show significance at the 5% level for the correlation with three of the seventeen questions. The correlation ranges between 0.13 and 0.16 for those three questions, thus suggesting a positive relationship between those variables and the years of experience in the banking sector. The next demographic variable to be tested is the years of experience in current position, the tests show no significance in the correlation between this variable and the answers to the questions asked. The last demographic variable to be tested is the education level of the respondent. The tests show that education positively affects the perception of the bank employees with respect to seven main areas; the independence of the auditor, the objectivity of the auditor, the possibility of holding executive positions, the possibility of assessing previous responsibilities, the need to possess all needed competencies, the degree of power the auditor has, and the responsibility of the auditor to detect fraud. The tests show that education might improve the perception of employees with regards to those issues. It is now possible, after this study to answer the research question regarding whether there is any significant linear relationship between the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level. It can now be said that there seems to be a slight but significant relation between the perception of the respondents to some of the standards of internal audit and three main demographic variables, the age of the respondent, his or her years of experience in the banking sector, and the education level of the respondent.

#### 4.5 Inferential Statistics

For this part of the analysis, the means of the sample are compared according to all the demographic variables. The data is manipulated by using the t-test, the Mann-Whitney U Test, the oneway ANOVA and the Kruskal-Wallis test. In the first table, the means of the

questions are compared with respect to the Bank Type. Banks are either Lebanese or Lebanese with Arab or foreign control. To test whether the type of the bank affects the answers to the questions, the t-test is run. The results are as follows:

Variable	Bank Type		Mean All	Standard Deviation All
	Lebanese	Lebanese with Arab or Foreign Control		
The Internal auditor is independent from the body entrusted with the operations	4.88	4.81	4.86	2.06
The Internal auditor is objective in performing his/her work	6.01	5.93	5.99	1.30
The Internal auditor cannot have executive responsibilities within the bank	4.81	4.61	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	4.14	3.83	4.05	2.21
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	4.34**	5.03**	4.54	1.98
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	5.97	6.21	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	5.18	5.41	5.25	1.76
The Internal auditor is not expected to have the competencies to detect and investigate fraud	2.23	2.16	2.21	1.63
The Internal auditor does not guarantee that all significant risks are identified	3.59	3.17	3.47	1.94

Variable	Bank Type		Mean All	Standard Deviation All
	Lebanese	Lebanese with Arab or Foreign Control		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.59	4.70	4.62	1.95
The Internal auditor contributes to the improvement of risk management processes	4.98	5.30	5.07	1.80
The Internal auditor is not responsible for detecting fraud	3.59	3.77	3.64	2.07
The Internal auditor is responsible for the soundness of the internal control structure of the entity	5.05	4.59	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	4.65	4.46	4.59	2.11
The Internal auditor does not have responsibilities for producing the financial statements	5.40	5.37	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	4.62	4.76	4.66	1.75
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	4.87	4.89	4.88	1.83

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 22: T-test by bank type

As the table shows, there is no statistical significant difference between the means of responses of employees of Lebanese banks and employees of Lebanese banks with Arab or foreign control, except for one question. The tests show that for the question "The Internal auditor may provide consulting services relating to operations for which he/she had



previous responsibilities", both parametric (as shown in Table 22) and nonparametric tests (as shown in Appendix C) show a high significance level for the variance in the means. This suggests that employees at Lebanese banks with Arab or foreign control might have a better perception to the role of the internal auditors in regards to them offering consulting services relating to the position the auditor used to hold. The next table shows the difference in the means with regards to the difference in genders. The data was normally distributed and thus only parametric tests were performed.

Variable	Gender		Mean All	Standard Deviation All
	Male	Female		
The Internal auditor is independent from the body entrusted with the operations	4.88	4.85	4.86	2.06
The Internal auditor is objective in performing his/her work	5.91	6.08	5.99	1.30
The Internal auditor cannot have executive responsibilities within the bank	4.68	4.85	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	3.89	4.23	4.05	2.21
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	4.57	4.51	4.54	1.98
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	5.94	6.16	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	5.05	5.47	5.25	1.76
The Internal auditor is not expected to have the competencies to detect and investigate fraud	2.09	2.35	2.21	1.63
The Internal auditor does not guarantee that all significant risks are identified	3.63	3.29	3.47	1.94

Variable	Gender		Mean All	Standard Deviation All
	Male	Female		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.55	4.71	4.62	1.95
The Internal auditor contributes to the improvement of risk management processes	5.05	5.1	5.07	1.80
The Internal auditor is not responsible for detecting fraud	3.72	3.55	3.64	2.07
The Internal auditor is responsible for the soundness of the internal control structure of the entity	4.83	5.01	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	4.50	4.7	4.59	2.11
The Internal auditor does not have responsibilities for producing the financial statements	5.48	5.29	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	4.52	4.83	4.66	1.75
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	5.04	4.69	4.88	1.83

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 23: T-test by gender

As the table shows, according to the tests performed, there are no significant differences in the views of female employees and male employees towards the profession of internal audit. Means are also compared according to the age of the participant. The first approach was to group the participants into three groups and thus use the ANOVA test in addition to nonparametric tests; significant variation levels were shown in two questions out of the seventeen and further t-tests were performed on the two questions.

		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor evaluates the design of the organization's ethics related objectives	Between Groups	0035.175	002	17.587	4.757	0.009
	Within Groups	0883.606	239	03.697		
	Total	0918.781	241			
The Internal auditor is not responsible for maintaining accounting records	Between Groups	0027.221	002	13.611	3.104	0.047
	Within Groups	1047.937	239	04.385		
	Total	1075.158	241			

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 24: ANOVA tests by age 1

For those two questions the means are compared between every two age groups out of the three groups to see where the actual significant difference lays. Results came as follows:

Variable	Age			Mean All	Standard Deviation All
	Between 20 and 29 years old	Between 30 and 39 years old	Above 30 years old		
The Internal auditor evaluates the design of the organization's ethics related objectives	* 4.32 **	4.84 *	5.52**	4.62	1.95
The Internal auditor is not responsible for maintaining accounting records	4.35*	4.85	5.26*	4.59	2.11

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 25: T-test by age 1

In regards to the question "The Internal auditor evaluates the design of the organization's ethics related objectives", the means show a difference in the perception of employees towards this issue. The tests show this difference is significant at the 1% level. This implies that there exists a statistically significant variance in the perception of this issue between

the employees belonging to the youngest age bracket and those belonging to the oldest age bracket. As for the question stating that "The Internal auditor is not responsible for maintaining accounting records"; the difference the perception is also significant, but at the 5% level. When grouping the participants' age into two groups, the tests show the following:

Variable	Age		Mean All	Standard Deviation All
	Below or Equal to 30 years old	Greater than 30 years old		
The Internal auditor is independent from the body entrusted with the operations	4.76	5.03	4.86	2.06
The Internal auditor is objective in performing his/her work	6.10	5.79	5.99	1.30
The Internal auditor cannot have executive responsibilities within the bank	4.79	4.70	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	3.96	4.20	4.05	2.21
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	4.53	4.56	4.54	1.98
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	6.03	6.07	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	5.27	5.20	5.25	1.76
The Internal auditor is not expected to have the competencies to detect and investigate fraud	2.10	2.40	2.21	1.63
The Internal auditor does not guarantee that all significant risks are identified	3.28*	3.80*	3.47	1.94

Variable	Age		Mean All	Standard Deviation All
	Below or Equal to 30 years old	Greater than 30 years old		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.38**	5.04**	4.62	1.95
The Internal auditor contributes to the improvement of risk management processes	5.00	5.20	5.07	1.80
The Internal auditor is not responsible for detecting fraud	3.65	3.64	3.64	2.07
The Internal auditor is responsible for the soundness of the internal control structure of the entity	4.91	4.92	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	4.32**	5.06**	4.59	2.11
The Internal auditor does not have responsibilities for producing the financial statements	5.20*	5.71*	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	4.50	4.94	4.66	1.75
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	4.83	4.96	4.88	1.83

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 26: T-test by age 2

The table above shows that the variance with respect to age in the perception of respondents towards internal audit is of high statistical significance mainly in regards to two main issues, the role the auditor plays in setting the ethics related objectives and the role the auditor plays in maintaining the accounting records. The variance is also of significance with regards to the questions about the responsibility the auditor assumes in guaranteeing that all major risks are identified and in producing the financial statement. However the

level of significance of the last two questions was not very high. Although the tests show a significant level of difference in the means of the four questions mentioned earlier, the actual difference in the means of the two age groups is not very big. The next table shows the results of the t-test with respect to the whereabouts of the respondents. The sample consisted of employees of banks located at Branches or Headquarters of the bank. The results of the parametric tests (Table 27) and non-parametric tests(Appendix D) came as follows:

Variable	Whereabouts of the Respondent		Mean All	Standard Deviation All
	Branch	Headquarters		
The Internal auditor is independent from the body entrusted with the operations	4.16**	5.08**	4.86	2.06
The Internal auditor is objective in performing his/her work	5.68	6.08	5.99	1.30
The Internal auditor cannot have executive responsibilities within the bank	4.61	4.80	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	3.68	4.16	4.05	2.21
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	4.27	4.62	4.54	1.98
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	5.54**	6.19**	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	4.91	5.35	5.25	1.76
The Internal auditor is not expected to have the competencies to detect and investigate fraud	2.21	2.21	2.21	1.63
The Internal auditor does not guarantee that all significant risks are identified	2.93*	3.63*	3.47	1.94

Variable	Whereabouts of the Respondent		Mean All	Standard Deviation All
	Branch	Headquarters		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.09*	4.78*	4.62	1.95
The Internal auditor contributes to the improvement of risk management processes	4.77	5.17	5.07	1.80
The Internal auditor is not responsible for detecting fraud	3.57	3.67	3.64	2.07
The Internal auditor is responsible for the soundness of the internal control structure of the entity	4.41*	5.07*	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	3.95**	4.79**	4.59	2.11
The Internal auditor does not have responsibilities for producing the financial statements	4.73**	5.59**	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	4.11**	4.83**	4.66	1.75
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	4.84	4.89	4.88	1.83

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 27: T-test by whereabouts

The tests suggest that the perception of respondents at headquarters is significantly different than the perception of employees at the branches in regards to the questions relating to the independence of the auditors, the competencies they are supposed to have, and their role in producing the financial statement, selecting the audit procedures and maintaining accounting records. As for the questions about the role of the auditor with respect to the ethics related objectives, the internal control structure and the absence of risks, it was also clear that employees at the head office had a significantly different perception than those at branches and the tests show a 5% significance level. In the next

table, the means are analyzed with respect to the type of the position of the respondents. As it was explained earlier, respondents worked in departments of different natures and are grouped into three groups; Operational Branch, Operational Headquarters or Accounting, Finance, Audit and Risk Management. The use of the ANOVA test showed significant levels in seven questions, as shown in the following table.

		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor is independent from the body entrusted with the operations	Between Groups	69.198	2	34.599	8.69 2	0.000
	Within Groups	951.302	239	3.980		
	Total	1020.500	241			
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	Between Groups	19.183	2	9.591	5.42 7	0.005
	Within Groups	422.404	239	1.767		
	Total	441.587	241			
The Internal auditor does not guaranty that all significant risks are identified	Between Groups	23.585	2	11.792	3.17 8	0.043
	Within Groups	886.713	239	3.710		
	Total	910.298	241			
The Internal auditor is responsible for the soundness of the internal control structure of the entity	Between Groups	20.744	2	10.372	3.61 1	0.029
	Within Groups	686.539	239	2.873		
	Total	707.283	241			
The Internal auditor is not responsible for maintaining accounting records	Between Groups	91.633	2	45.817	11.1 34	0.000
	Within Groups	983.525	239	4.115		
	Total	1075.158	241			
The Internal auditor does not have responsibilities for producing the financial statements	Between Groups	49.874	2	24.937	7.56 9	0.001
	Within Groups	787.474	239	3.295		
	Total	837.348	241			



		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor exercises judgment in the selection of the auditor procedures	Between Groups	35.387	2	17.693	6.054	0.003
	Within Groups	698.528	239	2.923		
	Total	733.915	241			

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 28: ANOVA test by position type

Further t-tests were performed on those questions to see where the actual significant difference lays. Results came as follows:

Variable	Position Type			Mean All	Standard Deviation All
	Operational Branch	Operational Headquarters	Accounting, Finance, Audit and Risk Management		
The Internal auditor is independent from the body entrusted with the operations	4.16**	4.80**	** 5.73**	4.86	2.06
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	** 5.54*	6.23**	6.11*	6.04	1.35
The Internal auditor does not guarantee that all significant risks are identified	* 2.93*	3.56*	3.80*	3.47	1.94
The Internal auditor is responsible for the soundness of the internal control structure of the entity	* 4.41*	4.99*	5.24*	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	3.95**	4.42**	** 5.67**	4.59	2.11

Variable	Position Type			Mean All	Standard Deviation All
	Operational Branch	Operational Headquarters	Accounting, Finance, Audit and Risk Management		
The Internal auditor does not have responsibilities for producing the financial statements	* 4.73**	* 5.39**	** 6.07**	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	* 4.11**	* 4.66*	** 5.24*	4.66	1.75

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 29: T-test by position type

As the table shows, there exists a significant level of difference between the means of every group. It is obvious that employees working at Accounting, Finance, Audit and Risk Management types of positions, have a better perception about the work of internal auditors than employees working in Operational positions. It is also clear that employees at the headquarters have a better perception than employees at branches, although both work similar types of jobs. Surprisingly, the employees working in Accounting, Finance, Audit and Risk Management types of positions, considered to be the most knowledgeable about the nature of internal audit, have a mean still very far away from what the actual standards of internal audit state. Next, the tests will show whether the means of the perception of the employees vary significantly with the difference in years of experience in the banking sector. The number of years was grouped into four brackets, 0 to 5, 6 to 11, 12 to 17, and above 17 years of experience. The ANOVA test showed a significant difference at the 1% level for two questions out of the seventeen questions asked.

		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor evaluates the design of the organization's ethics related objectives	Between Groups	0040.691	003	13.564	3.676	0.013
	Within Groups	0878.090	238	03.689		
	Total	0918.781	241			
The Internal auditor is not responsible for maintaining accounting records	Between Groups	0040.002	003	13.334	3.066	0.029
	Within Groups	1035.156	238	04.349		
	Total	1075.158	241			

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 30: ANOVA test by years of experience banking sector

A further t-test was run on the two questions between every two groups out of the four groups. Results were as follows:

Variable	Years of Experience in Banking Sector				Mean All	Standard Deviation All
	0 to 5 years	6 to 11 years	12 to 17 years	Above 17 years		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.43**	4.60**	4.82**	** ** 6.21**	4.62	1.95
The Internal auditor is not responsible for maintaining accounting records	4.49**	4.40**	** 5.94**	5.14	4.59	2.11

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 31: T-test by years of experience in banking sector

The table shows that for the statement about the auditor setting the audit related objectives, the best knowledgeable among all the groups are those with the highest number of years of experience, and the significant difference between their mean and the means of all the other groups is high. There does not seem to be any significance in the differences between the other groups. As for the question about the auditor maintaining the accounting records,

it appears that the most knowledgeable group is that having an experience between 12 and 17 years in the banking sector. Those with a higher number of years in experience seem to have a lower level of knowledge, but this difference between their means shows no significance in the t-test and thus might be of no importance. The significant difference in the means is between the other 3 groups as the tables show. The years of experience in the current position is analyzed next with respect to the knowledge the respondents have concerning the profession of internal audit. The respondents are grouped into three brackets, those with 0 to 3 years of experience in their current position, those with 4 to 7 years of experience and finally those with more than 7 years experience in their current position. The ANOVA test was run on the data and results showed a significant level of difference in one question out of the seventeen asked, as shown in the table below:

		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor evaluates the design of the organization's ethics related objectives	Between Groups	023.107	002	11.554	3.083	0.048
	Within Groups	895.674	239	03.748		
	Total	918.781	241			

\*\* Significant at the 1% level

\* Significant at the 5% level

Table32: ANOVA test by years of experience in current position

When the t-test was performed on this question, and every two brackets were compared, results showed a significant difference (at the 1% level) for two particular age groups. The tables below show the outcome:

Variable	Years of Experience in Current Position			Mean All	Standard Deviation All
	0 to 3 years	4 to 7 years	Above 7 years		
The Internal auditor evaluates the design of the organization's ethics related objectives	4.60*	4.38**	** 5.41*	4.62	1.95

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 33: T-test by experience in current position

The biggest and most significant difference between the means is between respondents with 4 to 7 years of experience in their current position and those with more than 7 years of experience. The education of the respondent is another demographic variable that will try to analyze next. The employees of the banks either hold a bachelor degree or a Masters degree. Only 2 employees have a secondary degree and 2 have a doctorate degree. Those four employees were disregarded in the study and those belonging to the bachelor and masters groups will be studied. The ANOVA test shows a significance level on 4 questions out of the 17. The questions are shown in the tables below:

		Sum of Squares	df	Mean Square	F	Significance
The Internal auditor cannot have executive responsibilities within the bank	Between Groups	0088.101	003	29.367	06.517	0.000
	Within Groups	1072.515	238	04.506		
	Total	1160.616	241			
The Internal auditor cannot assess specific operations for which he/she was previously responsible	Between Groups	0040.374	003	13.458	02.811	0.040
	Within Groups	1139.330	238	04.787		
	Total	1179.704	241			
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	Between Groups	0054.574	003	18.191	11.187	0.000
	Within Groups	0387.012	238	01.626		
	Total	0441.587	241			
The Internal auditor has full powers when carrying out internal audit operations	Between Groups	0025.509	003	08.503	02.813	0.040
	Within Groups	0719.301	238	03.022		
	Total	0744.810	241			

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 34: ANOVA test by education level

When the t-test was performed on this question, the two main groups were compared; results show a significant difference (at the 1% level) for three particular questions and at the 5% level for one question. The table below shows the outcome:

Variable	Education		Mean All	Standard Deviation All
	Bachelor Degree	Masters Degree		
The Internal auditor cannot have executive responsibilities within the bank	4.10**	5.22**	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	3.63**	4.38**	4.05	2.21
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	5.72**	6.32**	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	4.97*	5.45*	5.25	1.76

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 35: T-test by education level

As the tables show, the employees' perception towards the profession of internal audit differs with a statistical significance as the education level increases. The significant differences between the means of the two groups are in four questions out of the 17 questions asked. The possibility of an auditor holding executive responsibilities, assessing operations for which they were previously responsible for, the need to possess all needed competencies to perform their work and having full powers when performing their duties are the main areas of significant difference in means. The last demographic factor to be analyzed is whether the participant has acquired a professional certification or not. The results show that in the questions related to the auditor being independent from the body entrusted with the operations and to the auditor's obligation to have the competencies to perform his or her duties, employees in possession of certifications have a higher mean than their colleagues with no certifications. The difference is not very big but the t-test

shows that it is significant at the 1% level. As for the question relating to the auditor having the competencies to detect fraud, employees with certifications seem to have a view which contradicts with the standards. Employees with no certifications have a higher mean than the other group, suggesting that the possession of a certification might negatively affect the perception of the employee about the role auditors play with respect to fraud. Again, it is important to mention the both groups have a very low mean and both have views disagreeing with the standards of internal audit. The complete results are shown in the table below:

Variable	Certification		Mean All	Standard Deviation All
	No Certification	Certification		
The Internal auditor is independent from the body entrusted with the operations	4.62**	5.62**	4.86	2.06
The Internal auditor is objective in performing his/her work	5.94	6.13	5.99	1.30
The Internal auditor cannot have executive responsibilities within the bank	4.66	5.05	4.76	2.20
The Internal auditor cannot assess specific operations for which he/she was previously responsible	4.02	4.13	4.05	2.21
The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities	4.50	4.65	4.54	1.98
The Internal auditor must possess the needed competencies to perform his/her individual responsibilities	5.90**	6.48**	6.04	1.35
The Internal auditor has full powers when carrying out internal audit operations	5.24	5.27	5.25	1.76
The Internal auditor is not expected to have the competencies to detect and investigate fraud	2.34*	1.83*	2.21	1.63

Variable	Certification		Mean All	Standard Deviation All
	No Certification	Certification		
The Internal auditor does not guarantee that all significant risks are identified	3.45	3.55	3.47	1.94
The Internal auditor evaluates the design of the organization's ethics related objectives	4.54	4.88	4.62	1.95
The Internal auditor contributes to the improvement of risk management processes	5.08	5.05	5.07	1.80
The Internal auditor is not responsible for detecting fraud	3.57	3.88	3.64	2.07
The Internal auditor is responsible for the soundness of the internal control structure of the entity	4.90	4.95	4.91	1.71
The Internal auditor is not responsible for maintaining accounting records	4.52	4.8	4.59	2.11
The Internal auditor does not have responsibilities for producing the financial statements	5.29	5.68	5.39	1.86
The Internal auditor exercises judgment in the selection of the auditor procedures	4.64	4.73	4.66	1.75
The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	4.85	4.95	4.88	1.83

\*\* Significant at the 1% level

\* Significant at the 5% level

Table 36: T-test by certification

With this, the first part of the analysis that compares the means of the whole sample with respect to the demographic variables is concluded. Now, to answer the last research question which asks whether there is any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level, the significant variations are



studied. This analysis is inspired by the approach followed by Schelluch (1996) but is altered to match the vision of this study. What will be done is that for every statement in the questionnaire used in this study, any significant difference in means will be considered as a significant variation in the understanding of employees with different demographics to a certain issue in audit. The variance in means for every demographic variable will be reported only in the case of the t-test which was used to test for a significant difference in means showed this difference to be significant at the 5% level or the 1% level. The tables will target every question or standard of internal audit separately, and show only the demographic variables that seem to be related to the significant variance in means. The complete analysis is shown below.

The Internal auditor is independent from the body entrusted with the operations			
Demographic Variable	Whereabouts of respondents	Position type	Certification
Significant Variation related to	Branch/Headoffice	Operational Headoffice/ Accounting, Finance, Audit and Risk Management	Certification/ No Certification

Table 37: Significant variations for question one  
(For Means and significance levels refer to Tables 27, 28, and 36)

As the table shows, there are three significant variations in the understanding of the standard stating that: "The Internal auditor is independent from the body entrusted with the operations". It appears that the whereabouts of the respondent, his or her position type and acquiring a certification might have a role in the size of the degree of understanding.

The Internal auditor is objective in performing his/her work	
Significant Variation related to	No Significant variations

Table 38: Significant variations for question two

As the table shows, there are no significant variations in understanding related to this standard. None of the demographic variables identified in this study are related to a significant variation in the means.

The Internal auditor cannot have executive responsibilities within the bank	
<b>Demographic Variable</b>	Education Level of the respondent
<b>Significant Variation related to</b>	Bachelor Degree / Masters Degree

Table 39: Significant variations for question three  
(For Means and significance levels refer to Table 35)

As the table shows, a significant variation in the understanding was identified regarding the standard stating that: “The Internal auditor cannot have executive responsibilities within the bank”; this difference in means can be attributed to the difference in the education level of the respondent. The same applies to the standard stating that: “The Internal auditor cannot assess specific operations for which he/she was previously responsible”; the table below shows that a significant variation was identified as related to the difference in education level.

The Internal auditor cannot assess specific operations for which he/she was previously responsible	
<b>Demographic Variable</b>	Education Level
<b>Significant Variation related to</b>	Bachelor Degree / Masters Degree

Table 40: Significant variations for question four  
(For Means and significance levels refer to Table 35)

The fifth question of the questionnaire states that: "The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities". The tests indicate the existence of a significant variation in understanding regarding this standard mainly in relation to two demographic variables, the bank type and the educational level of the participant, as shown in the table below.

The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities		
Demographic Variable	Bank Type	Education Level
Significant Variation related to	Lebanese Bank / Lebanese Bank with Arab or foreign Control	Bachelor Degree / Masters Degree

Table 41: Significant variations for question five  
(For Means and significance levels refer to Tables 22 and 35)

The next table will show the significant variation in understanding identified with respect to the standard that states the following: "The Internal auditor must possess the needed competencies to perform his/her individual responsibilities".

The Internal auditor must possess the needed competencies to perform his/her individual responsibilities					
Demo-graphic Variable	Whereabouts of respondents	Position type		Education Level	Certification
Significant Variation related to	Branch/ Headoffice	Operational Branch/ Operational Headoffice	Operational Branch/ Accounting, Finance , Audit and Risk Management	Bachelor Degree / Masters Degree	Certification /No Certification

Table 42: Significant variations for question six  
(For Means and significance levels refer to Tables 27, 29, 35 and 36)

The tests identify a significant variation in understanding in regards to four demographic variables mainly the whereabouts of the respondent, the position type, the education level and the presence of a certification. The next standard to be checked for significant levels of

variation is the standard stating that: “The Internal auditor has full powers when carrying out internal audit operations”.

The Internal auditor has full powers when carrying out internal audit operations	
<b>Demographic Variable</b>	Education Level
<b>Significant Variation related to</b>	Bachelor Degree / Masters Degree

Table 43: Significant variations for question seven  
(For Means and significance levels refer to Table 35)

The tests show a significant variation in understanding regarding this standard with respect to the educational level of the respondent. As for the standard that states that: “The Internal auditor is not expected to have the competencies to detect and investigate fraud”; the tests show a significant variation in understanding between carriers and non-carriers of certifications. The variation suggests that non-carriers of certification have a better level of perception than carriers of certifications in regards to the auditor having competencies to detect and investigate fraud.

The Internal auditor is not expected to have the competencies to detect and investigate fraud	
<b>Demographic Variable</b>	Certification
<b>Significant Variation related to</b>	Certification/No Certification

Table 44: Significant variations for question eight  
(For Means and significance levels refer to Table 35)

As for the ninth question in the questionnaire, stating that: “The Internal auditor does not guarantee that all significant risks are identified”; the tests recognize a significant variation in understanding for this standard in regards to the three demographic variables shown in the table below:

The Internal auditor does not guarantee that all significant risks are identified					
Demographic Variable	Age of respondents		Whereabouts of respondents	Position type	
Significant Variation related to	Less than 30 years old /	Greater than 30 years old	Branch/ Headoffice	Operational Branch/ Operational Headoffice	Operational Branch/ Accounting, Finance, Audit and Risk Management

Table 45: Significant variations for question nine  
(For Means and significance levels refer to Tables 25, 26, 27 and 29)

The results of the tests indicate significant variation in understanding regarding the statement: “The Internal auditor evaluates the design of the organization's ethics related objectives”. The significant variations are mainly related to four demographic variables, the age and whereabouts of the respondent, the years of experience in the banking sector and in the current position. The table below summarizes the results of the variations in understanding.

The Internal auditor evaluates the design of the organization's ethics related objectives								
Demographic Variable	Age of respondents		Whereabouts of respondents	Years of Experience in Banking Sector			Years of Experience in Current Position	
Significant Variation related to	≤30 / >30	<29 / >39	Branch/ Headoffice	>6, <11 / >12, <17	>6, <11 / ≥17	>12, <17 / ≥17	>0, <3 / >7	>4, <7 / >7

Table 46: Significant variations for question ten  
(For Means and significance levels refer to Tables 25, 26, 27, 31 and 33)

The tests show no significant variations in understanding for the next two statements in the questionnaire. The statements are those stating that: “The Internal auditor contributes to the improvement of risk management processes”; and that: “The Internal auditor is not responsible for detecting fraud”. This means that none of the demographic variables identified in this study is related to a significant variation in understanding of the means. The results are as follows:

The Internal auditor contributes to the improvement of risk management processes	
<b>Significant Variation related to</b>	No Significant variations

Table 47:Significant variations for question eleven

The Internal auditor is not responsible for detecting fraud	
<b>Significant Variation related to</b>	No Significant variations

Table 48:Significant variations for question twelve

Next, the table shows that the tests identify a significant variation in understanding between respondents of different position types and of different whereabouts with respect to the following statement: “The Internal auditor is responsible for the soundness of the internal control structure of the entity”.

The Internal auditor is responsible for the soundness of the internal control structure of the entity		
Demographic Variable	Whereabouts of respondents	Position type
<b>Significant Variation related to</b>	Branch/Headoffice	Operational Branch/ Accounting, Finance, Audit and Risk Management

Table 49:Significant variations for question thirteen  
(For Means and significance levels refer to Tables 27 and 29)

The results of the tests indicate significant variations in understanding regarding the statement: “The Internal auditor is not responsible for maintaining accounting records”. The significant variations are mainly related to four demographic variables, the age and whereabouts of the respondent, his or her position type, and the years of experience in the banking sector. The table below summarizes the results of the variations.

The Internal auditor is not responsible for maintaining accounting records							
Demo-graphic Variable	Age of respondents		Whereabouts of respondents	Years of Experience in Banking Sector		Position type	
	Significant Variation related to	≤30 / >30		<29 / >39	Branch /Head-office	>0,<5/ >12,<17	>6,<11/ >12,<17

Table 50:Significant variations for question fourteen  
(For Means and significance levels refer to Tables 25, 26, 27, 29 and 31)

When testing for a significant variation in understanding for the statement "The Internal auditor does not have responsibilities for producing the financial statements", results identified a significant variation in relation to three main demographic variables, as shown in the following table:

The Internal auditor does not have responsibilities for producing the financial statements					
Demo-graphic Variable	Age of respondents	Whereabouts of respondents	Position type		
			Significant Variation related to	≤30 / >30	Branch/ Headoffice

Table 51:Significant variations for question fifteen  
(For Means and significance levels refer to Tables 25, 26, 27 and 29)

When studying whether the demographic variables used are related to any significant variation in understanding, the results show a significant variation in relation to two demographic variables with respect to the statement: "The Internal auditor exercises judgment in the selection of the auditor procedures". The outcome came as follows:

The Internal auditor exercises judgment in the selection of the auditor procedures			
Demographic Variable	Whereabouts of respondents	Position type	
Significant Variation related to	Branch/Headoffice	Operational Branch/ Accounting, Finance, Audit and Risk Management	Operational Headoffice/ Accounting, Finance, Audit and Risk Management

Table 52: Significant variations for question sixteen  
(For Means and significance levels refer to Tables 27 and 29)

For the final statement stating that: “The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities”, the tests show that there is no significant variation in understanding in regards to any of the demographic variable identified in this study.

The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities	
Significant Variation related to	No Significant variations

Table 53: Significant variations for question seventeen

As it was shown in this part of the analysis, there exists a significant variation in understanding in the Lebanese commercial banking sector in regards to many issues. The demographic variables are related to this variation in some areas of the research and are not related in others. The table below gives a summary of the demographic variables that are related to the significant variations in understanding that were identified earlier.



Variable	Bank Type	Gender	Age	Where abouts	Position Type	Experience Banking Sector	Experience Current Position	Education	Certification
Independence				X	X				X
Objectivity									
Executive responsibilities								X	
Assessing previous operations								X	
Consulting previous operations	X							X	
Possess needed competencies				X	X			X	X
Full powers								X	
Competencies to detect and investigate fraud									X
Guarantee significant risks are identified			X	X	X				
Evaluates ethics related objectives			X	X		X	X		
Contribute to risk management processes									
Detecting fraud									
Internal control structure				X	X				
Maintaining accounting records			X	X	X	X			
Producing the financial statements			X	X	X				
Selection of the auditor procedures				X	X				
Obtain competent assistance									

Table 54: Significant variation in understanding summary

#### 4.6 Conclusions

The results reveal a mild variation in understanding of the employees in the areas related to the independence of the auditor and to the possibility of holding an executive position within the bank; the mild variation was also related to the auditor having full powers when performing the audit operations, to the role of the auditor in assessing or consulting operations he or she was previously responsible of, in evaluating the ethics related objectives, in maintaining the soundness of the internal control structure, in maintaining accounting records, in producing the financial statements and in the selection of audit procedures. The studies suggest that employees at the head office, in positions with more exposure to internal audit, and of higher educational levels and longer experience periods have a better perception and understanding regarding these areas than the rest of the employees. As for the areas related to the objectivity of the auditor, to the role of the auditor in improving the risk management processes and to the auditor obtaining competent assistance in areas where he or she lacks the needed competencies; the demographic variables seem to have no significant effect on the perception of the respondents, but that is acceptable since their views are already close to the standards.

Finally, for the areas where the major gaps seem to occur, mainly the areas of fraud detection and investigation and in the area of the auditor guaranteeing that all significant risks are identified, the study illustrated that employees seem to believe that an internal auditor is responsible for detecting and investigating fraud and should ultimately possess the needed competencies to do so. Respondents seem to believe that the internal auditor guarantees the bank is free from any significant risk. The table above shows that the employees with the highest levels of exposure, experience, education and age have views similar to those with the lowest levels of exposure, experience, education and age; and thus both sides have views very far away from the standards.

It is now possible to answer the last research question which asks whether there is any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level. It can now be said that there seems to be a variation in the level of the respondents' understanding of eleven of the standards with respect to seven demographic

variables, mainly the bank type, the position type, the whereabouts and age of the respondent, the years of experience in banks and current position, and the education level of the respondents.

## Chapter 5

### Conclusions and Recommendations

#### 5.1 Introduction

This thesis attempts to investigate the potential existence of an Audit Expectation Gap in the Lebanese commercial banking sector and assess the understanding of employees to the standards of internal audit as promulgated by both the Institute of Internal Audit and the Lebanese Central Bank. This thesis defines the Audit Expectation Gap as the gap between what employees perceive the role of the internal auditor to be, and what the Standards of Internal Audit indicate his or her role to be. The research questions that were used in this thesis attempt to lead the study to test for an accurate understanding of the standards of internal audit by the bank employees, to test for an Audit Expectation Gap in the Lebanese commercial banking sector, to test for any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, and test for any significant linear relationship between the level of the respondents' understanding of the standards when compared for different demographic variables.

To reach the aim of the study, the positivist philosophical angle was followed through a deductive reasoning approach. The targeted population of this study was chosen to be the “employees of the Lebanese commercial banks” and the random stratified sample was a total of two hundred and forty two employees out of thirty six Lebanese commercial banks. With regard to the research strategy and methodology, a survey was considered the best approach and the data was collected using a questionnaire. The data collected was entered into the SPSS statistical tool and analyzed. The correlations between different variables were studied and explained, and the descriptive and inferential statistics were run and studied as well. This chapter will show the main findings of the statistical studies in its first part. In the second part, both the validity and the reliability of the study will be discussed. Then the limitations are communicated in the third part and the possibility of future

research is discussed in the fourth part. Finally all final remarks on this thesis will be illustrated.

## 5.2 The Main Findings

When the data was collected, it was manipulated using three main types of statistics, correlations, descriptive and inferential statistics. The study reveals a difference in many areas between what the respondents perceive the role of the internal audit to be and what the actual standards of the profession frame internal audit to be. The main differences are in the areas of fraud investigation and detection and in the area of the auditor guaranteeing that all significant risks are identified. The study illustrated that bank employees seem to believe that an internal auditor is responsible for detecting and investigating fraud and should ultimately possess the needed competencies to do so. They also tend to believe that the internal auditor guarantees the bank is free from any significant risk. It was also illustrated that a change in the demographical variables will not cause a significant change in the understanding of the employees. So the employees with the highest levels of exposure, experience, education and age have views similar to those with the lowest levels of exposure, experience, education and age; and thus both sides have views very far away from the standards. This probably indicates the presence of a gap that is hard bridge by a change to any of the demographic variables identified in this study.

The results reveal a mild variation in understanding of the employees in the areas related to the independence of the auditor and to the possibility of holding an executive position within the bank; the mild variation was also related to the auditor having full powers when performing the audit operations, to the role of the auditor in assessing or consulting operations he or she was previously responsible of, in evaluating the ethics related objectives, in maintaining accounting records, in maintain the soundness of the internal control structure, in producing the financial statements and in the selection of audit procedures. The studies suggest that employees at the head office, in positions with more exposure to internal audit, and of higher educational levels and longer experience periods

have a better perception and understanding regarding these areas than the rest of the employees.

This study also shows that bank employees have a good perception towards three main areas in internal audit, mainly those related to the objectivity of the auditor, to the role of the auditor in improving the risk management processes and to the auditor obtaining competent assistance in areas where he or she lacks the needed competencies. For those areas, the demographic variables did not induce any significant variation in the perception of the respondents, but that is not necessarily considered a problem since their views are already close to the standards. The table below gives a summary of the findings as they are related to the research questions this thesis attempted to answer.

Research Question	Test	Result
Do Lebanese employees of commercial banks accurately understand the standards of internal audit?	Descriptive Statistics	Employees of Lebanese commercial banks seem to lack a complete and clear knowledge about the role of internal audit within the bank.
Is there an Audit Expectation Gap in the Lebanese commercial banking sector?	Descriptive Statistics	An audit expectation gap seems to exist in the Lebanese commercial banking sector mainly in regards to three main areas, the responsibility of the auditor in detecting fraud, the need for an auditor to possess the needed competencies to detect and investigate fraud, and the auditors' guarantee that all significant risks within a bank are identified.
Is there any variation in the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level?	T-test Kruskal-Wallis test Mann-Whitney U Test Oneway ANOVA	There seems to be a variation in the level of the respondents' understanding of eleven of the standards with respect to seven demographic variables, mainly the bank type, the position type, the whereabouts and age of the respondent, the years of experience in banks and current position, and the education level of the respondents.

Research Question	Test	Result
Is there any significant linear relationship between the level of the respondents' understanding of the standards when compared for different demographic variables, such as the bank type, age, experience, gender, and education level?	Spearman's rank correlation coefficient	There seems to be a slight but significant relation between the perception of the respondents to some of the standards of internal audit and three main demographic variables, the age of the respondent, his or her years of experience in the banking sector, and the education level of the respondent.

Table 55: Results of Research Questions

### 5.3 Reliability and Validity

The ability to answer the research questions is of true value only if the data collection procedure and tool are of actual value. This is true since the data collection procedure and tool are directly related to the quality of the data that is ultimately used to answer the research questions. The main characteristics of a valuable data that is derived from a valuable data collection procedure and tool are reliability and validity.

#### 5.3.1 Reliability

Since this study uses a questionnaire as a data collection tool, the internal reliability of this questionnaire had to be tested. To do so, a Cronbach's Alpha was run on the sample of two hundred and forty two observations and gave a result of 0.74. Nunnally and Bernstein (1994) prescribed a general convention in research that stated that any value above 0.70 is an acceptable reliability ratio. This value shows a good level of internal consistency and thus suggests that the intercorrelation among test items is at an acceptable level.

#### 5.3.2 Validity

In the area of scientific research, validity simply refers to whether the study is actually able to answer scientifically the questions that it intends to answer. Next, the three main

kinds of validity are discussed; Internal, External, and Construct validity. The importance of internal validity is derived from its consequence of being able to suggest a causal relationship between different variables. This type of validity appeared throughout the testing process when the parametric and non-parametric tests both gave similar results and did not show any sort of contradiction. This fact suggests that the tests used in this study are internally valid. Moving to the next type of validity, the external validity, it is of importance because it relates to whether the results of this study can be validly generalized to other cases. A major factor affecting the external validity of the study is the sample. The sample used in this research is believed to be representative due to many reasons. Since the population is the employees of the Lebanese commercial banks, there were two main concerns when sampling. The first concern was having a valid sample of the commercial banks, and the second concern was to have a fair sample of employees from every bank separately. To solve the first concern regarding the banks, it was decided that all the banks within the population are to be visited. By doing so, the sample of banks was a census, thus increasing the validity of the bank sample. As a second step, the number of observations taken from every bank was targeted by setting a fixed percentage (1%) of employees to be sampled from every bank. By doing so, it was ensured that every bank is equally and fairly represented by the number of observations. The share of the bank's employees out of the employees of the whole sector is to be maintained with respect to its share of observations out of the sample. This fact has made the external validity of the test high and thus generalization is feasible to all employees of the Lebanese commercial banks. The third major type of validity is the construct validity. This relates to the close bond between the variables and the theory behind them. It was mentioned earlier that the variables used are used via the exact wordings from the standards set for the profession of internal audit. The standards used in this study are either the Standards of internal audit set by the Institute of Internal Audit, or from the decisions of the Central Bank of Lebanon in regards to the regulation of the profession of internal audit. Table 5 in Chapter Three shows the source of every variable used in the data collection tool. All this has shown that the data collection procedure and tool are reliable and valid, and thus the data used to answer the research questions is of good quality.



#### 5.4 Limitations of the research

Like every other research, this study has its limitations. The first limitation is whether the sample is truly representative of the population of the study. The sampling technique used in this study has helped, to our knowledge, in introducing a representative and diversified sample. However, employees at branches away from the central geographical area in Lebanon were not represented in the sample, and neither were employees at some commercial banks who refused to cooperate in filling out the questionnaire. The other limitation in this study is the scale used in the questionnaire. The seven point scale that was inspired by Schelluch (1996) and used by many other researchers since then might have its own limitations.

#### 5.5 Possible Future Research

Our findings seem to suggest the presence of an audit expectation gap in the Lebanese commercial banking sector. Employees seem to have a perception towards the profession of internal audit that does not conform with the standards of internal audit as set by the Institute of Internal Audit and the Central Bank of Lebanon. Employees seem to believe that an internal auditor is supposed to have the competencies to detect and investigate fraud, and is responsible for detecting fraud and guaranteeing that all significant risks within the bank are identified. Their perception contradicts with the standards of internal audit. The tests show that the change in the demographical variables of the respondent does not have any significant effect on his or her perception towards these issues. It is important to study whether the educational system in Lebanon properly introduces its students to the profession of internal audit. Students at the faculties of Business Administration at universities in Lebanon are expected to be the future employees of banks in Lebanon. Lebanese banks are all required by the Laws of the Central bank of Lebanon to have an independent internal audit function. Any wrong perception towards this profession will negatively affect its productivity and efficiency. Since it is important to have employees well knowledgeable about the profession of internal audit, and since our tests show that experience and position type might not increase the knowledge of individuals with regards

to internal audit, it can be suggested that future research identify whether the introductory courses that students are required to pass during their years of education at the Faculty of Business Administration at universities in Lebanon properly introduce the students to the profession of internal audit and its standards of performance, and whether an introductory audit course should be added to the current curricula.

### 5.6 Final Remarks

Overall, the findings seem to suggest a significant variation in understanding of employees of different demographics to some areas of audit. Although not tested, one could infer that a rotation for bank employees between the branches and headoffice might help in increasing the knowledge of bank employees towards the role of internal auditors. Constant seminars to introduce the employees of every department to the work of other departments in the bank seem to be a good solution as well. It can also be inferred that encouraging employees to pursue higher educational levels and higher certifications might have a positive role in increasing the understanding. As for the significant audit expectation gaps in regards to the areas of fraud and risk free environments, the gaps in those areas seem to be hard to bridge with the current status of education and work environment. Further studies that might lead to suggesting an additional introductory audit course to the curricula of business administration students at universities in Lebanon is also recommended.

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**QUESTIONNAIRE**

**The Internal Audit Function in the Lebanese Banking Sector**

SERIAL #

Thank you for taking time to complete this questionnaire which aims at gauging your perception about the importance of the Internal Audit function and about the role of Internal Auditors within a bank. Your opinion is vital for the success of this research and will be treated in the strictest confidence within the ethical code of practice for field research at the Faculty of Business Administration and Economics at Notre Dame University - Louaize; thus the information gathered will solely be used to compile statistics. No data about you as an individual will be disclosed in any published results.

ADMINISTRATION ONLY

**SECTION I**

Please choose the answer that best describes you or fill-in the space provided

.01 Gender:  Female  Male

.02 Age (please provide your age in years): \_\_\_\_\_

.03 Department (in which you currently work): \_\_\_\_\_

.04 Years of experience in the banking sector (Please provide the number of years): \_\_\_\_\_

.05 Years of experience in the current position (Please provide the number of years): \_\_\_\_\_

.06 Current position: \_\_\_\_\_

.07 Education:  Doctorate  Master's Degree  Bachelor Degree  Secondary or Equivalent  Elementary

.08 Professional Certifications (specify additional certifications if available): \_\_\_\_\_

**SECTION II**

The following uses a seven point scale. One (1) being your answer closest to the statement on the left while seven (7) being your answer closest to the statement on the right.

Please choose the response that best describes your perception of the role of the internal auditor.

.01 The Internal auditor is not independent from the body entrusted with the operations.  1  2  3  4  5  6  7 The Internal auditor is independent from the body entrusted with the operations.

.02 The Internal auditor is not objective in performing his/her work.  1  2  3  4  5  6  7 The Internal auditor is objective in performing his/her work.

## SECTION II –continued–

Please choose the response that best describes your perception of the role of the internal auditor.

- |   |   |   |
|---|---|---|
| .03 The Internal auditor can have executive responsibilities within the bank.   | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor cannot have executive responsibilities within the bank.  |
| .04 The Internal auditor can assess specific operations for which he/she was previously responsible.                                | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor cannot assess specific operations for which he/she was previously responsible.                         |
| .05 The Internal auditor may not provide consulting services relating to operations for which he/she had previous responsibilities. | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities. |
| .06 The Internal auditor must not necessarily possess the needed competencies to perform his/her individual responsibilities.       | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor must possess the needed competencies to perform his/her individual responsibilities.                   |
| .07 The Internal auditor does not have full powers when carrying out internal audit operations.                                     | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor has full powers when carrying out internal audit operations.   |
| .08 The Internal auditor is expected to have the competencies to detect and investigate fraud.                                      | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor is not expected to have the competencies to detect and investigate fraud.                              |
| .09 The Internal auditor guaranties that all significant risks are identified.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor does not guaranty that all significant risks are identified.   |
| .10 The Internal auditor designs the organization's ethics related objectives.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor evaluates the design of the organization's ethics related objectives.                                  |
| .11 The Internal auditor designs effective risk management processes.   | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor contributes to the improvement of the risk management processes.                                       |
| .12 The Internal auditor is responsible for detecting all fraud.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor is not responsible for detecting all fraud.  |

## SECTION II –continued–

Please choose the response that best describes your perception of the role of the internal auditor.

- |   |   |   |
|---|---|---|
| 2.13 The Internal auditor is not responsible for the soundness of the internal control structure of the entity.                           | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor is responsible for the soundness of the internal control structure of the entity.                            |
| 2.14 The Internal auditor is responsible for maintaining accounting records.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor is not responsible for maintaining accounting records.   |
| 2.15 The Internal auditor has responsibilities for producing the financial statements.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor does not have responsibilities for producing the financial statements.                                       |
| 2.16 The Internal auditor does not exercise judgment in the selection of the auditor procedures.  | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor exercises judgment in the selection of the auditor procedures.   |
| 2.17 The Internal auditor cannot obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities. | <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 | The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities. |

Please email the completed questionnaire to: [Inghafary@ndu.edu.lb](mailto:Inghafary@ndu.edu.lb)

If you have any comments or concerns about this questionnaire, please contact Dr. Elie Menassa, Dean of the Faculty of Business Administration and Economics at Notre Dame University – Louaize and supervisor of this research – Email: [emenassa@ndu.edu.lb](mailto:emenassa@ndu.edu.lb)

Thank you for your cooperation!

## Appendix B – Value of the Score

Score	Frequency
3.00	1
3.06	2
3.12	4
3.18	1
3.24	2
3.29	1
3.35	2
3.41	3
3.47	2
3.53	3
3.59	1
3.65	3
3.71	1
3.76	8
3.82	4
3.88	1
3.91	1
3.94	10
4.00	4
4.06	6
4.12	3
4.18	16
4.24	6
4.29	8
4.35	5
4.41	5
4.46	1
4.47	9
4.53	7
4.59	3
4.65	2
4.71	7
4.76	8
4.82	4

Score	Frequency
4.88	9
4.94	10
5.00	5
5.06	5
5.12	5
5.18	6
5.24	4
5.29	5
5.35	4
5.41	4
5.47	4
5.59	7
5.65	5
5.66	1
5.71	3
5.76	1
5.82	4
5.88	2
5.94	3
6.00	1
6.06	2
6.12	1
6.18	2
6.29	1
6.47	2
6.76	1
7.00	1

## Appendix C – Non-parametric Tests by Bank Type

**Hypothesis Test Summary**

	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
1	The distribution of The Internal auditor is independent from the body entrusted with the operations is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.911	Retain the null hypothesis.
2	The distribution of The Internal auditor is objective in performing his/her work is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.683	Retain the null hypothesis.
3	The distribution of The Internal auditor cannot have executive responsibilities within the bank is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.448	Retain the null hypothesis.
4	The distribution of The Internal auditor cannot assess specific operations for which he/she was previously responsible is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.280	Retain the null hypothesis.
5	The distribution of The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.004	<b>Reject the null hypothesis</b>
6	The distribution of The Internal auditor must possess the needed competencies to perform his/her individual responsibilities is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.172	Retain the null hypothesis.
7	The distribution of The Internal auditor has full powers when carrying out internal audit operations is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.190	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

### Hypothesis Test Summary

	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
<b>8</b>	The distribution of The Internal auditor is not expected to have the competencies to detect and investigate fraud is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.683	Retain the null hypothesis.
<b>9</b>	The distribution of The Internal auditor does not guaranty that all significant risks are identified is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.104	Retain the null hypothesis.
<b>10</b>	The distribution of The Internal auditor evaluates the design of the organization's ethics related objectives is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.495	Retain the null hypothesis.
<b>11</b>	The distribution of The Internal auditor contributes to the improvement of risk management processes is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.101	Retain the null hypothesis.
<b>12</b>	The distribution of The Internal auditor is not responsible for detecting fraud is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.595	Retain the null hypothesis.
<b>13</b>	The distribution of The Internal auditor is responsible for the soundness of the internal control structure of the entity is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.104	Retain the null hypothesis.
<b>14</b>	The distribution of The Internal auditor is not responsible for maintaining accounting records is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.761	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
15	The distribution of The Internal auditor does not have responsibilities for producing the financial statements is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.934	Retain the null hypothesis.
16	The distribution of The Internal auditor exercises judgment in the selection of the auditor procedures is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.406	Retain the null hypothesis.
17	The distribution of The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities is the same across categories of Lebanese, Lebanese with foreign or Arab control.	Independent-Samples Mann-Whitney U Test	.617	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.



## Appendix D – Non-parametric Tests by Whereabouts of Respondent

**Hypothesis Test Summary**

	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
<b>1</b>	The distribution of The Internal auditor is independent from the body entrusted with the operations is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.006	<b>Reject the null hypothesis</b>
<b>2</b>	The distribution of The Internal auditor is objective in performing his/her work is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.131	Retain the null hypothesis.
<b>3</b>	The distribution of The Internal auditor cannot have executive responsibilities within the bank is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.326	Retain the null hypothesis.
<b>4</b>	The distribution of The Internal auditor cannot assess specific operations for which he/she was previously responsible is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.116	Retain the null hypothesis.
<b>5</b>	The distribution of The Internal auditor may provide consulting services relating to operations for which he/she had previous responsibilities is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.270	Retain the null hypothesis.
<b>6</b>	The distribution of The Internal auditor must possess the needed competencies to perform his/her individual responsibilities is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.034	<b>Reject the null hypothesis</b>
<b>7</b>	The distribution of The Internal auditor has full powers when carrying out internal audit operations is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.120	Retain the null hypothesis.
<b>8</b>	The distribution of The Internal auditor is not expected to have the competencies to detect and investigate fraud is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.737	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

### Hypothesis Test Summary

	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
<b>9</b>	The distribution of The Internal auditor does not guaranty that all significant risks are identified is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.013	Reject the null hypothesis.
<b>10</b>	The distribution of The Internal auditor evaluates the design of the organization's ethics related objectives is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.028	Reject the null hypothesis.
<b>11</b>	The distribution of The Internal auditor contributes to the improvement of risk management processes is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.226	Retain the null hypothesis.
<b>12</b>	The distribution of The Internal auditor is not responsible for detecting fraud is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.655	Retain the null hypothesis.
<b>13</b>	The distribution of The Internal auditor is responsible for the soundness of the internal control structure of the entity is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.016	Reject the null hypothesis.
<b>14</b>	The distribution of The Internal auditor is not responsible for maintaining accounting records is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.014	Reject the null hypothesis.
<b>15</b>	The distribution of The Internal auditor does not have responsibilities for producing the financial statements is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.002	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
16	The distribution of The Internal auditor exercises judgment in the selection of the auditor procedures is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.008	Reject the null hypothesis.
17	The distribution of The Internal auditor can obtain competent assistance if he/she lacks the competencies needed to perform his/her responsibilities is the same across categories of The whereabouts of the respondent.	Independent-Samples Mann-Whitney U Test	.768	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.