Full Length Research Paper

A study of risk based auditing barriers: Some Iranian evidence

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In developing countries, such as Iran, since risk based auditing would be more benefited through progressive technology and its advantages than the traditional auditing method, auditors need to welcome risk based auditing as a common, as well as a desirable one. The aim of the current study is to find out the main barriers experienced due to risk based auditing in Iran. The results show firstly the individual competency and ability in using statistical methods; secondly, the professional and legislation references effort in selecting risk based auditing standards; thirdly, the timely financial information prepared by accountants; and finally, the auditors training via risk based auditing are the main barriers to the members of Iranian Certified Public Accountants to implementing risk based auditing in Iran.

Key words: Auditing, risk based auditing, traditional auditing, Iran.

INTRODUCTION

Keeping track of the healthiness of any business process is one of the most important factors affecting the stability and efficiency of that business. This check-up usually takes place via a set of measures that help to ensure that the business is performing well and that potential threats are eliminated (Salehi et al., 2010). In early 2006, policy makers were determined to strengthen the quality of audits and introduced new sweeping standards for comprehensive audit methodologies. Taking the best ideas of Sarbanes-Oxley to the extent where they are relevant to smaller, nonpublic organizations, the incoming new standards significantly alter the way audits have been performed over the past three decades. The new risk-based auditing (RBA) standards are designed in order for auditors to focus on matters that are most important to the internal control over financial reporting and apply them to all audits, not just those of financial institutions. The new rules become effective for the calendar year-end 2007 financial statement audits, and the audit firms are currently busy revising their policies and procedures to ensure compliance by the end of the year (Salehi et al., 2010). Since the new audit standards are applied to audit firms, financial institutions share an important role in the audit process as well, and can also begin to prepare for the new rules. Institutions that assist auditors with documentation of internal controls or have an internal audit function to assist with auditors’ testing can work now to ensure a more efficient audit, and thus can help to curb audit fees in the future. Nowadays, the economy is presented in all aspects of human life as an important factor in the progress of the human society. In most cases, economic condition is the only evaluation instrument in evaluating efficiency and operations and in finally reaching the predetermined objectives of countries. Existence of information in the country’s current economy, can evaluate the individuals and economic organizations and societies effectively (Salehi, 2008b). Regarding the nature of economic activities, this information is applicable if they are explained in numbers and figures and in fixed measurement units. Therefore, that is why in this case, financial information is used as an important one. The existence of reliable financial information is necessary for improving the duration of modern society. The need for the existence of independent auditors in this reasoning is overt. Who are the

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the competent persons that can honestly determine reliable financial information in the profession? Is it or is it not an optimal and complete image of the real fact (Alam, 2009a)? However, if it is asked that what errors could occur in these methods, we will understand, with some consideration, that auditing profession which is independent from the beginning of its occurrence, is simultaneous with the environment situation changes and progress of human knowledge that have no remedy in just accepting this revolution. It has applied new tools to retain and increase efficiency and useful services in the society. Selecting RBA methodology which is a new method in auditing profession is one of the more optimal methods used to determine managers and decision makers’ objectives. Also, professional and auditing training centers must review professional auditors’ knowledge and skills in the area, in which information technology affected the commercial environment and market and auditors’ services (Alam and Khalifa, 2009). It must reform the acceptance conditions of its members according to new needs and place an important knowledge and skill of information technology parts in auditors’ training program before and after continuous acceptance and professional training.

**Auditing technology definition and its evolution**

It is a technical knowledge used to prepare efficient evidences by the auditor to represent professional idea.

**Historical changes in auditing technology:** Regarding auditing technology definition and technology variation indexes, according to most of the auditors’ opinion, historical changes procedure in auditing technology is classified as follow:

1. Documentation based auditing technology.
2. Balance sheet based auditing technology.
3. System based auditing technology.
4. RBA technology.

**Important reasons in auditing technology changes**

A) Quantity growth and ever-increasing problems of activities which relate to business.
B) Improving the defense capability of auditing in qualified references.
C) Improving public confidence to auditing reports.
D) Challenge existence arising from customer, competitiveness and changes.

In summing up the study of the fourteen fold steps in auditing technology changes, the following are derived:

1. Documentation based auditing technology - The important steps in these stages are as follow:
   a) Confirmation effort for items which are implied in the concentrated balance sheet, and focusing on the first transactions registration officials and financial events that have little importance.
   b) The assumption is that assets and debts present transaction and financial events and financial transition.
   c) Economize auditing time towards previous technology.
   d) There are no evidences which present transaction credit and registered financial events.
   e) The auditor is not able to obtain necessary confidence in relation to lack of mistake cases.

2. Balance sheet based auditing technology - The important steps in these stages are as follow:
   a) Confirmation effort for items which are implied in the concentrated balance sheet, and focusing on the first transactions registration officials and financial events that have little importance.
   b) The assumption is that assets and debts present transaction and financial events and financial transition.
   c) Economize auditing time towards previous technology.
   d) There are no evidences which present transaction credit and registered financial events.
   e) The auditor is not able to obtain necessary confidence in relation to lack of mistake cases.

3. System based auditing technology - Figure 1 shows total performance of system based auditing. The important steps in these stages are as follow:
   a) The main feature of this technology relies on internal controls system as a basis for obtaining the confidence ability towards the reflected information in accounts.
   b) Internal control as a new auditing evidence source, beside content tests, has an important role.
   c) Based on internal controls evaluation, the necessary confidence level is determined and then the auditing evidences volume, corresponding to the confidence level, is specified.

4. RBA technology - The RBA approach seeks to improve audit effectiveness and efficiency by shifting the function from a policy activity to one that contributes effectively to managing risk and achieving wider organizational goals. The approach aims to increase the accountability of government ministries and line agencies by ensuring transparency, validating key systems of internal control, and committing resources against key risks. Traditional audits focus primarily on compliance with rules and procedures, and their recommendations may not give management enough information about the achievement of organizational goals. RBA involves high-level risk profiling of the audit portfolio over time; thus, it facilitates strategic use of scarce audit resources, aligns audit efforts with management objectives, facilitates institutional development, and reduces risk exposure by
Figure 1. Total performance of system based auditing.

focusing attention on areas of weakness. In RBA, risk is measured by assessing the ethical climate, competence of personnel, size of assets and of operations, materiality, and results of previous audits. Direct probability estimates, normative tables and comparative risk ranking are typically used to identify risk. Risk factors are then converted from conceptual and subjective data into quantitative data. An overall risk score is derived by scoring and weighing the risk factors. The result is a risk-based engagement plan that guides the deployment of audit resources to high-risk areas.

Managing risk

It means administration and control of auditing risk to
reach the lowest confidence level.

**Management auditing risk’s advantages**

The important advantages are as follow:

1) Preparing the total strategy of practical and exact auditing.
2) Decrease the final price of services.
3) Decrease time of auditing operations.
4) Increase staff professional incentives.
5) Much effort to prepare sufficient evidences for expressing opinions in related standards framework.
6) Increase credit of issued auditing reports.
7) Create mechanization for the illegal auditing operations section.
8) Increase quality and prepare the more effective quality control possibility.
9) Increase customer consent.
10) RBA technology causes an increase in audition volume.

**Auditing acceptability risk in historical changes procedure in auditing technology**

Auditing acceptability risk exists in all forms of auditing, but base on management risk of auditing technology, the most control auditing form is imposed on auditing acceptability risk. So, auditing is able to access the lowest necessary confidence level in the identified risks framework. An auditor must be able to determine the necessary confidence level inevitably. That is, in any manner, the auditor’s opinion is based on relative confidence and not his opinion certainly.

**Need for new methodology (technology) evaluation**

One of the matters that must be considered in applying each new technology is fitness of it or request with the new technology. The need for each new technology must be previously evaluated. Management risk of auditing technology is not an exception of this general aforementioned rule; that is why, we suggest that each auditing institute must evaluate itself before deciding about auditing a new technology. The need to evaluate a new technology is specified by its establishment barriers elimination methods. As such, necessary actions priorities are prepared and applied to a new technology. Different models are presented about the manner of need to new technology. Regarding the auditing task, the model which is presented to evaluate management risk of auditing technology may be suitable (Alam, 2009b).

The auditor must obtain such knowledge of accounting systems and internal control, which is efficient for audition planning, and must use his professional judgment, designed for getting confidence about his acceptable levels of deduction, to estimate auditing risk and auditing methods (Alam, 2009b).

i. Lack of exploration risk due to analytic studies = 40 D1R;
ii. Audition acceptable risk = 20IR;
iii. Materiality level = 10 M;
iv. Lack of exploration risk due to content tests = 60 D2R;
v. Control risk = CR.

Consequently, confidence level = sum total of material explored mistakes or distortions/ important explored mistakes or distortions in the account. If the auditing risk is equal to 5%, the confidence level will be 95%. In other words, the auditor must express 95% confidence level towards financial statements.

**Research problems and questions**

It is now widely accepted that there is much to be gained from attempting to understand accounting in its social context (Cooper and Sherer, 1984). Yet, auditing research has remained relatively immune to the influence of this type of theoritizing, particularly in terms of empirical analysis of contemporary audit practice. Much of the post-Enron analysis has focused on scandalous and emotive elements of this case, the technical complexities of accounting rules and practices, the excesses and abuses of corporate America, assessing whether such scandal(s) could happen in the UK or elsewhere, and proposing (and implementing) a range of reforms to improve corporate governance and deal with issues of auditor liability. The day-to-day professional and working environment of corporate external auditors and the impact that the Enron case has had upon them and their methods/practices has not attracted much attention.

Further, the industry development in countries such as Iran, ever increasing importance of major managers and information valuation, especially accounting information must be considered. Additionally, the auditors must progress and increase their reports application, but according to the figure, unfortunately there are no systematic studies in relation to auditing progress rate and its development of probable barriers in active economic units of Iran (Salehi, 2008a). Therefore, limitation and exploitation and auditing methods are not determined to prepare information for stockholders and other users. What is the operation rate of different auditing methods in Iran’s economic units and lack of probable operation reasons? Is there any disorder in Iran’s auditing development process? Are other operational systems functional and is their growth effective? These questions and similar ones lead to the preparation of this research which is “based on the risk of auditing barriers in firms, in
which the auditors of the firms are members of Iran official accountants”.

Importance of the study

In the world, in which human infinite needs are against finite economic resources, appearance and failure of each phenomenon is due to real and reasonable needs of human society. Auditing institute is not an exception of this rule in professional services field. Firms and institutes survival in market economic environment observe continuous commercial barriers elimination and market integration. Management risk of auditing which is the newest methodology in auditing, have dynamic answers for these mentioned problems. The new methodology creates acceptable risk control and administration for auditors to reach the lowest confidence level and to collect auditing evidence in the lowest possible extent for decreasing auditing time and cost (Salehi and Azary, 2008).

Review of literature

The separation of ownership and management functions and the presence of information asymmetry introduce the possibility of principal-agent conflicts (Haniffa and Hudaib, 2006). It also incurs risks to stakeholders in the organization (management, shareholders, creditors, etc) (Spira and Page, 2003). Those agency conflicts, agency costs and risks are now managed within the corporate governance framework through accountability mechanisms, such as internal control and audit (Haniffa and Hudaib, 2006; Spira and Page, 2003). Stakeholders now compete to participate in corporate governance to seek power in organizations by asserting their own conceptions of risk and how it should be managed. However, a focus on risk management has become central to this competition, since it defines the accountability of the management of the organization (Spira and Page, 2003). This is consistent with Hay and Knechels’ (2004) argument that the demand for auditing is a function of the set of risks faced by individual stakeholders in an organization and the set of control mechanisms available for mitigating those risks. Therefore, internal auditing’s risk management orientation has given the audit function increased credibility across the enterprise and greater acceptance by management (Beumer, 2006).

RBA is considered as the methodology that the audit department utilizes to ensure that risks are being managed and assures that the residual risk falls within appropriate levels. Basically, risk-based auditing ensures that the organization is within its acceptable level of risk after controls are put into place. The board of directors in any organization is ultimately responsible for this acceptable risk level (Griffiths, 2006).

What really differentiates RBA is the fact that it extends and improves the risk assessment process, looking at areas based on risk instead of focusing on controls (McNamee, 1997). By focusing on high risk areas, the auditor must also understand that “some activities might never be deemed important enough to receive internal audit attention” (Parkinson, 2004) because they are considered in low risk areas.

RBA also requires that auditors completely understand their clients, their clients’ industry, the nature of their business and the environment that they operate in. “Without a thorough understanding, the auditor may fail to correctly identify the critical business process and corresponding internal controls that he should evaluate (Hunton et al., 2004).

Goodwin-Stewart and Kent (2006) use an agency framework to explore firm characteristics associated with the existence of internal audit function from risk management, control and governance perspectives. He argues that internal auditing is either to be a complementary or substitution mechanism that aligns with other risk management and governance mechanisms, and that survey evidence indicates a significant association between the use of internal auditing and a commitment to strong risk management and firm size. However, the results reveal a mixed support for the corporate governance factors. Using an agency cost framework, Carey et al. (2000) examined demand for both internal and external auditing by family business with two agency proxies which are: (1) the proportion of nonfamily management, and (2) the proportion of nonfamily representation on the board of directors. They found that the two agency cost proxies are associated with demand for external audit, but do not explain the demand for internal audit. Carcello et al. (2005) examines factors associated with U.S. public companies’ investment in internal auditing, and the result indicates that the total internal audit budgets (in-house plus outsourced portions) are related to factors associated with company risk, for example, company size, complexity and leverage.

Research objectives

Lack of efficient development in auditing depends on different factors such as current economy condition, human forces, natural sources, etc. All the mentioned features are effective in auditing the information system in a formal manner. So, we must consider their changes, but these factors, during the time, are considered constant and their main objective is to study the risk based auditing barriers in firms, in which the auditors of the firms are members of Iran official accountants.

RESEARCH METHODOLOGY

The method which is applied in this research is descriptive. It is descriptive because it describes the obtained information without any changes and studies the relation among variables.
The study, the following hypotheses are postulated in the study:

- \( H_1 \): Lack of timely preparation of financial statements by auditors prevents risk based auditing performance.
- \( H_2 \): Lack of sufficient standards prevents risk based auditing performance.
- \( H_3 \): Lack of using auditors of statistical methods prevents risk based auditing performance.
- \( H_4 \): Lack of necessary auditing training prevents risk based auditing performance.

Based on the hypotheses, the research variables include dependent and independent variables, which are as follow:

**Dependent variable**: Risk based auditing barriers.

**Independent variables**: Timely preparation of financial invoices, lack of risk based auditing standards, lack of using statistical methods verified by auditors, and lack of necessary training with risk based auditing method.

A questionnaire was used to measure the research variables. In this respect, a questionnaire was designed based on the research variables measurement and was adjusted after advisor confirmation and was distributed among the sample units.

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**Questionnaire questions reliability and validity**

The questionnaire questions were desirable and reliable because they were prepared with the assistance of advisors. The renewed test was used in relation to the validity of answers. The questionnaire was distributed, for the second time, among 8 members of the sample members after two weeks had passed. They were asked to answer the questions again. Spearman coefficient test was calculated between two stages answers, in which its value was \( rs = 0.96 \). Consequently, it showed that high dependence existed between the two stages answers.

Under the considered society, they were 1400 members in 2009, which include auditors of Iranian Certified Public Accountants. Due to the magnitude of the under considered society's volume, by using random matters sampling method, we gathered the necessary information.

The beneath relation was used to determine the necessary sample’s volume:

\[
n = \frac{NZ^2 \hat{P}(1-\hat{P})}{n \sum d_i^2 / N} = \frac{1400 \times (1/96)^2 \times 0.25}{1400 \times 0/01 + (1/96)^2 \times 0/25} = \frac{1344/5}{14/96} = 90
\]

Although the questionnaires were distributed among 90 members of the society randomly, just 60 questionnaires were collected and filled out by 3 groups of accountants in the following order:

- Audition managers = 19 participants
- Senior auditing supervisors = 26 participants
- Supervisors = 15 participants
- Sum = 60 participants

**Statistical methods**

The answers were forecasted as very much, much, average, low and very low (Likert's scale) options for tests of the research hypotheses. So, non parametric methods were used for the hypothesis tests (Table 1):

\[
r_i = 1 - \frac{\sum d_i^2}{N(N-1)} = 1 - \frac{6 \times 3}{504} = 0/96
\]

a) Dependence test between two variables with X index. This test evaluates the relation of two variables:

- \( X \) has no relation with \( Y \) variable.
- \( X \) has a relation with \( Y \) variable.
Table 2. Demographic information of participants.

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Overall frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between 1 and 9 years</td>
<td>13</td>
<td>21.67</td>
</tr>
<tr>
<td>Between 10 and 19</td>
<td>10</td>
<td>16.66</td>
</tr>
<tr>
<td>Between 20 and 29</td>
<td>26</td>
<td>43.34</td>
</tr>
<tr>
<td>Over 30</td>
<td>11</td>
<td>18.33</td>
</tr>
<tr>
<td>Gender of participants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>48</td>
<td>80.00</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>20.00</td>
</tr>
<tr>
<td>Educational background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>40</td>
<td>66.67</td>
</tr>
<tr>
<td>Master degree</td>
<td>20</td>
<td>33.33</td>
</tr>
</tbody>
</table>

The testing function is distributed according to \((X^2)\) rule with \((s-1)(t-1)\), in which \(s\) stands for row numbers and \(t\) for column numbers in the table. After calculation, we decided on the numeral value of the testing function, which was observed by frequencies and its comparison with the critical table number \((X^2)\) toward hypothesis \(H_0\). Note that the aforementioned test was used for many society comparisons (many distributions) and was applied in comparing the answers of different organizational classes or different work records.

b) Calculation of Cherperof dependency coefficient: If the relation between two \(X\) and \(Y\) variables is verified, Cherperof dependency coefficient is used to determine the dependency intensity or degree. This coefficient varies from 1 to 0, in which case the dependency of the two variables is more when it is closer to 1:

\[
P_I = \frac{X^2}{\sqrt{n(s-1)(t-1)}}
\]

Statistical society

Under the studied society, which includes auditors who are members of Iranian Certified Public Accountants, it is reported that there are 1400 members. As a consequence, 90 questionnaires were prepared to collect information and were distributed among Iran official accountants’ auditors. Only 60 questionnaires were collected and the rest of them were not completed. However, the research findings analysis is shown in Table 2.

As shown in Table 2, the majority of participants are male with 20 to 29 years experiences. By the way, Table 2 shows that 66.67% of participants have Bachelor degree, followed by 20 participants, who have masters’ degree in accounting or related subject.

First hypothesis

\(H_1\): Lack of timely preparation of financial statements by auditors prevents risk based auditing performance.

\(H_0\): Lack of timely preparation of financial statements by auditors does not prevent RBA performance.
Table 3. The results of the first hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>118.25</td>
<td>$H_1$ Accepted</td>
</tr>
</tbody>
</table>

Table 4. The results of the second hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>90.42</td>
<td>$H_2$ Accepted</td>
</tr>
</tbody>
</table>

Testing function:

$$X^2 = \sum \sum \frac{(O_j - E_j)^2}{E_j}$$

For the fact that the calculated $X^2$ is higher than $X^2$ table, $H_0$ hypothesis is rejected and $H_1$ hypothesis is accepted. On the other hand, we accept that lack of timely preparation of financial statements prevents RBA performance.

Second hypothesis

$H_2$: Lack of sufficient standards prevents RBA performance.

$H_0$: Lack of sufficient standards does not prevent RBA performance.

$$X^2 = \sum \sum \frac{(O_j - E_j)^2}{E_j}$$

According to the results of Table 4, hypothesis $H_1$ is accepted and $H_0$ is rejected because the calculated $X^2$ is bigger than the exploited $X^2$ in the table. On the other hand, we accept that lack of RBA standards prevents its execution.

Third hypothesis

$H_3$: Lack of using auditors of statistical methods prevents RBA performance.

$H_0$: Lack of using auditors of statistical methods does not prevent RBA performance.

Some of the respondents (47%) explain that few auditors are familiar with statistical methods and 42% say that this familiarity is average. Some respondents (58%) believe that auditors use an average amount of statistical methods in their auditing, while 30% said few auditors use an amount of statistical methods in their auditing. Some respondents (47%) say that non-usage of statistical methods have a great effect on prevention of risk based auditing execution, while 48% say its value is at average. Some respondents (40%) know that non-usage of computer software has a great effect on prevention of statistical methods and 48% believe that this issue is at average and very high. Some respondents (73%) believe that applying statistical methods, by auditors, is to a high extent, effective on the optimality of professional judgments, while the remaining 27% say that this effect is at average. Nonetheless, 77 and 78% of the respondents believe that using statistical methods are very effective in decreasing auditing costs and time, respectively. More so, 57% of the respondents are convinced that incorrect analysis of the samples is very effective on auditing risk determination. However, 78% believe that the generalized discovered faults to the total community are very effective on the auditing risk determination:

Tester function:

$$X^2 = \sum \sum \frac{(O_j - E_j)^2}{E_j}$$

Hypothesis $H_1$ is accepted and $H_0$ is rejected because the calculated $X^2$ is bigger than the exploited $X^2$ in the table. So, we accept that non-usage of statistical methods, by auditors in their auditing, causes prevention in RBA (Table 5).

Fourth hypothesis

$H_4$: Lack of necessary auditing training prevents RBA performance.

$H_0$: Lack of necessary auditing training does not prevent RBA performance.

A large number of respondents (82%) believe that lack of RBA education is very effective on its practical execution, while 38, 47 and 15% of the respondents believe that auditors’ interest toward learning the risk based auditing methods are high, average and low, respectively. Some respondents (70%) believe that lack of training on risk based auditing, at university courses, is very effective on
Table 5. The results of the third hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.90</td>
<td>231.22</td>
<td>$H_0$ Accepted</td>
</tr>
</tbody>
</table>

Table 6. The results of the fourth hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.90</td>
<td>52.11</td>
<td>$H_4$ Accepted</td>
</tr>
</tbody>
</table>

Table 7. Ranking of hypotheses.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$: Lack of timely preparation of financial statements by auditors prevents risk based auditing performance.</td>
<td>$H_1$ Accepted 0.187 Third</td>
</tr>
<tr>
<td>$H_2$: Lack of sufficient standards prevents risk based auditing performance.</td>
<td>$H_2$ Accepted 0.188 Second</td>
</tr>
<tr>
<td>$H_3$: Lack of using auditors of statistical methods prevents risk based auditing performance.</td>
<td>$H_3$ Accepted 0.301 First</td>
</tr>
<tr>
<td>$H_4$: Lack of necessary auditing training prevents risk based auditing performance.</td>
<td>$H_4$ Accepted 0.143 Fourth</td>
</tr>
</tbody>
</table>

its practical execution, while the remaining percent of respondents believe it as average. Some respondents (78%) think that special expertise in risk based auditing is very effective on its practical execution, while 20% of them know that it is at average. Some respondents (72%) believe that lack of enough expertise to familiarize and train auditors with risk based auditing methods is very effective on its practical execution, whereas 75% of respondents think that the auditor’s familiarity with risk based auditing objectives is very effective on their learning by this method. However, 58% of the respondents believe that absence of quality in the current auditing methods is very effective on increase of the auditor’s motivation in learning the risk based auditing method. However, 75% of the respondents think that lack of assembling necessary equipment to educate employees by auditing institutes is very effective in auditors’ negative motivation towards learning the risk based auditing method (Table 6):

\[ P_T = \sqrt{\frac{90/42}{600\sqrt{2 \times 9}}} = 0/188 \]

\[ P_T = \sqrt{\frac{231/22}{600\sqrt{2 \times 9}}} = 0/301 \]

\[ P_T = \sqrt{\frac{52/11}{600\sqrt{2 \times 9}}} = 0/143 \]

As it is apparent from Choprof dependency coefficient, the hypotheses of non-usage of statistical methods by auditors in their auditing, which cause prevention in risk based auditing is at first priority.

At second priority, lack of risk based standards prevents its practical execution. At third priority, lack of timely preparation of financial statements by firms’ accountants prevents its practical execution, and finally, auditors’ necessary education with risk based auditing method can prevent its application. As shown by the received respondents’ results, the auditor’s familiarity with the statistical method was really low and the auditors used these methods in their auditing at average and low levels. According to respondents’ answers, non-usage of computer software can prevent risk based auditing application at high and relatively average levels.

According to respondents’ answers, using statistical methods can reduce application costs and time, and increase reliance of auditors’ audits. With attention to the aforementioned reasons, this subject can be very important with impediment to the lack of risk based practical execution.

In the second hypothesis, according to respondents’ answers, auditors use auditory standards in their audits.
increasingly. On the other hand, existence of these standards helps us to recognize auditing risk and prepare a suitable background to achieve a rational judgment.

Application of these standards is very effective to decrease costs and time, so using auditory standards can remove practical execution impediments increasingly.

In preparing financial statements by firms’ accountants, firstly, we report the accountant’s awareness towards the auditor’s necessary information in an average level. Secondly, awareness towards the auditors’ time limitations in auditioning by auditors is in an average level. Finally, auditors must receive their training towards risk based audit, and this matter is very important in the practical execution of risk based audition.

Comparison of the attitudes of managers, senior supervisors and common supervisors under the considered questions in different hypotheses:

**H$_0$:** There is no meaningful difference between the attitudes of managers and the senior and common supervisors in answering hypothesis 1 questions.

**H$_1$:** There is a meaningful difference between the attitudes of managers and the senior and common supervisors in answering hypothesis 1 questions (Table 8):

$$X^2 = \sum \sum \frac{(O_i - E_i)^2}{E_i}$$

The test result shows a meaningful difference between respondents’ ideas in different organizational ranks toward hypothesis 1 questions. Evidently, the senior supervisors, as compared with managers and common supervisors, have a more positive attitude. So, 47% are ranked with high and very high. Nevertheless, 40% of managers and 35% of supervisors answer with high and very high words:

**H$_0$:** There is no meaningful difference between the supervisors in answering hypothesis 2 questions.

**H$_2$:** There is a meaningful difference between the attitudes of managers and the senior and common supervisors in answering hypothesis 2 questions (Table 9).

In the test results, equality of answers is rejected and there is a meaningful difference between different organizational ranks. Here, senior supervisors are more optimistic also, so 75% of them answer with high and very high. On the other hand, 68 and 64% of managers and supervisors, respectively answer with high and very high.

**H$_0$:** There is no meaningful difference between the attitudes of managers and the attitudes of the senior and common supervisors in answering hypothesis 3 questions.

**H$_1$:** There is a meaningful difference between the attitudes of managers and the attitudes of the senior and common supervisors in answering hypothesis 3 questions (Table 10).

In the test results, equality of answers is rejected. In other words, there are differences between the respondents’ answers in hypothesis 3.

It is apparent from the answers, given by the three groups (managers, senior supervisors and common supervisors), that managers and senior supervisors have 56% of high and very high answers and 55% of high and very high answers, which are more agreeable than the answers of supervisors with 51%.

**H$_0$:** There is no meaningful difference between the attitudes of managers and the attitudes of senior and common supervisors in answering hypothesis 4 questions.

**H$_2$:** There is a meaningful difference between the attitudes of managers and the attitudes of senior and common supervisors in answering hypothesis 4 questions (Table 11).

In this phase, hypothesis $H_0$ is rejected. As such, we
Table 10. The results of the hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>29.95</td>
<td>15.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$H_0$ Accepted</td>
</tr>
</tbody>
</table>

Table 11. The results of the hypothesis test.

<table>
<thead>
<tr>
<th>$X^2$ exploited by table</th>
<th>$X^2$</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42.04</td>
<td>12.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$H_0$ Accepted</td>
</tr>
</tbody>
</table>

conclude that there is a meaningful difference between the different ideas in various organizational ranks. Comparison of the answers show that managers have 69% of high and very high answers, senior supervisors have 75% of high and very high answers and supervisors have 58% of high and very high answers. Hypothesis 4 reveals that there is a meaningful statistical difference between them.

**Conclusion**

The emergence and dissemination of new audit techniques and methodologies have not received attention in academic research, and is merited by their significance. In the processes of establishing new claims to knowledge, there is an opportunity to examine the professional and social processes, through which such claims emerge, and the extent to which attempts are connected to the extension of professional jurisdiction. In so doing, the dynamics that underlie the institutions of the profession may be revealed and subjected to tension. The paper’s title signals three interrelated dimensions of this technical-professional interface: status, identity and fragmentation.

According to the first hypothesis, we can conclude that lack of timely preparation of financial statements by firms’ accountants prevents the practical execution of risk based auditing, and with attention to the increasing trend of auditors’ usage from financial statements, firms’ accountants must be aware of the needed information and time limitations. According to the second hypothesis, we can conclude that lack of risk based auditory standards prevents the execution of risk based auditing method and these standards help auditors to recognize the auditing risk and prepare enough circumstances to have rational judgment. According to the third hypothesis, we can conclude that non-usage of auditors from statistical methods prevents the execution of risk based auditing method, and using statistical method to a great extent decreases auditing costs and time and increases reliability of auditors’ audits. According to the fourth hypothesis, we can conclude that lack of education for the auditors under the risk based auditing method can prevent the practical execution of risk based auditing and training of risk based auditing in the official community of accountants. Furthermore, its compilation on the senior expertise course of a university can be effective for the execution of risk based auditing method.

An appropriate assessment of risk is the foundation of a high quality audit. “Risk-based auditing extends and improves the risk assessment model by shifting the audit vision”. Instead of looking at the business process in a system of internal control, the internal auditor views the business process in an environment of risk. The basic premise of risk-based auditing is that auditors should focus more resources on accounts that are likely to be misstated and fewer resources on balances that are less likely to be misstated (Bell et al., 2005; Rittenberg and Schwieger, 2005; Knechel, 2007). Proponents of risk-based auditing claim that such a strategy leads to more efficient and effective audits (Bell et al., 2005; PCAOB, 2007).

**Suggestions**

**Suggestion related to the first hypothesis**

According to the first hypothesis, it is known that timely presentation of financial statements by firms’ accountants can be effective on the execution of the risk based auditing method. So, familiarizing of accountants with auditors’ objectives and needs can be very effective on the practical execution of the risk based auditing method. Therefore, we suggest that auditing authorities with timely and correct information act about the aforementioned cases (auditors’ objectives and needs) have a great role to play in the execution of the risk based auditing method.

**Suggestion related to the second hypothesis**

All auditing phases (planning, operational execution and
opinion) have professional judgment. Using auditing standards, the necessary field is assembled to gain advocating judgment for auditors; so, with regard to the great role of risk based auditing standards in technology development of auditing (risk based auditing), it is suggested that the legislative authorities of the auditing profession, with an approval of the risk based auditing standards, prepare the necessary field for the execution of risk based auditing.

**Suggestion related to the third hypothesis**

Familiarity of auditors to statistical methods relates to their individual competency and the quality of their competency, because auditors’ auditions are based on their sampling and usage of statistical methods, which cause the documentation of auditors’ audits. Auditors, with regard to this point that the statistical method is one of the used and useful factor in advanced auditing technology (risk based auditing), must be familiar with statistical methods in the process of their training in auditing courses. Furthermore, it is suggested that the official accountants’ community must carry on the courses and meetings with familiar auditors amid statistical methods.

Also, statistical subjects must be considered in the official accountant’s community test to accept new members.

Statistics course must be published in the senior section of the university.

**Suggestion related to the fourth hypothesis**

Bedding and preparation of the auditing profession, regarding the execution of risk based auditing method, which is the root of the auditors’ individual competency, is used to standardize the auditors’ plan in auditing operations, and the timely preparation of financial statement by firms’ accountants. We can prepare some circumstances to develop the advanced auditing technology, in which training auditors with advanced risk based auditing technology has a great role on the advanced auditing technology (risk based auditing). As a consequence, we suggest that the professional auditing authorities, with training auditors via risk based auditing methods and practical execution, play a great role in the official accountants’ community, auditing organization and auditing institutes.

**Suggestion related to future investigations**

1. Since increase of the quality level is one advantage of this new technology, we suggest that an investigation should be carried out and the relation between the execution of risk based auditing method and improvement of the quality level in auditors’ reports should be investigated.

2. With regard to the importance of statistical methods in non-execution of risk based auditing, it is better to investigate the relation between the statistical methods and effectiveness of risk based auditing.

**REFERENCES**


