# Discussions on Qualitative Assessment or Risk Quantification in Adopting Decisions Concerning Risk in Financial Auditing

Radu, Laura-Diana and necula, sabina-cristiana

Alexandru Ioan Cuza Unversity of Iasi

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# Discussions on Qualitative Assessment or Risk Quantification in Adopting Decisions Concerning Risk in Financial Auditing

DIANA-LAURA RADU
SABINA-CRISTIANA NECULA
Department of Research
Alexandru Ioan Cuza University of Iasi
Carol I Blvd., no.22, 700505
ROMANIA
glaura@uaic.ro
necula.sabina@gmail.com

*Abstract:* - This paper presents some insights concerning qualitative and semi-quantitative audit risk assessment methods. We consider that semi-quantitative assessment collaborated with qualitative interpretation can be a better solution in evaluation auditors' decisions. We then exemplify our solution by taking into account recommendations offered by International Auditing Standards.

*Key-Words:* - qualitative interpretation, semi-quantitative risk assessment, IAS, audit, financial reporting, business decisions

## 1 Introduction

Research on auditor decision making are: descriptive, normative and prescriptive. Thus, over time, researches have been made in order to describe how auditors make decisions and how good are those decisions. Before 1970, the audit was considered an art and was not subject to investigation. Therefore, we consider decisions on audit to be divided between: financial audit, strategic audit, internal control.

It must be emphasized that the audit decision process and audit risk assessment is very close to the rational approach by instrumenting existing audit standards, although there are numerous studies that focus on knowledge and experience required of auditors. Audit risk is the risk that the auditor expresses an audit opinion that is not appropriate when the financial statements are significantly flawed. Audit risk assessment is, in fact, assessing the quality of information presented to investors. As in any assessment of quality and audit standards require that auditors use to express an opinion. Investors will receive useful information and quality assessment information. Organizations try to distort or conceal information that does not correspond with the common wishes of its investors, the auditor evaluates the quality of information provided by analysis of the impact of distortions. Rational approach is manifested in the use of materiality and usefulness of information subsequent calculations, but the utility is established by professional reasoning based on a rational-biased judgment.

Internal control, analyzed in terms of decision making is a set of activities capable of generating a decision on maintaining a sufficient level of stocks available of funds. As strategic audit, it is a management tool that helps decision makers in making informed decisions by providing real-time information.

The transition from internal control activities focused mainly to the identification, risk assessment and evaluating the risk has led to the development of complex models involving the entire organization and that include all necessary controls. Risk management in enterprises has been designed to assist in this transition process. Component of risk management, properly implemented and updated throughout the operation has a beneficial effect on the value of the organization by creating a single image on all risks, internal and external, which will be discussed at the strategic level of management. To ensure continuity in terms of profitable firms should consider at least the following [1]:

- business relationship between benefits and potential losses associated with different levels of activities;
- accumulating sufficient assets or use other methods to protect against unexpected losses;
- obtain revenue corresponding risky activities, since the risk capital and risk management is considered;
- communication with business partners on the level and type of risk (eg. establishing a certain level of solvency, since the determination and risk reduction).

A systematic analysis of risk exposure can lead to a better allocation of resources, if its realization is taken into account the costs involved. Rationally it will provide a more realistic development, better results and higher revenues.

Systematic risk analysis motivations are varied and are the result of technological progress and economic

globalization led by the regulations in various fields, the aspirations of shareholders, etc. At the same time, risk-taking was the premise that determined the evolution of social, economic and technological level of organization, nation and worldwide. As a result, a decision under risk conditions should not cause a limitation of the initiative, but a careful analysis of the conditions for adopting a rational comparison between the efforts and effects achieved. In the traditional approach, the risk was seen from a defensive perspective, the major trend is to avoid and not taking it. In a competitive environment, however, such an attitude is not sufficient. Risk taking is absolutely necessary, but based on a detailed and structured analysis of the interaction between the factors that generate value, risk, growth and profitability. [2]

Risk assessment is a complex process because the following issues:

- opportunities and threats can interact in ways that cannot be anticipated (for example, behind the initial schedule may force consideration of a new strategy that ultimately leads to decrease the time allocated to project)
- a single risk can have multiple effects: additional costs, delays, penalties, reducing the quality of results;
- events which are opportunities for a person or organization (cost savings) may be threats to other (reducing profits);
- mathematical techniques used to quantify the risk may provide a time accuracy and safety unfounded.

The audit risk is that situations when the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated. [3] In its determination is necessary to analyze the relationship between costs of views inconsistent with the facts and costs of achieving the additional tests necessary to reduce risk. Components of audit risk, according to International Standards on Auditing are [3]:

- *Inherent risk* is the susceptibility of an assertion about a class of transaction, account balance or disclosure to a misstatement that could be material, either individually or when aggregated with other misstatements, before consideration of any related controls.
- *Control risk* is the risk that a misstatement that could occur in an assertion about a class of transaction, account balance or disclosure and that could be material, either individually or when aggregated with other misstatements, will not be prevented, or detected and corrected, on a timely basis by the entity's internal control.
- *Detection risk* is the risk that the procedures performed by the auditor to reduce audit risk to

an acceptably low level will not detect a misstatement that exists and that could be material, either individually or when aggregated with other misstatements.

Based on the three risks mentioned is the size of the sample. Typically, audit risk is considered a constant (5%) and is used with the inherent risk and control risk in determining the risk of detection that allows the auditor to determine the sample considered relevant and plan work. To estimate risk, both in auditing and other fields, there are three broad categories of methods: qualitative, semi-quantitative and quantitative first of which is the most used even if not always provide an accurate mathematical model. The following sections are presented the three categories of methods and how they are applied in specific financial audit activities.

## 2    Qualitative methods for audit risk assessment

Qualitative assessment does not require determining the likelihood of data, only estimates of potential losses. Some related items are discussed in this approach:

- *threats* - what can go wrong or attack the system such as fires or fraud. They are present in any system.
- *vulnerabilities* - make the system more prone to attacks or the attacks may have more success and greater impact. For example, if fire, the presence of flammable materials is a vulnerability.
- *controls* - are counter-measures vulnerabilities and their effects may be manifested in the following forms:
  - controls - are counter-measures vulnerabilities and their effects may be manifested in the following forms;
  - preventive controls protect against vulnerabilities and attacks can cause failure or reduce their impact;
  - corrective controls reduce the effect of attacks;
  - detective controls discover attacks and trigger preventative or corrective controls.

While not providing accurate results, qualitative models for risk assessment are often preferred by professionals. They are more accessible and offer some advantages as: a greater range of work with uncertainty, discretion and requires less time for carrying out. [4]

In auditing qualitative risk assessment involves estimating the qualitative detection risk level, after assigning a value of 5% audit risk by assessment type "Very low", "Low", "Medium" or "High" for control risk and inherent risk presented in introduction of this work (Table 1).

Table 1 *Qualitative assessment of detection risk in audit [5]*

| | | Control risk | | |
|---|---|---|---|---|
| | | High | Medium | Low |
| **Inherent risk** | High | *Very low* | *Low* | *Medium* |
| | Medium | *Low* | *Medium* | *High* |
| | Low | *Medium* | *High* | *Very high* |

To use the value obtained to determine the sample size qualitative expression should be quantified as easily alter the quality of the method presented.

## 2 Semi-quantitative methods for audit risk assessment

Semi-quantitative methods are used to describe the relative risk scale. For example, risk can be classified into categories like "low", "medium", "high" or "very high". Number of levels of risk can vary from 3 to 10 or more. In a semi-quantitative approach, different scales are used to characterize the likelihood of adverse events and their consequences. Analyzed probabilities and their consequences do not require accurate mathematical data. The objective is to develop a hierarchy of risks against a quantification, which reflects the order that should be reviewed and no real relationship between them.

We consider that semi-quantitative assessment is useful especially as a quantification of risk is difficult and, to a considerable extent, the extreme. [6] At the same time, qualitative interpretation is too subjective. The combination of the two models can be a solution in some cases, combining the specific advantages of each and decreasing their disadvantages. In addition, the implementation of risk assessment models through qualitative methods, the software is often resorting to using semi-quantitative methods, even if the result obtained will result in a qualitative assessment of risks.
In auditing semi-quantitative assessment involves the award of such assessments very low, low, medium, high risk for each component and then framing their numerical values. Inherent risk for example, as a component of audit risk, is general and specific. General inherent risk has to be evaluating for: management, accounting, activity and previous audits. The auditor has to find answers for some sets of question for each category and combine them with answers for specific inherent risk. Information sources for these answers are varied and combines documentary sources with direct knowledge within the firm and documentary sources from third parties. Table 2 summarizes the sources of information *for assessing the accounting staff training and the capacity to accomplish the tasks*. In this case, assessing the accounting staff must be based on two categories of criteria: *human*, determined by the quality of relations between members of the organization,

motivation, aptitude in relation to communication ability etc. and *professional* identified by their competence, initiative, creativity, organizational capacity, capacity of decision etc. [7] Evaluation can be done as a general or customized model depending on each person's specific activities and sources of information are varied and can be grouped into categories and in this case.

Table 2 *Evaluation of the accounting personnel qualification and its capacity to accomplish the tasks*

| Evaluation of the professional training | |
|---|---|
| Documentation sources inside the company | Curriculum vitae |
| | Documents certifying the studies |
| | Courses with specialized organizations |
| | Training sessions inside the audited company |
| | Professional accreditations |
| | Job descriptions |
| | Experience in that position |
| | Seniority in the audited company |
| Third parties documentation sources | Intimations, penalties and/or punishments from the specialized organizations in the field (CECCAR, CAFR etc.) |
| **Evaluation of the capacity to accomplish the tasks** | |
| Direct knowledge | Interviews with the accounting personnel and the managers |
| | Questionnaires conducted by the auditor |
| Documentation sources inside the company | Control and/or internal audits reports |
| | The last external audit report |
| | Results for evaluation tests completed inside the company |
| | The number of intimations or penalties applied |
| | The number of detour notes |
| Third parties documentation sources | Third parties reports |
| | Financial control reports |
| | Information supplied by accounting regulation corporations and/or audit organizations or by Human resources Companies |

The results will be interpreted according with table 3.

Table 3 *Inherent risk assessment*

| The number of specific inherent risks identified | The general level of risk inherent | | | |
|---|---|---|---|---|
| | Very low | Low | Medium | High |
| 0, 1, 2 risks | 23 % | 50% | 70% | 100% |
| 3, 4 risks | 50% | 70% | 100% | 100% |
| 5, 6 risks | 70% | 100% | 100% | 100% |

Control risk arises where the auditor wishes to rely, in part or in full, on certain internal controls conducted by the organization. Evaluation can be done quantitative

and / or qualitative, and the results are close, as exemplified in Table no. 4.

Table 4 *Control risk assessment [9]*

| Support provided by internal control | Risk level | |
|---|---|---|
| | Qualitative | Quantitative |
| High - excellent control, both specific and compliance | Low | 10%-30% |
| Moderate - good control, but there are some shortcomings in the specific control or compliance | Moderate | 20%-70% |
| Low - control deficiencies, specific and / or compliance | High | 60%-100% |

Non-sampling risk detection should be considered when the analytical procedures are considered important to obtain audit evidence to achieve the mission. In table 5 are presented sections involved and their confidence to be considered when planning the audit.

Table 5 *Detection risk factors associated non-sampling*

| Audit sections | Certainty | Risk |
|---|---|---|
| Stock and work in progress | moderate | 56% |
| | Zero | 100% |
| Debtors and creditors | moderate | 56% |
| | Zero | 100% |
| Sales, purchases and expenses | High | 31% |
| | Moderate | 56% |
| | Zero | 100% |
| Salary and allowances | High | 31% |
| | moderate | 56% |
| | Zero | 100% |

After determining the inherent risk, control risk and non-sampling detection risk, sample size is set to be tested. They may be systematically or randomly selected to verify transactions or based on a sampling interval for checking balance sheet items. After determining the sample size will be extracted elements to be considered by the auditor, based on statistical or non-statistical methods or non-statistical in order to be representative for the entire population that they represent.

Another important issue to be considered at this stage is *tolerable error accepted by the auditor*. It is *the weight that the auditor can accept in population, remained at the same time, willing to use the estimated control risk and / or estimated amount of errors monetary from operations, determined during the planning*. [9] This weight affects the sample size by an inverse relationship (Table 6).

Table 6 *The risk - sample size*

| Element analysis | Sample size | |
|---|---|---|
| | Decreases | Increase |
| Risk estimates of control is low | X | |
| Risk estimates of control is high | | X |
| Accepted permissible error is small | | X |
| Accepted permissible error is high | X | |
| Deviation of expected share of the population is low | X | |
| Deviation of expected share of the population is high | | X |

The three components of audit risk are interrelated and, therefore, there are still many differences of opinion on the valuation method to be used. As stated earlier, the audit risk is considered usually takes a constant value of 5% and is used with the inherent risk and control risk in determining the risk of detection that allows the auditor to determine the sample considered relevant and plan work . Its objective is to set a level as low risk and at the same time, a corresponding relation between the risk and cost of audits.

Determining the relationship between the three main components of audit risk is carried by the following formula:

$$AR = IR \times CR \times DR \qquad (1)$$

Where:

IR – inherent risk;
CR – control risk;
DR – detection risk.

The result obtained for the audit risk can be expressed terms of quantity (percent) or quality ("low", "medium", and „high").

*Example:* Suppose that the auditor assess inherent and control risk at 50% and 5% audit risk. The risk of detection, determined by the formula above, is:

$$DR = \frac{AR}{IR \times CR} = \frac{0.5}{0.5 \times 0.5} = 0.20 \, (20\%) \qquad (2)$$

If the auditor determines that the inherent risk that cannot be estimated or that the effort to estimate is too high compared to the benefits obtained, it can determine the amount to 100%. In this case, the risk of detection will be 10%. If he decides to assign to the 100% control risk, detection risk will be 5%.

The formula for calculating the audit risk requires some restrictions [9]:

- auditor *cannot* perform an assessment of inherent risk as zero (one) and cannot rely entirely on internal control (2) because each of the two cases are disposed of all the evidence collection procedures:

AR = IR x CR x DR = 0 x CR x DR = 0 (2)

AR = IR x CR x DR = IR x 0 x DR = 0 (3)

- *less rigorously performs the audit*, in many cases, the risk of failing to detect material errors or irregularities are too high:

  AR = IR x CR x DR = 0.8 x 0.8 x 0.5 = 0.32 (4)

- auditors may choose *to rely exclusively on the evidence provided by tests of detail*, even if they consider the risk inherent in very large and describes internal control as inadequate. For example, the following situation is found acceptable:

  AR = IR x CR x DR = 1 x 1 x 0.01 = 0.01 (5)

This model starts from the premise that the three components of audit risk are independent, which does not reflect reality. For example, management will establish a level of control so that it can be determined errors arising from the inherent risk. Under these conditions, separate assessment of inherent risk and control that will not provide a real level of risk.

In the literature, this method, proposed by the International Standards is much more a way of thinking on audit risk than one's actual determination. He is the main advantage simplicity, once the delimitation of risk components and the ability to analyze them separately to determine the sample size. But this approach *misses the connection between risk components, the dependencies that exist between them*.

## 4   Conclusion

Audit risk evaluation and interpretation is still a subject of argument in more specialized environments and approaches outlined above are further evidence of the different ways for such activities. This trend is also due to the absence of rules to define exactly the sources of risk and how to understand them. International Auditing Standards provides, in our opinion, from this point of view, a subjective image, overall, on how the auditor should address the risk in carrying out the works and allow interpretation based on his knowledge and experience. The standard are offering a panoramic subjective picture of the way that the auditor should approach the risk during his missions and gives space to interpretations based on personal knowledge and experience.

The solution for audit risk assessment is to apply a probabilistic method as belief functions method which has some advantage as:

- conduct a classification audit risk associated components on sources of information;
- consider three situations in which the auditor may encounter: one in which, following the documentation found reliability of evidence, the second they find their incorrect and the third not

sufficiently aware of the company audited statement and therefore cannot give an opinion;

- provides a way to merge both the sources of evidence and the results obtained from their analysis;
- results are achieved through the objectives in the way of organization and functioning of accounting work, including evaluation of employees;
- provides flexibility. The auditor may collect and analyze certain evidence and, on this basis, to determine the risk.

Even in the quantification of risk components and application of probabilistic methods cannot be created a model that faithfully that accurately assess audit risk. Auditor will face, often with unforeseen events and circumstances, particular to each company or area of activity that affects, in ways and in different sizes, the result of the engagement.

We consider that any attempt to model the expression of an opinion on the audit can not be exhaustive, since this activity involves a lot of expertise and different contexts of development. The context is characterized by risk, uncertainty, error factors can be too many, different and with consequences difficult to assess.

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