

## ATTITUDES TO AUDIT RISK MODEL AND MATERIALITY: EVIDENCE FROM TURKEY

Taylan Altıntaş, Ph.D\*

### ABSTRACT

The audit process is significantly influenced by the audit evidence collected, in other words, accumulating and evaluating sufficient and appropriate evidence are crucial in order to obtain an appropriate audit opinion. The amount of audit evidence to be collected in an audit engagement depends on the degree of detection risk. Therefore, using audit risk model and deciding on materiality in the planning phase of an audit play important role in conducting audit efficiently and effectively.

This paper aims to explore the attitudes of the Turkish auditors about the audit risk model and materiality. For this purpose a survey was conducted to the experienced auditors in Turkey. This study reveals that, despite the fact that the audit risk model is neither widely known nor utilized by the auditors in Turkey, auditors are willing to adopt risk based approach.

**Key words:** Auditing, audit risk model, materiality, Turkish auditors

### DENETİM RİSK MODELİNE KARŞI TUTUMLAR: TÜRKİYE'DE BİR ARAŞTIRMA

### ÖZET

Denetim sürecinin toplanan kanıttan önemli derecede etkilenmektedir, bir başka deyişle yeterli ve uygun denetim kanıtının toplanması uygun bir denetim görüşü verilmesinde en önemli unsurdur. Bir denetim sözleşmesinde toplanacak kanıtın miktarı bulgu riskine bağlıdır. Bu nedenle, denetim risk modelinin kullanılması ve planlama aşamasında önemliliğin belirlenmesi denetimin etkin ve verimli şekilde yürütülmesinde önemli rol oynamaktadır.

Bu çalışmanın amacı Türkiye'de bağımsız denetçilerin denetim risk modeli ve önemlilik hakkındaki tutumlarını incelemektir. Bu amaçla Türkiye'deki deneyimli denetçiler üzerinde bir anket çalışması yapılmıştır. Bu çalışma denetim risk modelinin Türkiye'de çok fazla bilinmediğini ve uygulanmadığını, ancak denetçilerin risk odaklı yaklaşım uygulamaya istekli olduklarını ortaya koymaktadır.

**Anahtar kelimeler:** Denetim, denetim risk modeli, önemlilik, Türk denetçiler

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\* Istanbul University School of Business Accounting Department [ataylana@istanbul.edu.tr](mailto:ataylana@istanbul.edu.tr)

## 1. INTRODUCTION

In today's highly competitive audit environment, audit firms have focused their attention on conducting efficient, cost-effective audits. This has led to them adopting a risk-based approach to auditing; that is, identifying and assessing the risk of the financial statements being materially misstated and planning the nature, timing and extent of their audit procedures accordingly (Porter, 2008).

Auditing is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria, and communicating the results to interested parties. When planning the audit, the auditor considers what would make the financial statements materially misstated. The auditor's assessment of materiality, related to specific accounts, balances and classes of transactions, helps the auditor to determine what items to examine and whether to use sampling and analytical procedures. This enables the auditor to select audit procedures that, in combination, can be expected to reduce audit risk to an acceptably low level (Soltani, 2007). Audit risk assessment is a relatively recent and important development in the general area of auditing (Millichamp, 1996; Dittenhofer, 2001) and one which continues to generate debate (Ritchie, Khorwatt, 2007).

The remainder of this study is organized as follows: The first section provides brief information related to audit planning and materiality and it is followed by the audit risk and components of audit risk model in the second section. The third section provides information about previous research. The fourth section presents the research methodology and the fifth section covers the results of the study. In the last section conclusions are presented.

## 2. AUDIT PLANNING AND MATERIALITY

As the definition of auditing implies auditing is a process, which is consisted of four phases; client acceptance, planning and design of an audit approach, tests for evidence, completion of audit and issuance of an audit report (Hayes et al., 2005). The purpose of audit planning is to establish a general strategy for an audit

engagement and for successfully completing an audit at the required time. The transactions that consist the audit planning is follows (Thomas, Henke, 1986):

- Accumulating data about the client
- Segmenting the audit work
- Gathering information about the internal control system and evaluating the control risk
- Determining materiality
- Determining the audit risk
- Determining the audit objectives
- Writing the draft of audit program
- Determining the duration of audit
- Selecting staff

Professional judgment is essential to the proper conduct of an audit, according to ISA 200. Professional judgment is necessary in particular regarding decisions about:

- Materiality and audit risk.
- The nature, timing and extent of audit procedures used to meet the requirements of the ISAs and gather audit evidence.
- Evaluating whether sufficient appropriate audit evidence has been obtained, and whether more needs to be done to achieve the objectives of the ISAs and thereby, the overall objectives of the auditor.
- The evaluation of management's judgments in applying the entity's applicable financial reporting framework.
- The drawing of conclusions based on the audit evidence obtained, for example, assessing the reasonableness of the estimates made by management in preparing the financial statements.

According to ISA 320, when establishing the overall audit strategy, the auditor shall determine materiality for the financial statements as a whole. If, in the specific circumstances of the entity, there is one or more particular classes of transactions, account balances or disclosures for which misstatements of lesser amounts than materiality for the financial statements as a whole could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements, the auditor shall also determine the materiality level or levels to be applied to those particular classes of transactions, account balances or disclosures. (Ref: Para. A2-A11)

Scrutiny of auditors' materiality judgments has focused on the methods used to decide whether individual or aggregated misstatements would matter to a "reasonable person". Both auditors and financial statement preparers commonly use quantitative materiality thresholds as rules-of-thumb to assist in the preparation and evaluation of financial statements. However, both the SEC (1999) and the Big Five Audit Materiality Task Force (1998) highlighted the dangers of simple reliance on quantitative measures and the need for careful consideration of qualitative factors that can make even very small misstatements material (DeZoort et al., 2006).

When planning the audit work, the auditors decide the degree of detection risk of the plans and the expected collection of audit evidence amount through their understanding of the target enterprise and industries and assessment of the auditees' operational risk, execution of analytical process, seriousness of assessment and acceptable audit risk, and the degrees of inherent risk and control risk (Audit Bulletin No. 24, 1993). Therefore, the determination of detection risk would not only influence the progress of audit strategies, but also significantly influence the results of the audit (Chang et al., 2008).

### 3. AUDIT RISK AND AUDIT RISK MODEL

Audit risk is the risk that the auditor gives an inappropriate audit opinion when the financial statements are materially misstated. (Hayes, et al., 2005) In other words, audit risk is the risk that the auditor will conclude that the financial statements are fairly stated and an unqualified opinion can therefore be issued when, in fact, they are materially misstated. Auditing cannot be expected to uncover all material financial statement misstatements. Auditing is limited by sampling, and certain misstatements and well-concealed frauds are extremely difficult to detect; therefore, there is always some risk that the audit will not uncover a material misstatement even when the auditor has complied with generally accepted auditing standards (Arens, Loebbecke, 1997).

At present, the common basic audit risk assessment methods include (Arens et al., 2005; Cushing, Graham, Palmrose, Roussey, & Solomon, 1995; Low, 2004; Messier & Austen, 2000; Taylor, 2000; Wuste-

mann, 2004): risk factor analysis; fuzzy combined assessment; internal control assessment; analytical audit; audit risk model; qualitative risk assessment; and risk rate assessment (Chang et al., 2008).

The audit risk model operationalizes a risk-based approach of selecting the amount of detailed testing necessary for an audit to be effective. The audit risk model decomposes the components of audit risk (AR) as inherent risk (IR), control risk (CR) and detection risk (DR), which includes analytical procedures risk and test of detailed risk. Audit risk model can be defined as (Soltani, 2007):

$$AR = IR * CR * DR$$

The three components are traditionally defined as follows. Inherent risk is the susceptibility of an account balance or class of transactions to misstatements that could be material, individually or when aggregated with misstatements in other balances or classes, assuming that there were no related internal controls (Hayes, et al., 2005).

Control risk is a measure of the auditor's assessment of the likelihood that misstatements exceeding a tolerable amount in a segment will not be prevented or detected by the client's internal controls. Control risk represents an assessment of whether a client's internal controls are effective for preventing or detecting misstatements, and the auditor's intention to make that assessment at a level below the maximum as part of the audit plan (Arens, Loebbecke, 1997)

Detection risk is the risk that the auditor will not detect a material misstatement that exists in an assertion. Detection risk can be divided further into analytical procedures risk and substantive tests of details risk. Analytical procedures risk is the risk that substantive analytical procedures will fail to detect a material misstatements, while test of details risk is the allowable risk for failing to detect a material misstatement that is not detected by internal controls or substantive analytical procedures (Eilifsen et al., 2006)

In using the audit risk model, auditors first have to determine the level of audit risk they are willing to bear. Then the auditor assesses the level of inherent riskiness of the client's accounts, cycles or financial statement assertions. Next, the auditor documents the client controls and assessed control risk. Finally, the

auditor combines inherent risk and control risk to determine the amount of detection risk that can be tolerated, given the targeted audit risk level (Soltani, 2007). The auditor in applying this model has to quantify, as a percentage, the IR, CR, and DR elements. It is self-evident that auditors in making these assessments will apply their professional judgments based on their prior knowledge and experience, both generically and specifically in terms of the particular client (Ritchie, Khorwatt, 2007).

When inherent and control risk are high, acceptable detection risk needs to be low to reduce audit risk to an acceptably low level. For example, if the internal control structure is effective in preventing and/or detecting errors, the auditor is able to perform less effective substantive tests. Alternatively, if the account balance is more susceptible to misstatement, the auditor must apply more effective substantive testing procedures. In short, the higher the assessment of inherent and control risk, the more audit evidence the auditor should obtain from the performance of substantive procedures (Hayes et al., 2005).

#### 4. LITERATURE REVIEW

Despite its increasing importance, relatively little is known about the process or criteria used in the assessment of audit risk and its components in practice. Quadackers et al. (1996) pointed out that little systematic empirical evidence has been published on the assessment of audit risk and its influence on audit work, whilst Chong and Vinten (1996, p. 42) stated that "there is a considerable potential for further research in how audit risk is evaluated in practice". Except for a few studies (e.g. Waller, 1993; Haskins and Dirsmith, 1995; Helliard et al., 1996; Dusenbury et al., 2000), there have been no recent empirical studies in terms of IR and CR assessment. In addition, theoretical and empirical research studies have criticized the assumption that the risk components are independent of each other (e.g. Dusenbury et al., 2000; Messier and Austen, 2000; Peters, 1990; Cushing and Loebbeck, 1983; Hayes et al., 1999; Waller, 1993; Yardley, 1989) (Ritchie, Khorwatt, 2007).

Chewning and Higgs (2000) conduct a meta-analytic review of the literature to document the

strength of each of 11 frequently-used materiality measures studied in the empirical research on materiality. Their results show large effect sizes for an item's impact on income, revenue, assets, and equity; moderate effect sizes for the nature of the item and risk; and small effect sizes for earnings trend, absolute size of the item, firm size, current assets or working capital, and return on investment. The results also indicate that the effects persist over categories of research design (survey, archival, or behavioral), but the strength of the effects varies between designs.

The extant literature provides evidence of auditor reliance on quantitative income-based measures when judging materiality (e.g., Boatsman & Robertson, 1974; Carpenter & Dirsmith, 1992; Friedberg, Strawser, & Cassidy, 1989; Icerman & Hillison, 1991; Krogstad, Ettenson, & Shanteau, 1984; Libby & Kinney, 2000; Messier, 1983). The literature also links materiality judgments to the disposition of proposed audit adjustments (Braun, 2001; Wright & Wright, 1997) (DeZoort et al., 2006)

#### 5. RESEARCH METHODOLOGY

The study was designed to improve understanding of attitudes of Turkish auditors related to audit risk model and materiality. Since there is a lack of research in this area, an exploratory research was conducted.

The study addresses auditors practicing in Turkey. Audit profession in Turkey is a relatively new profession with respect to the western societies. The need for audited financial statements was arisen during eighties after the Capital Market Law in 1981 and the legal framework of auditing profession was shaped by the Accounting Profession's Law (shortly known as Law No. 3568) in 1989. The Law 3568 established the Chamber of CPAs and Union of Chambers of CPAs (TURMOB), the professional authority which represents the profession.

The target population for the study included all Turkish auditors. Whereas, as part of a pilot study a questionnaire was conducted to selected sample of 30 experienced auditors. The questionnaire comprised 18 statements related to audit risk model and materiality. The statements in the questionnaire were derived from International Standards of Auditing. Likert scale was

used and the respondents were required to respond to each of the statements whether they certainly agree, agree, neither agree nor disagree, disagree, or certainly disagree.

Reliability is an assessment of the degree of consistency between multiple measurements of a variable. Internal consistency is the commonly used measure of reliability which applies to the consistency among the variables in a summated scale. One of the diagnostic measures is the reliability coefficient that assesses the consistency of the entire scale, Cronbach's alpha being the most widely used measure. The generally agreed upon lower limit for Cronbach's alpha is .70, although it may decrease to .60 in exploratory research (Hair et al., 1998). The reliability of the questionnaire is .639 which is an acceptable level for an exploratory research.

**Table 1: Reliability Statistics**

Cronbach's Alpha	N of Items
.639	18

## 6. RESULTS

The responses related to "experience of the auditors as an auditor", "their professional designations", "type of audit firm either international or national", "positions of the auditors in the audit firm" are summarized below.

**Table 2: Experience as an Auditor**

	Frequency	%
3-5 years	3	10.0
6-8 years	5	16.7
9-11 years	6	20.0
12-14 years	8	26.7
15 years and above	8	26.7
Total	30	100

The respondents are consisted of auditors with at least 3 years of experience. 53.4% of the auditors have either more than 12 years experience.

**Table 3: Professional Designations**

	Frequency	%
Sworn-in CPA	19	63.3
CPA	11	36.7
Total	30	100

63.3 % of the respondents are Sworn-in CPAs, whereas 36.7% are CPAs.\*

\* Certified Public Accountants are authorized to render services related to bookkeeping, auditing and other related services. Sworn-in Certified Public Accountants are not allowed to provide bookkeeping services, but are authorized to conduct special type of audit. It is

**Table 4: Type of Audit Firm**

	Frequency	%
International	18	60
National	12	40
Total	30	100

Of the 30 auditors, 18 are working in an international audit firm, the remaining respondents are working in national ones.

**Table 5: Positions in the Audit Firm**

	Frequency	%
Partner	20	66.7
Senior Manager	4	13.3
Manager	3	10.0
Supervisor	3	10.0
Total	30	100

66.7% of the auditors are partners in their audit firms, whereas 13.3% senior managers and the others are either managers or supervisors.

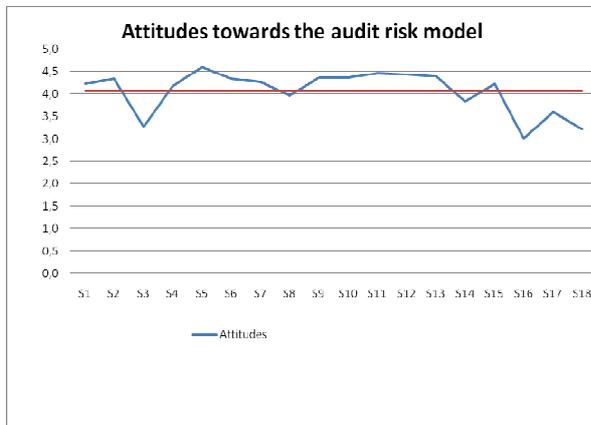
The statements and the means of the responses of the auditors are given below. The mean of the means of the statement is 4.1.

**Table 6: Statements and Means**

Statements	Means
S1 Definition of materiality	4.2
S2 Priority of risk analysis in gathering evidence	4.3
S3 Priority of experience in gathering evidence	3.3
S4 Definition of material misstatement	4.2
S5 Necessity of risk analysis	4.6
S6 Necessity of evaluation of detection risk	4.3
S7 Low detection risk and audit evidence	4.3
S8 Determining detection risk	4.0
S9 Determining control risk	4.4
S10 High control risk and audit evidence	4.4
S11 Determining inherent risk	4.5
S12 High inherent risk and audit evidence	4.4
S13 Evaluating audit risk	4.4
S14 Audit risk factors	3.8
S15 Low audit risk and audit evidence	4.2
S16 Purpose of users and audit risk	3.0
S17 Default risk and audit risk	3.6
S18 Attitudes of top management and audit risk	3.2

**Figure 1: Attitudes Towards the Audit Risk Model**

regarded as the peak of the profession since one can become Sworn-in Certified Public Accountant only after having worked at least 10 years as Certified Public Accountant.



The auditors strongly agree that risk analysis related to client should be done in gathering evidence (mean score 4.6). Evaluation of inherent risk is considered as the most important component of audit risk model (mean score 4.5). The auditors agree that the quantity of evidence accumulated should be increased if the inherent risk is assumed to be high. Respondents also agree that evaluation of audit risk and control risk are needed.

To sum up, the respondents attitudes towards the components of the audit risk model are higher than 4.3, which means that the auditors agree that an auditor must evaluate the inherent risk, control risk and audit risk and the quantity of evidence is significantly influenced by this evaluation.

However, the respondents think that the purpose of the users of the financial statements is not important in risk evaluation. The respondents also believe that their risk evaluation is not significantly affected by the attitudes of top management of their client. Another important point is that the auditors do not consider experience of the auditor as an important factor in gathering evidence. Another factor which is considered as a less important factor is the debt failure risks of the auditee.

## 7. CONCLUSIONS

Auditors may face certain difficulties in determining the quantity and quality of evidence if they solely rely upon their professional judgement. Audit risk model may be useful for the auditors to conduct evidence gathering systematically and in a scientific

way so that the auditor will be able to defend her or himself in case of an audit failure.

Because gathering evidence is crucial in audit process, it should be adequately planned and conducted with due care. In a lawsuit the most serious allegation - except for corruption- will be failure to accumulate necessary evidence. As seen in the audit scandals such as Enron, Worldcom, Parmalat, this issue will be most important challenge for auditors.

Unlike the auditors in developed countries, the Turkish auditors do not widely use audit risk model, therefore, utilizing risk evaluation and statistical methods anticipated by the audit risk model is not common. There are few studies related to the application of audit risk model in Turkey. This study tries to provide a brief outlook to the attitudes of Turkish auditors on the matter.

This pilot study reveals that, despite the fact that the audit risk model is neither widely known nor utilized by the auditors in Turkey, auditors are willing to adopt risk based approach. If the professional bodies initiate efforts related to audit risk model, Turkish auditors will not have difficulties in adopting themselves to these.

Future research can be conducted by increasing the sample. The statements can also be more detailed in order to measure the issue more specifically.

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