Risk Analysis in Financial Audit using the Trust Function Method

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Abstract

With a strong expansion of the competitive environment in almost all sectors, the key resource for competitiveness is information, which becomes a value for the economic entity and society at large when it contributes positively to the objectives. This article has as its primary objective the presentation of an approach to the documentation and risk assessment by financial auditors using the method of trust functions. In the area of financial audit, risk assessment and quantification shall form the basis for planning, carrying out of the mission, obtaining audit evidence and expressing opinion. Based on the literature synthesis, the research undertaken aimed to ensure that audit evidence is represented as a network of interconnected variables, statements about the synthesis documents for which the mission team collects evidence to determine whether or not they are correctly presented. The method of the services of assignment gives an important role to professional judgment when planning and during the course of the mission.

Keywords: *audit risk; trust functions; audit mission; audit objectives; professional judgment*

JEL Classification: *M41, M48*

1. Introduction

The risk in various forms and dimensions has been and is present in the economy of any society. It is precisely this why it has consistently been an area of study to find solutions to reduce the threats faced by the economic environment. At company level, risk minimization contributes to the development of companies, to higher performance with an impact on the industry and the economy.

In the area of financial audit, their evaluation and quantification shall constitute the basis for planning, carrying out the mission, obtaining audit evidence and expressing opinion.

The occurrence of the risk may result in the entity's objectives being not met[1,2]. Thus, the rationale for implementing an identification and evaluation system is to minimize exposure to uncertainty, of course, within reasonable tolerances. Normally, the implementation of such a process cannot take place without defining the objectives to be achieved at different levels of organization, according to the real and possible risks. "The development of contemporary society has been made possible by risk-taking. Thus, economic growth could not be achieved if the certainty trumps before risk and uncertainty[3]". In conjunction, the 'reason' for any economic entity to exist is to generate profits for the owner as a result of risk-taking.

Will anyone invest in shares whose return is lower than that of government bonds? Surely not!

The purpose of this article is to present an alternative methodology for the assessment of audit risk, respectively by using the method of trust functions. The method of trust functions can also be used for the assessment of risks at the level of a commercial entity.

During the course of the research I sought to present and analyze relevant literature on audit risks, as well as to present approaches in audit missions for their completion and audit standards with incidence in risk analysis. The causal relationship between risk, the significant level and audit evidence is the basis for documenting and presenting the audit risk assessment methodology using the Trusted functions method.

Evidence is a key component of the audit process. They form a variable network. Grouped into account balances, classes of transactions, management statements or audit objectives, is of higher relevance because a sample provides a basis for analysis and evaluation for more than one variable in the network[4].

2. Audit risks – literature review

Starting from the assumption that the risk is associated with uncertainty, or rather with effects from exposure to uncertainty, its measurement becomes a difficult process. The identification and assessment of audit risk falls within this general meaning given the implications for the mission. In order to achieve its objective, i.e. the extent to which the financial statements of companies present a true and fair view of the financial position and performance, the auditor should obtain the evidence necessary to substantiate the opinion[5]. Effective management of the mission requires the auditor to correctly assess the audit risk as a fundamental step in determining methods, techniques, nature and scope of procedures[6]. "The process is carried out at the very beginning of the planning process, immediately after the customer has been informed

[1] Dobrotă, N., Economy dictionary, *Economic publishing house*, Bucarest, 2000, page 37;

[2] Cosma, D., Cosma, O., Modern Risk Management Strategies for the Romanian State Treasury, available at: http://mpra.ub.uni-muenchen.de/20425/1/MPRA_paper_20425.pdf

[3] Morariu, A., Petroianu, G.-O., Modificări conceptuale şi structu-rale ale riscului în societatea cunoaşterii, *Audit Financiar* Journal, no.6/2013, p. 22.

[4] See: Arens, A., Elder, R., Beasley, M., Auditing and assurance services: an integrated approach, 14th edition, *Pearson Education*, New Jersey, p. 20-175, 2012

[5] Horomnea, E. et al., Utilizarea pragului de semnificaţie şi a riscului de audit în planificarea şi conducerea auditului financiar, The volume of the national conference „*Informarea financiar-contabilă în condiţii de criză: 16 ani de la implementarea noului sistem contabil în România*", Iaşi, 2010.

[6] Causholli, M., Knechel R.W., Lin, H., & Sappington, D., Competitive Procurement of Auditing Services with Limited Information, *European Accounting Review*, no.3, p.573-605, 2013.

and the internal control system has been assessed[1]". The approach taken is also a key factor in the completion of the mission's performance.

Essentially, there are four different approaches to audit. The underlying approach, the balance sheet approach, the systems approach, the risk-based approach. The main difference between these approaches is the volume and allocation of resources.

Depending on the nature of the audit process, each mission poses a new challenge for the accounting professional. There are no two entities identical in terms of industry, location, size, number of employees or corporate governance structure. However, it is generally accepted that a risk-based approach will minimize the possibility that audit objectives may not be met.

The first models for determining audit risk were drawn up in the years 1980. A very well-known and widely used approach is the model proposed by the AICPA[2] (American Institute of Certified Public Accountants), with audit risk estimated on the basis of inherent risk, control risk and detection risk. Currently, the most common methods for audit risk assessment include risk factor analysis, qualitative risk approach, fuzzy theory[3], Bayesian model[4] or the trusted function model[5]. In our country, the following are used for the estimation of audit risk: Statistical survey technique, matrix of audit assessment criteria on significant areas or risk summary matrix. *Auditors often use, in the absence of standardized information or technical indications, the qualitative representation of risk based on professional judgment[6].*

In Romania, the method of reliable functions for estimating audit risk was presented in articles and specialized books, but no concrete ways of

determining it were presented[7]. In practice the method is extremely little used because it is not promoted by professional bodies, nor are there any charts developed in this respect. The method is an alternative to the model proposed by the International Audit standards and uses the same network of variables, with the indication that for each statement and objective in the financial statements, the auditor based on professional judgment shall give a degree of confidence and plausibility for each variable, and the accounting professional can use the same software, whether it's a specially created software or Excel tables.

Unlike other methods of determining audit risk, the trust function method allows for greater flexibility in the professional judgment applied, allows for the correlation and image of a statement in the financial statements during the performance of the mission, thus allowing the volume of evidence collected to be altered.

The audit risk issue is presented in ISA 315 – Identification and assessment of significant distortion risks through an understanding of the entity and its environment. Through this standard, auditors are guided to a mission-based approach. According to that Regulation, *"the objective of the auditor is to identify and assess the risks of significant misstatement of information, in so far as it is due to fraud or error, in financial statements and allegations, through an understanding of the entity and its environment, including the entity's internal control thus **providing a basis for the development and implementation of the risk of material misstatement assessed"**[8].* As the auditor is required to focus on the entity and the environment or in risk assessment, this approach first requires the identification of the key operational risks a business must faces. The second step is to quantify the impact of those risks on the entity's financial position and performance. Planning audit procedures is the last step in this process. For these reasons, we can continue to use the designation "Business risk approach" as an integral part of the audit risk.

[1] Horomnea, E., Audit Financiar. Concepte. Standarde. Norme, Ed. *TipoMoldova*, Iași, 2014, p.129.

[2] AICPA, SAS 47, Risk and Materiality Audit in Conducting an Audit, 1983.

[3] Chang, S.-I., The development of audit detection risk assessment system: Using the fuzzy theory and audit riskmodel, *Expert Systems with Applications,* Vol.35, 2008, pp.1053-1067.

[4] The Canadian Institute of Chartered Accountants, 1980.

[5] Srivastava W., Shafer G., Belief-function formulas for audit risk, *The Accounting Review*, nr. 67, 1992, pp. 249-283.

[6] Danescu, T., Proceduri şi tehnici de audit financiar, Ed. *Irecson*, Bucharest, 2007, p. 23-146.

[7] Zăiceanu A.M., et.all., Methods for Risk Identification and Assessment in Financial Auditing, Emerging Markets Queries in Finance and Business, *Procedia Economics and Finance* no. 32 (2015), pp 595-602

[8] IAASB, ISA 315, p.278.

Audit risk expresses the likelihood that the auditor will give an inadequate opinion, as a function of risks of significant distortions in financial statements (inherent risk and control risk) and of detection. In the literature, there are numerous studies addressing the issues of factors influencing its evaluation and estimation[1,2]. Beattie[3] classifies these factors into two categories:

a. "auditor's risk" means the risk caused by the failure of the accounting professional to detect significant distortions as a result of its assessments of: integrity and management attitude, understanding of the audited company's environment, scale and complexity of operations, expertise and experience of specific transactions undertaken by the entity (for example: auditing of derivatives), failure to identify significant systems properly, limitation of procedures due to increased cost importance or inadequate determination of significance level;

b. „Mission risk" refers to the degree of influence that the misreporting of an audit report has on the client entity. Among these factors are: the perception of external users of financial statements or the likelihood of financial difficulties for the audited company after the presentation of the audit report.

According to ISA 315[4], audit risk shall not include the possibility for the auditor to express a qualified or adverse opinion where the financial statements are not distorted. It also does not relate to the risk to the auditor of any disputes arising from the audit report or negative publicity. "for the auditor or audit firm it represents an economic or business risk"[5].

The relationships between audit risks from the perspective of International Audit Standards are set out below:

$$RDP = \frac{RAA}{RI \times RC} \text{ or } RDP = \frac{RAA}{RDS}$$

RI = inherent risk;

RC = control risk;

RDP = planned detection risk;

RDS = risk of significant distortion;

RAA = acceptable audit risk.

In literature[6], the risk of significant distortion is sometimes referred to as 'audited risk' or 'emerging risk' because it represents the risk that material distortions may occur in the financial statements before the audit process begins. The value of inherent risk and control risk are the primary variables for estimating the risk of planned detection. The latter indicator determines the amount of substantial evidence the auditor plans to collect, which is inversely proportional to the size of the RDS.

The planned detection risk is influenced by the following factors:

- The nature, timing and extent of the audit procedures carried out;
- Sampling risk – choosing an unrepresentative sample;
- The observation risk.

Summarizing the information presented above, the relationship between audit risks, significant information and audit evidence is shown in *Figure no. 1*.

[1] AICPA, SAS 47, Audit Risk and Materiality in Conducting an Audit, 1983.

[2] Arens, A., Loebbecke, K., Audit: O abordare integrată, Ed. *Arc*, Chişinău, 2003.

[3] Beattie, V., et.al., Auditor independence and audit risk in the UK: A Reconceptualisation*, Presented at *The American accounting association professionalism and ethics symposium*, 2002, apud Chang, S.-I., op.cit.

[4] IAASB, ISA 315;

[5] Briciu, S. et all., Contribuții la evaluarea şi implementarea unui model de evaluare a riscului de audit, *Audit Financiar*, no.6/2010, p.32.

[6] Khurana, I., Raman, K., Litigation risk and the financial reporting credibility of big 4 versus non-big 4 audits: Evidence from Anglo-American countries. *The Accounting Review*, 79(2), pp. 473-495, 2004.

Figure no. 1. Relationship between risks, significant level and audit evidence
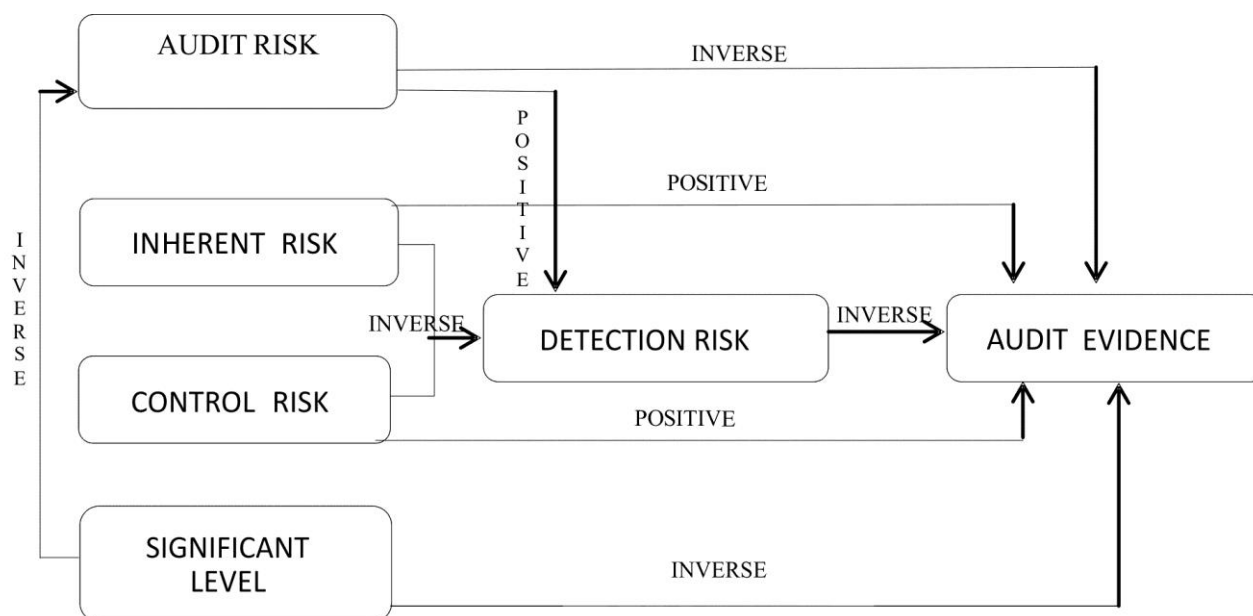
Source: Own approach

3. Research methodology. The approaches and methods used

In our research, we have used both qualitative (predominantly constructive) and quantitative (predominantly positive) approaches.

The problem addressed, *the risk analysis in audit using the reliable function method* is analyzed in the context of the increasing concerns of international accounting bodies to increase the quality of audit work and restore investor confidence in the financial statements submitted by companies. The research methodology outlines the steps taken to achieve the aim and objectives. The work assumes an application character.

In our approach, we started from analyzing the causal relationship between risk, significant level and audit evidence, and a scheme of this. I used the reliable function method to represent audit risk because it has some advantages, including the fact that the risk is viewed from the perspective of the plausibility of an event to take place. Unlike the theory of probabilities, a value equal to zero assigned to a variable is the lack of any evidence and not the impossibility of an event occurring.

For the purpose of obtaining the final risk value, audit samples shall be considered as a network of variables. For their aggregation, the Dempster-Shafer theory (DS) was used, considered in literature the most appropriate approach to combine a variety of independent evidence. There are three important functions for the application of the theory: The function of basic probabilistic assignment, the function of trust and the function of plausibility. To be applied in the framework of research it is proposed that audit evidence be collected in mission stages (planning, internal control, control of accounts, examination and verification of financial statements) and that the network of variables comprising audit objectives is structured in inherent risk, risk of control and financial statements.

4. Audit risk modeling using the trust function method

Previous research and international normalizers explored more rigorous frameworks for audit risk analysis and assessment such as specific mathematical definitions and a particular focus on the sampling process. Recently, "auditing practice puts work thinking

more in place and risk is seen as a general guidance for mission planning"[1].

The disappearance of "Arthur Andersen" company together with many other alleged failures of audit shows us that the current ways of conceptual design and operational risk must be reconsidered. The Trusted functions method offers some potential advantages in its assessment and a summary is presented below[2, 3, 4]:

- Risk is considered from the perspective of the plausibility of an event to take place;

- It can be used in a variety of situations, in fraud risk assessment, audit risk assessment, auditor independence assessment, limited review missions of financial statements or in situations of significant uncertainties and ambiguities;

- unlike the theory of probabilities, a value equal to zero assigned to a variable is the absence of any evidence and not the impossibility of an event;

- the basic probabilistic allocation is represented by positive, negative and confirmation values to better reflect reality.

The Dempster-Shafer theory of reliable functions was developed by Glenn Shafer in 1960 and by Arthur Dempster in 1970 through the "A mathematical they of evidence". This is relevant for audit and assurance missions because it focuses on the process of collecting audit evidence and the rigorous rationale of the auditor's judgment.

There are three important functions for the application of Dempster-Shafer theory (DS): the function of the basic probabilistic assignment, the function of trust and the function of plausibility.

The research was based on the models developed by Rajendra Srivastava.

Similar to the probabilities' theory of Bules, the Dempster rule is used in the theory of trusted functions to aggregate several independent samples relating to a variable.

4.1. The function of the basic probabilistic assignment

This function is similar to the probabilities' distribution function, but with a significant difference. In Bayes' theory, it assigns a value to each element of the set, for example, A=(a_1, a_2,...,a_n). Assume that the probability assigned to an item of to be true is P (AI) that takes values from 0 to 1 and the sum of them is 1.

Thus: $\sum_1^i P(ai) = 1$.

In DS theory, the basic probabilistic attribution (m-values) is performed both on the single elements of the set and at all levels of aggregation (its own subgroups).

Thus: A = (a_1a_2, $a_1a_2a_3$,......, a_1a_2.......a_n).

The basic probabilistic assignment is represented by m(X), X⊆A, X=a_1a_2, which takes values from 0 to 1 and the sum of them is 1, as follows: $\sum_{X \subseteq A}^n m(X) = 1$.

For variable x we can have: m(x)≥0, the extent to which the variable is considered correct; m(~x)≥0 the extent to which the variable is considered incorrect and m(x, ~x)≥0, trust for the whole set; so that m(x)+m(~x)+m(x,~x)=1.

M-values can be obtained by the decision maker (auditor in our case) on a subjective judgment or may be derived from a compatibility relationship between a framework with known probabilities and a lot of interest[5]. For each statement in a section on the financial statements, the auditor will conduct an analysis, giving an average level of confidence on a scale of 0 to 1. Using the basic probabilistic assignment, the auditor may represent the degree of trust attributed to the whole crowd as follows:

M-values above represent the level of support obtained from the samples described, and m(x, ~x) is the level of support attributed to the entire crowd. These m-values are mixed evidence, some confidence in favor of the claim and some support against it. A positive evidence means that we

[1] Srivastava, R., An Introduction to Evidential Reasoning for Decision Making under Uncertainty: Bayesian and Belief Functions Perspectives, *International Journal of Accounting Information Systems*, Vol. 12: 126-135, 2010.

[2] Srivastava, R., Mock, T., Gao, L., The Dempster-Shafer Theory of Belief Functions for Managing Uncertainties: An Introduction and Fraud Risk Assessment Illustration, *Australian Accounting Review*, Volume 21, Issue 3, pp. 282-291, 2011;

[3] Harrison, K., Srivastava, R., Plumlee., D., Auditors' Evaluations of Uncertain Audit Evidence: Belief Functions versus Probabilities*, Studies in Fuzziness and Soft Computing*, Volume 88, 2002, pp 161-183;

[4] Srivastava, R., et.al., Causal inference in auditing: A framework, *Journal of Practice and Theory*, Vol. 31, Issue 3, p. 177-220, 2012

[5] Srivastava, R., Shafer, G., *Belief function formulas for audit risk*, The accounting review, vol.67, nr.2, p.249-283, 1992.

have information to substantiate the opinion only for m(x) and no support for its denial; thus: 1>m(x)>0 and m(~x)=0. A negative sample means we have support only for denying it, like this: 1>m(~x)>0 and m(x)=0.

4.2. Function of trust

The value attributed to confidence for a set of items, noted as A, is equal to the sum of all the m-values for the subset of items marked with B that are contained in A. Mathematically, we express the confidence in the network of variables A as: $Bel(A) = \sum_{B \subseteq A} m\,(B)$.

Unlike the theory of probabilities, where P(A)=0 represents the impossibility to occur, the trusted function Bel(A)=0 represents the lack of evidence about A. However, both Bel(A)=1 and P(A)=1 express the certainty that A is true and the event will certainly occur. Also, Bel(A) + Bel(~A) ≤1, so the certainty that the "A" event will occur and the confidence that the "~A" event will occur is not required to be 1. In probabilities theory always P(A)+P(~A)=1. The auditor's activity is to decide which state is true.

4.3. Plausibility function

This function is the third component of the equation. In a variable network, for example "A", this is the maximum possibility that "A" is true based on all the evidence gathered. "A" is the sum of the m-values of a decomposition level.

$$Pl(A) = \sum_{A \cap B \neq \varnothing} m\,(B).$$

Plausibility for "A" can be described as a complementary function to the value attributed to "~A", thus: Pl(A)=1-Bel(~A).

Pl(A) = 1 implies that the statement "A" is possible and true, while we don't have evidence to show that "~A" is true, Pl(~A)=0.

$$Pl(x)=m(x)+m(x,\sim x).$$

$$Pl(\sim x) = m(\sim x) + m(DT,\sim DT).$$

The value of PL(~x) can be interpreted as the maximum risk that variable A is not true on the basis of the accumulated evidence. From this perspective, the plausibility function is used to estimate different types of risks. Srivastava[1] defines audit risk by the plausibility

that undetected significant distortions are present in the financial statements.

The estimation of risk by the function-of-trust method is conservative in the sense that due attention is paid to both evidence and situations of ambiguity or uncertainty. In general, uncertainty refers to situations where the outcome of an event is not certain. For example, we assume that the auditor has no evidence of management fraud. In the absence of any favorable records from the point of view of the trust functions, zero value is assigned for both States: Bel(fraud is present)=0; Bel(fraud does not exist)=0. Plausibility that fraud is present or not 1. The ambiguity in a result is defined as the difference between plausibility and confidence in the result. Thus, "ambiguity" in this case is 1.

Evidence is a key component of the audit process, and international standards state that the final opinion must be supported by sufficient and appropriate evidence [2]. The evidence collected by the auditor also remains uncertain. They form a network of variables and can be grouped into account balances, classes of transactions, management statements or audit objectives. *Structured in this way, they are of higher relevance because a sample provides a basis for analysis and evaluation for more than one variable in the network*[3] and the interrelationship between them is expected to provide more effective audit.

In order to obtain the final value of risk, it is necessary to obtain evidence, to attribute basic probabilistic, to determine the functions of trust and plausibility, and not least to aggregate them. In literature, the most appropriate approach is Dempster's theory, used to combine a variety of independent evidence.

The audit is a process of collecting evidence and reducing uncertainty about the accuracy of the presentation of financial statements for qualified opinion. Thus, in order to understand the possible risks in the auditing process, the accounting professional should have access to the risks arising from accounting information[4]. The way in which the audit risk assessment

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[1] Srivastava, R., Audit Decisions Using Belief Functions: A Review, *Control and Cybernetics*, Vol. 26, No.2, 1997, pp. 135-160.

[2] ISA 500 – Audit Evidence.

[3] See: Arens, A., Elder, R., Beasley, M. Auditing and assurance services: an integrated approach, 14th edition, *Pearson Education*, New Jersey, p. 20-175, 2012

[4] Wustemann, J. (2004). Evaluation and response to risk in international accounting and audit systems: Framework and German experiences. *Journal of Corporation Law*, 29(2), 449-466.

is carried out, in the view of international normalizers, provides a way to assess the existence and intensity of significant distortions in an assertion or assertion of financial statements, but does not provide an adequate way to aggregate accumulated documentation by measuring accounts and transaction flows.

We appreciate that one of the most effective ways of auditing involves obtaining a combination of (obvious)

certainty for each mission objective. Audit samples collected by the auditor may be represented as a network of interconnected variables, statements of the summary documents for which the mission team collects evidence to determine whether or not they are correctly submitted. A summary of the objectives for each statement in the financial statements is presented in *Table no. 1*.

Table no. 1. Audit objectives		
Statements	**Targets**	**Explanation**
Classes of transactions	Occurrence	The transactions and events recorded have actually occurred and relate to the entity
	Exhaustiveness	Journals include all operations to be recorded
	Accuracy	Transactions will show accurately the amounts involved
	Separation of the financial years	The records relate to the period during which they occurred.
	Classification	The classes of transactions and events have been recorded in the corresponding accounts
Balances on accounts	Existence	Balance sheet accounts (assets, liabilities and equity) exist and are not fictitious.
	Rights and obligations	The entity holds or controls the rights to the assets and a liability is an obligation
	Exhaustiveness	All relevant balance sheet items have been recorded
	Evaluation and allocation	The balance sheet accounts shall be presented at fair value and any value adjustment shall be recorded accordingly.
Presentation and description	Occurrence, Rights and obligations	The transactions and events described have occurred and are related to the entity.
	Classification and comprehensibility	All relevant information has been presented in the financial statements
	Accuracy and evaluation	The financial information shall be adequately described and presented and shall be clearly expressed.

Source: Own processing according to "Quality audit guide", CFAR, 2019

In general, the auditor obtains more evidence on each variable and has evidence at different levels of financial statements. To estimate audit risk by using the reliable function method, we have been working on identifying information sources and

collecting evidence at mission stages (planning, internal control, auditing, financial statements review and verification). The network of variables we propose to estimate audit risk using the Trusted functions method is shown in *Figure no. 2*.

Figure no. 2. The network of variables influencing the audit risk
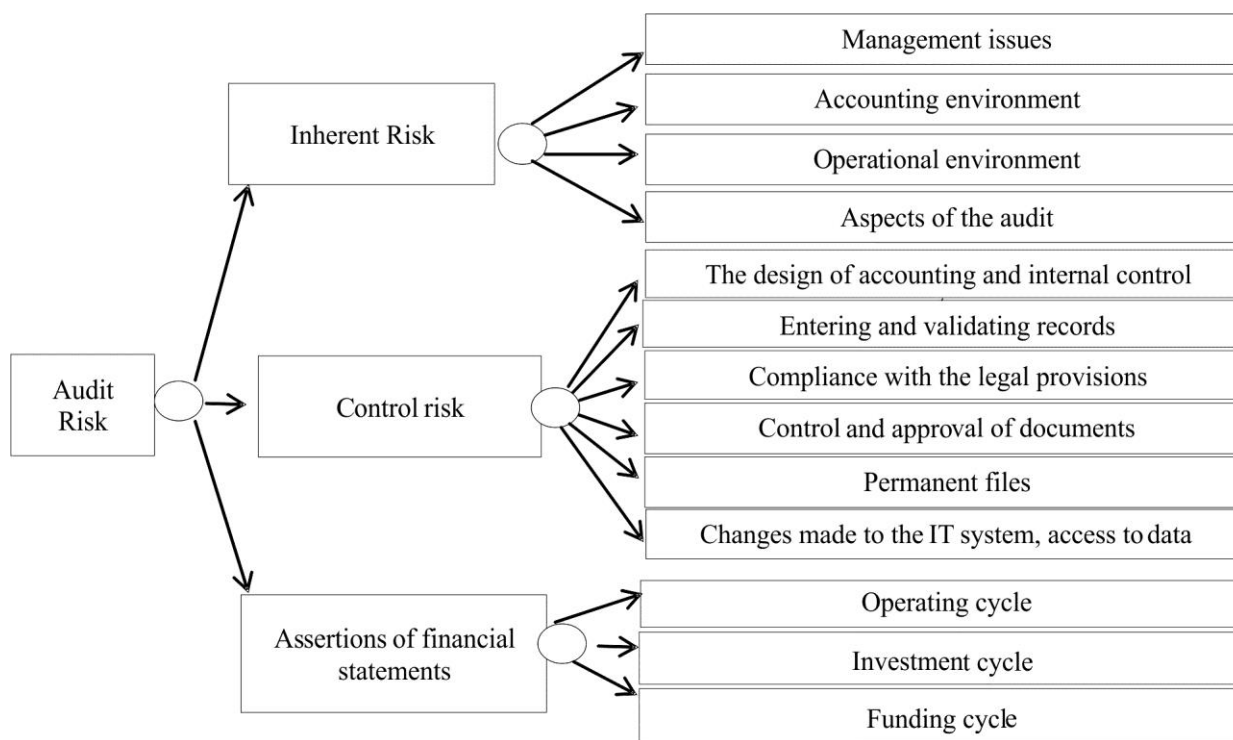
Source: Own projection based on "Quality audit guide", CFAR, and Horomnea, E., "Financial audit. Concepts. Standards. Rules", 2014

In the model, the values of the underlying probabilistic assignment are obtained by direct subjective judgment estimation. It should also be noted that the auditor's information sources are diverse and sometimes interdependent, and the level of trust in the different categories of evidence obtained is not equal in value. Some elements may not be conclusive in their own right, but overall contribute to the formation of opinion by linking them with other information. The situation presented is not exhaustive and can be further specified in the audit engagement.

The audit risk assessment shall include the estimation of the basic probabilistic attribution values, the calculation of the confidence-setback function and the plausibility-function-based rating for each of the above-mentioned variables network claims. A model is given in **Table no. 2**.

Table no. 2. The functions of the probabilistic basic, reliable and plausible assignment for the audit risk evidence

Statements analyzed	Basic probabilistic assignment	Trust function	Plausibility function
Inherent Risk			
Management issues	$m_{AC}(ri)$ $m_{AC}(-ri)$ $m_{AC}(ri;-ri)$	$Bel_{AC}(ri)$ $Bel_{AC}(-ri)$ $Bel_{AC}(ri; -ri)$	$Pl_{AC}(ri)$ $Pl_{AC}(-ri)$
Accounting environment	$m_{MC}(ri)$ $m_{MC}(-ri)$ $m_{MC}(ri;-ri)$	$Bel_{MC}(ri)$ $Bel_{MC}(-ri)$ $Bel_{MC}(ri; -ri)$	$Pl_{MC}(ri)$ $Pl_{MC}(-ri)$

Statements analyzed	Basic probabilistic assignment	Trust function	Plausibility function
Operational environment	$m_{MO}(ri)$ $m_{MO}(-ri)$ $m_{MO}(ri;-ri)$	$Bel_{MO}(ri)$ $Bel_{MO}(-ri)$ $Bel_{MO}(ri; -ri)$	$Pl_{MO}(ri)$ $Pl_{MO}(-ri)$
Audit aspects	$m_{AA}(ri)$ $m_{AA}(-ri)$ $m_{AA}(ri;-ri)$	$Bel_{AA}(ri)$ $Bel_{AA}(-ri)$ $Bel_{AA}(ri; -ri)$	$Pl_{AA}(ri)$ $Pl_{AA}(-ri)$
TOTAL INHERENT RISK	$m_{RI}(ri)$ $m_{RI}(-ri)$ $m_{RI}(ri;-ri)$	$Bel_{RI}(ri)$ $Bel_{RI}(-ri)$ $Bel_{RI}(ri; -ri)$	$Pl_{RI}(ri)$ $Pl_{RI}(-ri)$
Control Risk			
Design of the accounting and internal control systems	$m_{SC}(rc)$ $m_{SC}(-rc)$ $m_{SC}(rc;-rc)$	$Bel_{SC}(rc)$ $Bel_{SC}(-rc)$ $Bel_{SC}(rc; -rc)$	$Pl_{SC}(rc)$ $Pl_{SC}(-rc)$
Entering and validating records	$m_{VI}(rc)$ $m_{VI}(-rc)$ $m_{VI}(rc;-rc)$	$Bel_{SC}(rc)$ $Bel_{SC}(-rc)$ $Bel_{SC}(rc; -rc)$	$Pl_{SC}(rc)$ $Pl_{SC}(-rc)$
Compliance with the legal provisions	$m_{DL}(rc)$ $m_{DL}(-rc)$ $m_{DL}(rc;-rc)$	$Bel_{SC}(rc)$ $Bel_{SC}(-rc)$ $Bel_{SC}(rc; -rc)$	$Pl_{SC}(rc)$ $Pl_{SC}(-rc)$
Control and approval of documents	$m_{AP}(rc)$ $m_{AP}(-rc)$ $m_{AP}(rc;-rc)$	$Bel_{AP}(rc)$ $Bel_{AP}(-rc)$ $Bel_{AP}(rc; -rc)$	$Pl_{AP}(rc)$ $Pl_{AP}(-rc)$
Permanent Files	$m_{FP}(rc)$ $m_{FP}(-rc)$ $m_{FP}(rc;-rc)$	$Bel_{FP}(rc)$ $Bel_{FP}(-rc)$ $Bel_{FP}(rc; -rc)$	$Pl_{FP}(rc)$ $Pl_{FP}(-rc)$
Changes made to the IT system, access to data	$m_{AD}(rc)$ $m_{AD}(-rc)$ $m_{AD}(rc;-rc)$	$Bel_{AD}(rc)$ $Bel_{AD}(-rc)$ $Bel_{AD}(rc; -rc)$	$Pl_{AD}(rc)$ $Pl_{AD}(-rc)$
TOTAL CONTROL RISK	$m_{RC}(rc)$ $m_{RC}(-rc)$ $m_{RC}(rc;-rc)$	$Bel_{RC}(rc)$ $Bel_{RC}(-rc)$ $Bel_{RC}(rc; -rc)$	$Pl_{RC}(rc)$ $Pl_{RC}(-rc)$
AUDIT RISK AT PLANNING STAGE	$m_{RP}(ra)$ $m_{RP}(-ra)$ $m_{RP}(ra;-ra)$	$Bel_{RP}(ra)$ $Bel_{RP}(-ra)$ $Bel_{RP}(ra; -ra)$	$Pl_{RP}(ra)$ $Pl_{RP}(-ra)$
Assertions of financial statements			
Intangible assets	$m_I(as)$ $m_I(-as)$ $m_I(as;-as)$	$Bel_I(as)$ $Bel_I(-as)$ $Bel_I(as; -as)$	$Pl_I(as)$ $Pl_I(-as)$
Tangible assets	$m_{IN}(as)$ $m_{IN}(-as)$ $m_{IN}(as;-as)$	$Bel_{IN}(as)$ $Bel_{IN}(-as)$ $Bel_{IN}(as; -as)$	$Pl_{IN}(as)$ $Pl_{IN}(-as)$
Investments	$m_I(as)$ $m_I(-as)$ $m_I(as;-as)$	$Bel_I(as)$ $Bel_I(-as)$ $Bel_I(as; -as)$	$Pl_I(as)$ $Pl_I(-as)$
Stocks and current production	$m_{SP}(as)$ $m_{SP}(-as)$ $m_{SP}(as;-as)$	$Bel_{SP}(as)$ $Bel_{SP}(-as)$ $Bel_{SP}(as; -as)$	$Pl_{SP}(as)$ $Pl_{SP}(-as)$
Bank balances and cash available	$m_{SB}(as)$ $m_{SB}(-as)$ $m_{SB}(as;-as)$	$Bel_{SB}(as)$ $Bel_{SB}(-as)$ $Bel_{SB}(as; -as)$	$Pl_{SB}(as)$ $Pl_{SB}(-as)$

Statements analyzed	Basic probabilistic assignment	Trust function	Plausibility function
Debtors	$m_D(as)$ $m_D(-as)$ $m_D(as;-as)$	$Bel_D(as)$ $Bel_D(-as)$ $Bel_D(as; -as)$	$Pl_D(as)$ $Pl_D(-as)$
Taxes	$m_{IM}(as)$ $m_{IM}(-as)$ $m_{IM}(as;-as)$	$Bel_{IM}(as)$ $Bel_{IM}(-as)$ $Bel_{IM}(as; -as)$	$Pl_{IM}(as)$ $Pl_{IM}(-as)$
Liabilities, commitments and contingencies	$m_{DA}(as)$ $m_{DA}(-as)$ $m_{DA}(as;-as)$	$Bel_{DA}(as)$ $Bel_{DA}(-as)$ $Bel_{DA}(as; -as)$	$Pl_{DA}(as)$ $Pl_{DA}(-as)$
Legal and statutory issues	$m_{AL}(as)$ $m_{AL}(-as)$ $m_{AL}(as;-as)$	$Bel_{AL}(as)$ $Bel_{AL}(-as)$ $Bel_{AL}(as; -as)$	$Pl_{AL}(as)$ $Pl_{AL}(-as)$
Sales and revenues	$m_V(as)$ $m_V(-as)$ $m_V(as;-as)$	$Bel_V(as)$ $Bel_V(-as)$ $Bel_V(as; -as)$	$Pl_V(as)$ $Pl_V(-as)$
Purchases and expenditure	$m_{AC}(as)$ $m_{AC}(-as)$ $m_{AC}(as;-as)$	$Bel_{AC}(as)$ $Bel_{AC}(-as)$ $Bel_{AC}(as; -as)$	$Pl_{AC}(as)$ $Pl_{AC}(-as)$
Salaries and similar debts	$m_{SD}(as)$ $m_{SD}(-as)$ $m_{SD}(as;-as)$	$Bel_{SD}(as)$ $Bel_{SD}(-as)$ $Bel_{SD}(as; -as)$	$Pl_{SD}(as)$ $Pl_{SD}(-as)$
Profit and loss statement	$m_{CP}(as)$ $m_{CP}(-as)$ $m_{CP}(as;-as)$	$Bel_{CP}(as)$ $Bel_{CP}(-as)$ $Bel_{CP}(as; -as)$	$Pl_{CP}(as)$ $Pl_{CP}(-as)$
Trial balance	$m_{BV}(as)$ $m_{BV}(-as)$ $m_{BV}(as;-as)$	$Bel_{BV}(as)$ $Bel_{BV}(-as)$ $Bel_{BV}(as; -as)$	$Pl_{BV}(as)$ $Pl_{BV}(-as)$
TOTAL STATEMENTS	$m_{AS}(as)$ $m_{AS}(-as)$ $m_{AS}(as;-as)$	$Bel_{AS}(as)$ $Bel_{AS}(-as)$ $Bel_{AS}(as; -as)$	$Pl_{AS}(as)$ $Pl_{AS}(-as)$
FINAL AUDIT RISK	$m_{RA}(ra)$ $m_{RA}(-ra)$ $m_{RA}(ra;-ra)$	$Bel_{RA}(ra)$ $Bel_{RA}(-ra)$ $Bel_{RA}(ra; -ra)$	$Pl_{RA}(ra)$ $Pl_{RA}(-ra)$

Source: Own processing according to "Quality audit guide", CFAR, 2019
Legend:
  MAC(ri) – value of the underlying probabilistic attribution for management claims at the inherent risk analysis stage
  BelAC(ri) – value attributed to the trust function for the management claim at the inherent risk analysis stage
  Ads(ri) – value attributed to the plausibility function for the statement of looks relating to management in the inherent risk analysis stage

5. Results and discussions

The method of reliable functions shall be distinguished from other modes of audit risk analysis in the light of the fact that the risk is regarded from the perspective of the plausibility of an event. A value equal to zero attributable to a variable is the absence of any evidence and not the impossibility of an event. For example, we believe that the auditor is carrying out a review of the debtor section of the financial statements to ensure that debtors reflect amounts due by third parties at the end of the year. On the basis of the evidence gathered, the auditor shall assign an average level of confidence of 0,8 on a scale of 0 to 1 for the claim that invoices, and receipts exist.

At the same time, the auditor notes that several invoices were issued manually, the company's computerized accounting system was not used which could indicate a risk of mismanagement of assets or fictitious

income. The auditor thus attributes a level of confidence of 0,1 to the claim that the transactions actually took place. The assignment of probabilities is the level of support obtained from the described samples. A positive evidence means that we have information to substantiate the opinion and no support for denying it. A negative sample means we have only support for denying it. The values of the underlying probabilistic assignment are obtained by direct subjective judgment estimation. It should also be noted that the auditor's information sources are diverse and sometimes interdependent, and the level of trust in the different categories of evidence obtained is not equal in value. Some elements may not be conclusive in their own right, but overall contribute to the formation of opinion by linking them with other information.

For the purpose of obtaining the final risk value, audit samples shall be considered as a network of variables. There are three important functions for the application of the theory: The function of basic probabilistic assignment, the function of trust and the function of plausibility. To be applied in the framework of research it is proposed that audit evidence be collected in mission stages (planning, internal control, control of accounts, examination and verification of financial statements) and that the network of variables comprising audit objectives is structured in inherent risk, risk of control and financial statements.

Conclusions

The audit risk assessment is a complex and continuous process that runs from the first information on the entity's knowledge to the issuance of the opinion. An incorrect estimate of this may lead to misallocation of resources and thus to inefficient and ineffective results. An important role is given to the reasoning of the accounting professional that can be influenced by factors such as: The working environment, personality, nature and timing of evidence collected, the decision-making process within the audited entity, the quality characteristics set. Evidence is a key component of the audit process. From the perspective of the reliable functions described by the Dempster-Shafer theory, they form a network of variables. Grouped into account balances, classes of transactions, management statements or audit objectives are of higher relevance because a sample provides a basis for analysis and evaluation for more than one network variable.

During the Article, we have proposed, based on the study of relevant literature on the analysis and risk assessment in the audit, that we present a less used method in practice, i.e. the method of reliable functions. This involves estimating the values of the basic probabilistic attribution base, calculating the confidence-setback function and the plausibility-based function-based rating for each statement in the variable network that influences the audit risk as presented in the "quality audit guide". This gives the auditor greater freedom to use professional judgment in mission documentation and risk assessment.

In practice the method is extremely little used because it is not promoted by professional bodies, nor are there any charts developed in this respect. The method is an alternative to the model proposed by the International Audit standards and uses the same network of variables, with the indication that for each statement and objective in the financial statements, the auditor based on professional judgment shall give a degree of confidence and plausibility for each variable, and the accounting professional can use the same software, whether it's a specially created software or excel tables.

As future Directorates of Research, we aim to make a comparison of a sample of companies listed on the Bucharest stock Exchange to assess whether the determination of audit risk by the trust function method offers a higher level of information than by applying the method recommended by the International Audit standards.

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