EVALUATION OF THE AUDIT RISK. A CASE STUDY

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Abstract:
Identification of the risks which an entity is facing is one of its key concerns. Audit risk assessment should be the main concern of the auditor. The main objective of the auditor to consider is the design and implementation of audit procedures to reduce the audit risk allowing at an acceptable level.
This paper presents the main categories of risks, audit risk determination models and a case study of the assessment of the audit risk in a stock company.

Keywords: *inherent risk, control risk, detection risk, International Standards on Auditing model, Bayesian model*

JEL Classification**:** *M41, M49*

INTRODUCTION

Financial audit is interposed between the producers and users of accounting information by professionals who take responsibility of certification that financial statements are prepared under all significant aspects, in accordance with an accounting referential. Performing a financial audit requires in-depth knowledge of the conceptual accounting framework at national and international level, of the postulates, principles, norms and rules of assessment, accounting technical instrument and Auditing Standards.

In Europe, the audit of accounts was used as a common practice in ancient Greece and the Roman Empire for the first time, being useful also for preparing the budget[168].

In Italy, in the fifteen century, in Florence, Genoa and Venice, audit was used as a current practice, its purpose being to identify fraud.

In England, in the fourteen century, audit was intended to verify the registration of all transactions without paying attention to internal control, the auditor was regarded as a "detective" in is field of activity because the main causes of bankruptcies were frauds and errors.

In U.S.A., the emergence of audit had initially a strong British influence, but subsequently the audit's purpose was not fraud detection, but financial statements' certification.

In Romania, the audit was legislated only in 1999 and has undergone important steps through the Body of Expert Accountants and Licensed Accountants of Romania and through the establishment of the Chamber of Financial Auditors of Romanian, which drafted the Auditing Standards and the Code of professional ethics.

[168] Tatiana Dănescu – Audit financiar. Convergențe între teorie și practică, EdituraIrecson, București, 2007, pg. 26-27

RESEARCH METHODOLOGY

The research method consisted in reviewing the opinions and approaches within the specialized literature, articles and specialized studies from national and international journals. We sought a more detailed approach on audit risk assessment by conducting a case study in a joint stock company from Romania.

LITERATURE REVIEW

Phil Griffiths defines risk as the threat that an action or event will adversely affect an entity's ability to achieve its objectives and successfully execute its strategies[169].

H.M.Treasury considers that risk represents the uncertainty of a result which takes the form of a probability of a positive nature or a threat, of some actions or events and should be administered in terms of a combination between the possibility of something happening and the impact that would cause the materialization of this possibility.[170]

Alexandru Rusovici considers that risk is an inseparable companion of the auditor, the audit contract beneficiary and potential users of financial reporting, that need to be aware of the necessity to monitor any risk, to know the variables that condition the audit report, to know their dimension, to foresee their influences and monitor the results.[171]

GENERAL FEATURES OF AUDIT RISKS

Audit risk can be defined as the risk that an auditor assumes to issue an inappropriate audit opinion regarding the financial statements he is auditing.

Audit risk is defined by the Auditing Standards as "the risk that the auditor assigns to an inappropriate audit opinion when the financial statements contain significant erroneous information".[172]

Audit risk has three components inherent risk, control risk and risk of not detecting.[173]

Inherent risk is the susceptibility of a balance, an account or a category of transactions to erroneous information that could be significant individually or together with other erroneous information from other balances or transactions.

Control risk is the risk that a misstatement that may occur in an account balance or a category of transactions, and that could be significant individually or together with other erroneous information from other balances or transactions, could not be prevented or detected and corrected in a timely manner by the accounting system and the internal control system.

Risk of not detecting is the risk that an auditor's substantive procedures may not detect an incorrect information that exists in an account balance or a category of transactions that could be significant individually or together with other erroneous information from other balances or transactions.

EVALUATION OF AUDIT RISKS

Risk evaluation in the audit process analysis plays an important role and should be the main concern of the auditor.

The auditor's main objective is to design and implement certain audit procedures that allow him to reduce risk to an acceptable level.

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[169] Phill Griffiths- Risk-Based auditing, Gower Publishing Limited, England, 1998, pp.17

[170] H.M.Treasury – Cartea portocalie. Gestionarea riscurilor, principii și concepte,2004, pg. 9

[171] Alexandru Rusovici – Audit financiar la societățile comerciale, Editura R.A. Monitorul Oficial, București, 2003, pp.114

[172] ***Audit financiar 2000, Standarde.Codul privind conduita etică și profesională.Camera Auditorilor Financiari din România, Editura Economică, București,, 200, pg.97

[173] ***Audit financiar 2000, Standarde.Codul privind conduita etică și profesională.Camera Auditorilor Financiari din România, Editura Economică, București,, 200, pg.97

Before the conclusion of the audit, based on substantive procedures and other audit evidence obtained by the auditor, he should consider whether control risk assessment is confirmed and to ensure that the risk is reduced to the minimum acceptable level.[174]

In the specialized literature and in practice are presented different *models for determining audit risk*, the difference between these models is given especially by the categories of risk considered.

1. The International Standards on Auditing Model. To determine the relationship between the three main components of audit risk AICPA ("Accounting Principles and Auditing Standards") proposed in 1988 the following mathematical model, which maintained so far:

RA = RI x **RC** x **RND,** where:

RA – audit risk; **RI** – inherent risk; **RC** – control risk; **RND** – detection risk.

To express the level of audit risk there can be uses quantitative terms (percentage) or qualitative (low, medium, high).

To illustrate the quantitative risk assessments, suppose an auditor estimated the inherent risk at 20%; the control risk at 40% and the audit risk at 3%.

The detection risk will be determined by the formula presented above **RND = RA/ (RI x RC)** = 0.375 = 37.5%.

2. The Bayesian model for risk evaluation expresses the possibility of using estimates with personal probabilities and objective modified as new data appear, as the uncertainty elements are numerous, subjective and can be revised as a result of the acquisition of information. The occurrence probability of an event is conditioned by another unknown or uncertain event.

The general formula of Thomas Bayes's theorem, also applied in audit to calculate the posterior probabilities that provide additional information to management is the following:

$$P(E_i \mid A_j) = \frac{P(A_j \mid E_i)P(E_i)}{P(A_j)}$$

Where:

P(Ei) - unconditional or prior probability of errors;

P(Ei|Aj) - posterior probability (conditional), respectively the manifestation probability of of state E in the the hypothesis of results A for the experiment. Inaudit this represents the probability of acceptance of financial statements based on evidence even if they contain errors (the auditor's risk of incorrect acceptance);

P(Aj) - marginal, total or simultaneous probability of evidence, which involves acceptance;

P(Aj|Ei) - conditional probability of errors, given by the financial statements based on the evidence (the user's risk of unjustified acceptance of financial statements.

3. The trust functions model. Trust functions have their origin in the seventeenth century in the works of authors George Hooper and James Bemoulli, their study was continued by Shafer (1976), Gabbay and Smets (1998), Shafer and Srivastava (1990), Smets (during 1990 - 1998), Yager (1994). The trust functions model is based on the probability theory and is reduced to applying the Bayesian theory in special conditions. Shafer and Srivastava (2003) proposed the use of trust functions in audit risk assessment

[174] Standardul de audit ISA 400 ”Evaluarea riscurilor și controlul intern” (Audit Standard ISA 400 „Risk assessment and internal control”)

because they believe that the Bayesian theory is limited by the differences between intuitive and Bayesian interpretation of audit risk. For example, according to SAS (Statement on Auditing Standards) 47, if the auditor decides not to consider the inherent factors, the value of the inherent risk will be set as 1. Since a probability equal to 1 means certainty, it would seem that there are material errors in accounts. But this is not what the auditor wants.
Trust functions use uncertainty, reason that allows a more accurate interpretation regarding the auditor's elections. When the auditor determines the audit risk at 70%, results that 30% of the inherent factors are identified and assigned, and the remaining 70% represent uncertainty. In this case the probability that errors exist is 70%, but the possibility that these errors are absent is 100%. When the risk is set at 50%, the possibility of errors is reduced to 50%, but the possibility that any kind of errors are absent is still 100%.

CASE STUDY

The case study refers to the evaluation of audit risk in a joint stock company from Romania, which has as main activity performing construction and assembling works, construction and repair of installations for buildings, execution and repair of facilities, municipal networks, producing and marketing construction materials and installation, metal or wooden materials, plastics and rubber, repair works and maintenance of machinery and transport equipment, refrigeration equipment, electronics and industrial automations, design and technical support for the execution of construction works and installation, interior design, extensions, alterations and renovations, benefits service and rental equipment, vehicles and goods.

Table no. 1

Materiality threshold

Client: **SC CONSTRUCT SA**	**Prepared by: M.L.M.**	***Date*** **10.01.20013**
Audited period: 1.01-31.12.2012	**Reviewed by: M.C.**	**03.03.2013**

		Materiality threshold	
		Current year	**Previous year**
Total assets (before deducting debts)	1%	254.440	145.456
	2%	508.880	290.912
Turnover	0,5%	127.242	57.317
	1%	254.484	114.634
Profit before taxation	5%	123.456	152.626
	10%	246.912	305.252

Is selected the lowest threshold between the three indicators to ensure a low level of the audit risk. The materiality threshold has a value of 123,456 lei.

Table no. 2

Checklist of the general inherent risk

Client: **SC CONSTRUCT SA**	**Prepared by: M.L.M.**	***Date*** **23.01.2013**
Audited period: 1.01-31.12.2012	**Reviewed by: M.C.**	**10.03.2013**

1. MANAGEMENT	**YES**	**NO**
a) Do managers lack the necessary knowledge and experience to run the company?		NO
b) Do the managers tend to represent the company in association with high risk?		NO
c) Were there made any changes of managers with key functions during the financial year?		NO
d) Are there certain requirements for maintaining a level of profitability or performing objectives? (for example to meet certain requirements from creditors)		NO
e) Do the retained earnings have a personal significance for managers? (for example profit-related bonuses)	YES	
f) Are the administrative control and the one exercised by managers		NO
g) Is there a lack of performance management information systems?		NO
h) Are managers actually involved in the daily tasks? (This question is only relevant if a risk is identified at one of the above (d) or (e) points?	YES	
2. ACCOUNTING	**YES**	**NO**
a) Is the accounting function decentralized?		NO
b) Does the accounting staff lack training and the ability to carry out their tasks?		NO
c) Are there any problems regarding attitude or low morale in the accounting department?		NO
d) Is there a risk of committing errors as a result of the fact that the company's employees work under pressure?		NO

3. ACTIVITY OF THE AUDITED COMPANY	**YES**	**NO**
a) Does the company operate in a high-risk sector?	YES	
b) Is there a creditor - third party with a significant individual importance?		NO
c) Is there a concentration of shares or voting rights greater than 25% in the possession of members of the Board of Directors without an executive function?	YES	
d) Is it anticipated that the business (or part of it) could be sold in the future?		NO
e) Has the control of the company been taken over by someone else in		NO
f) Is the company insolvent?		NO

4. COMPANY'S AUDIT	**YES**	**NO**

a) It is the first time the company will audit this client?		NO
b) Was there expresses an opinion in the audit report with significant reserves in any of the last two years?		NO
c) Would you describe the relationship company-client as "conflicted" or "deteriorating"?		NO
d) Are there any pressures regarding fees or time?		NO
e) Are there a number of "hard to audit" operations?		NO

General assessment of management risk:
Management risk is considered to be very low due to the significant experience and knowledge of the company's management, which provided an administrative control and a good management. Although managers are directly involved in daily tasks, thus having interest in relation to the smooth running of the business because of the premiums granted in relation to the profit, they have not engaged the company in high risk activities.
General assessment of accounting risk:
The accounting activity is carried out in a pressure free environment, by people of irreproachable morality and very good professional training. Therefore, the accounting risk is expected to be very low.
General assessment of audit risk:
The contractual relationship with the company is good, meaning that the firm has audited before this client without issuing an opinion with significant reserves and there were no operations difficult to audit pressures regarding the fees or time.

Table no. 3

Checklist of the general inherent risk

Client: SC CONSTRUCT SA	**Prepared by: M.L.M**	***Date*** **25.01.2013**
Audited period: 1.01-31.12.2012	**Reviewed by: M.C.**	**13.03.2013**

Materiality threshold	**Specific inherent risks**							**Ref sit.**	**Sample size (based on judgment)/ Initial risk**
General inherent risk	**Questions**						**Assessment**		
	1	**2**	**3**	**4**	**5**	**6**			
Tangible and intangible fixed assets	NO	NO	NO	NO	NO	NO	very low		23%
Group accounts and investments	NO	NO	NO	NO	NO	NO	very low		23%
Stocks and production in progress - amounts	NO	NO	NO	YES	YES	YES	very low		50%
Stocks and production in progress - assessment	NO	NO	YES	NO	YES	NO	very low		23%

Debtors	NO	NO	NO	NO	NO	NO	very low		23%
Short-term investments	NO	NO	NO	NO	NO	NO	very low		23%
Bank accounts and petty cash - payments	NO	NO	NO	NO	NO	NO	very low		23%
Bank accounts and petty cash - receipts	NO	NO	NO	NO	NO	NO	very low		23%
Bank accounts confronted with accounts statements	NO	NO	NO	NO	NO	NO	very low		23%
Creditors	NO	NO	NO	NO	NO	NO	very low		23%
Long-term creditors	NO	NO	NO	NO	NO	NO	very low		23%
Sales	NO	NO	NO	NO	NO	NO	very low		23%
Purchases	NO	NO	NO	NO	NO	NO	very low		23%
Expenditure	NO	NO	NO	NO	NO	NO	very low		23%
Wages and compensations	NO	NO	NO	NO	NO	NO	very low		23%
Other audit sections	NO	NO	NO	NO	NO	NO	very low		23%
Trial balance and accounting records	NO	NO	NO	NO	NO	NO	very low		23%
Preliminary financial statements and records after the end of the year	NO	NO	NO	NO	NO	NO	very low		23%

The questions used to determine the level of specific inherent risk are:

- System exhibited to errors/ inadequate system/ non-computerized manual system?
- Accountant responsible for this field is badly trained professionally?
- Complex operations (the actual nature of the operation, not how it is recorded)?
- Risk of loss/ embezzlement/ fraud?
- Many professional judgments/ calculations?
- Unusual transactions (nature of the operation or nature of the process outside the system)?
- Complex operations (actual nature of the operation, not how it is recorded)?

Based on the responses received to these questions about meaningful systems, it was established *the level of specific inherent risk as being very low*.

Table no. 4

Risk factors based on identified risks

Number of specific inherent risks identified	**GENERAL LEVEL OF INHERENT RISK**			
	Very low	**Low**	**Average level**	**High level**
0,1 or 2 risks	23%	50%	70%	100%
3 or 4 risks	50%	70%	100%	100%
5 or 6 risks	70%	100%	100%	100%

Table no. 5

Specific inherent risks and the size of initial samples

Client: SC CONSTRUCT SA	**Prepared by: M.L.M**	***Date*** **25.01.2013**
Audited period: 1.01-31.12.2012	**Reviewed by: M.C.**	**13.03.2013**

Will be used only if the risk based sampling method is adopted

	Inherent risk (RI)	**RN**	**Control risk (RC)**	**Calculating risk strip RI x RN x RC**	**Sample size**
Tangible and intangible fixed assets	*23%*	56%	56%	7,21	10
Group accounts and investments	23%	56%	56%	7,21	8
Stocks and production in progress - amounts	50%	56%	56%	15,68	25
Stocks and production in progress - assessment	23%	56%	56%	7,21	10
Debtors	23%	56%	56%	7,21	8
Short-term investments	23%	56%	56%	7,21	8
Bank accounts and petty cash -	23%	56%	56%	7,21	10
Bank accounts and petty cash - receipts	23%	56%	56%	7,21	10
Bank accounts confronted with accounts statements	23%	56%	56%	7,21	8
Creditors	23%	56%	56%	7,21	8
Long-term creditors	23%	56%	56%	7,21	8
Sales	23%	56%	56%	7,21	10
Purchases	23%	56%	56%	7,21	10
Expenditure	23%	56%	56%	7,21	10
Wages and compensations	23%	56%	56%	7,21	10
Other audit sections	23%	56%	56%	7,21	8
Trial balance and accounting	23%	56%	56%	7,21	10
Preliminary financial statements and records after the end of the year	23%	56%	56%	7,21	8

Table no. 6

Risk factors of not-detection not associated with sampling

SAFETY IN EXAMINING	Nonexistent	100%
	Moderated	56%
	High	31%

Table no. 7

Control risk factors

SAFETY	CRITERIA	RISK
Meaningful	Failure rate up to 2%	13.5%
Moderated	Failure rate up to 5%	23%
Limited	Failure rate up to 10%	56%
Nonexistent	Failure rate higher than 10%	100%

Table no. 8

Table with the sample size at a population<400

RISK STRIP	SAMPLE SIZE
78.4% up to 100%	53
58.5% up to 78.3%	48
43.8% up to 58.4%	43
33.0% up to 43.7%	38
24.9% up to 32.9%	33
18.9% up to 24.8%	28
14.4% up to 18. 8%	23
11.1% up to 14.3%	18
8.5% up to 11.0%	13
6.6% up to 8.4%	8
0 up to 6.5%	3

Table no. 9

Table with the sample size at a population>400

BANDA DE RISC	MĂRIMEA EŞANTIONULUI
72.1% up to 100%	59
58.7% up to 72.0%	52
47.8% up to 58.6%	48
39.0% up to 47.7%	44
30.2% up to 38.9%	40
23.4% up to 30.1%	35
18.1% up to 23.3%	30
14.0% up to 18.0%	25
10.9% up to 13.9%	20
8.4% up to 10.8%	15
6.5% up to 8.3%	10
0 up to 6.4%	5

CONCLUSIONS

The demarches to determine the level of the general inherent risk led to the following conclusions:

• ***Management***. *The management risk is considered to be very low* due to the significant experience and knowledge of the company's management, which provided an administrative control and good management. Although managers are directly involved in daily tasks, thus having interest in relation to the smooth running of the business because of the premiums granted in relation to the profit, they have not engaged the company in high risk activities.

• ***Accounting***. The accounting activity is carried out in a pressure free environment, by people of irreproachable morality and very good professional training. Therefore, the *accounting risk is expected to be very low*.

• ***The company's activity***. The situation is stabile given that the company does not manifest an insolvency danger and there is no third party (creditor) of significant importance. Furthermore, there was no change in the control of the company, nor is expected any change in this regard. But the company carries out its activity in a high risk sector. The risk regarding the company's activity is therefore considered to be low.

• ***The company's audit***. The contractual relationship with the company is good, in the sense that the firm has audited before this client without issuing an opinion with significant reserves and there were no difficult to audit operations or pressures regarding fees or time.

• The ***level of the specific inherent risk*** is very low.

• It can be seen that the ***risk strip for stocks*** is the highest due to an obsolete inventory management program, with deficiencies, non-integrated with the accounting program, requiring data entry into two programs, which may give rise to errors.

• ***Control risk***, it ***is considered to be limited*** because there is only one person who is responsible for internal control; there are no internal audit procedures and no organized internal audit department.

REFERENCES

1. Dănescu T. – Audit financiar.Convergenţe între teorie şi practică, Editura Irecson, Bucureşti, 2007, pp.26-27
2. Ghiţă R., Ghiţă M., Voinea D., Popa A., Dumitrache A. – Etapele procesului de gestionare a riscurilor, Revista Finanţe publice şi contabilitate nr.7-8/2010
3. Griffiths P. – Risk-Based auditing, Gower Publishing Limited, England
4. Rusovici A. – Audit financiar la societăţile comerciale, Editura R.A. Monitorul Oficial, Bucureşti, 2003
5. Treasury H.M. – Cartea portocalie. Gestionarea riscurilor, principii şi concepte, 2004
6. *** - Audit financiar 2000, Standarde.Codul privind conduita etică şi profesională.Camera Auditorilor Financiari din România, Editura Economică, Bucureşti, 2000, pp.97.