

EMPLOYMENT OF AUDIT RISK MODELS

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Different audit risk evaluation models presented in the literature and looks into their advantages and disadvantages are analysed. However, scientific works do not offer a universal audit risk evaluation model to make the auditor's life easier when the audit risk has to be evaluated. Following the research of audit risk evaluation performed by Lithuanian auditors and in view of the related models provided in the literature, some improvements to the audit risk model are proposed, which enable evaluating the audit risk components, i.e. the audit risk structure, and reveals the consistency of audit risk evaluation in the auditing process, i.e. discloses the dynamic picture of the audit.

Introduction

The volumes of analytical checks in the competitive market keep growing, whereas the fast development of technologies and economic pressure force the audit companies to apply increasingly creative methods for dealing with the profitability issues. This implies the danger that most audits are performed without sufficient risk evaluation. Since auditing is attributed to the activities that are charac-

terised by inevitable risk, it must be evaluated, too.

The problems of audit risk evaluation have been addressed by a large number of researchers (Arens, Loebbecke, 1997; Robertson, 1990; Davies, 2001; Beatie, Fearnley, Brandt, 2002; Bichkova, 1998; Skobara, 1998; Sheremet, Sujc, 1995; etc.). These problems are also analysed by Lithuanian scientists (Mackevičius, 1999; Kabašinskas, Toliatienė, 1997; Matickienė, 1997. However, no univer-

sal models that would make the auditor's life easier when it comes to assessing the audit risk were found in the literature. Thus, audit risk should be analysed as a possibility of applying audit risk evaluation models in practice.

The purpose of this article is to assess the risk evaluation models in auditing by identifying their advantages and disadvantages, to evaluate the possibilities of applying audit risk models in auditing practice, and to offer an improved audit risk evaluation model. To attain these goals, results of studies in management and administration, accounting, law, audit, and other fields were analyzed. The paper is structured as follows. We first analyze the theoretical aspects of the development of audit risk models by presenting previous studies reported in the literature, and providing an overview of standard document analysis, their comparison and synthesis. We next present results of our empirical study on audit risk evaluation performed by Lithuanian auditors, followed by conclusions.

Risk evaluation models in auditing

Following an analysis of scientific works, it can be maintained that the literature principally covers the 1) classical, 2) expanded, 3) ABREMA, 4) risk-based audit, 5) Beatie, Fearnley and Brandt audit risk models, which can be applied in evaluating the audit risk. Below we present a short overview of the above-listed models.

The classical audit risk model integrates the inherent, control, and detection risks. The relation among the components of the classical risk evaluation model in auditing can be mathematically expressed by the formula:

$$AR = IR \times CR \times DR,$$

where AR is the audit risk, IR is the inherent risk, CR is the control risk, and DR is the detection risk.

In the expanded audit risk model (Dodge, 1992; Robertson, 1990; O'Reilly, 1990), the detection risk is replaced by the risk of analytical procedures and substantive tests. Thus, the audit risk is expressed as follows:

$$AR = IR \times CR \times AP \times TD,$$

where AR is the audit risk, IR is the inherent risk, CR is the control risk, AP is the risk of analytical procedures, and TD is the risk of substantive tests.

Apparently, the structure of the expanded audit risk model is similar to that of the classical audit risk model. The expansion of the model does not make the audit more professional, although the expanded audit risk model explains some sampling elements in the auditing of account balances and economic transactions.

In *ABREMA*, 1995, an activity-based risk evaluation model of auditing offered by Australian scientists, the audit risk (AR) is decomposed into two components:

- 1) the risk of a material misstatement of a financial statement item in the unaudited financial statements that may be decomposed into the inherent risk of a material misstatement occurring (RMM_i) and the risk that it will not be detected by the entity ($1 - \text{Pr}(\text{De})$), and
- 2) the risk that the misstatement will not be detected by the auditor (equal to one minus the probability of detection by the auditor, $1 - \text{Pr}(\text{Da})$).

Consequently, the three audit risk components covered by *ABREMA* (RMM_i, $1 - \text{Pr}(\text{De})$, and $1 - \text{Pr}(\text{Da})$) correspond to the components of the traditional risk model: the inherent risk (IR), the control risk (CR), and the detection risk (DR).

Beatie, Fearnley, and Brandt (2002) have described the essence of the audit risk and emphasised that the auditor may fail to detect

material misstatements or identify them once they are detected due to three main causes: 1) the audit does not meet the standards, i.e. the auditor lacks competence; 2) the auditor fails to report or get right material misstatements after they are found by the auditor, i.e. the auditor lacks independence; 3) the management of the entity may deliberately try to mislead the auditor. In the latter case the auditor may not be held responsible for the failure to detect errors, whilst the first two reasons are attributable to audit failure.

Reasoning that threats that may arise from the auditing companies themselves are not recognised by the classical audit risk model, the latter being only focused on the detection of material misstatement of information rather than resolution, Beatie, Fearnley, and Brandt (2002) included two new audit risk components into the audit risk model, which are independence and competence risks. Moreover, the risk evaluation model in auditing proposed by these authors includes such risks as 1) motivation risk, which is the key to the understanding of the management behaviour, 2) specific period and specific transaction risks. The latter are important since the auditors should give more consideration to the specific periods of auditing and specific transactions that depend on the motivation of the management.

The risk-based audit model focuses not only on the audit risk but also on the *business risk of the corporate client*, i.e. the risk that may affect the profitability and survival of the enterprise. Bayer (1999) emphasised the advantages of the risk-based audit model and notes that in traditional audit the auditors make their decisions with respect to the factor of significance, whereas the internal control of the corporate customer fails to be comprehensively evaluated for the purpose of audit efficiency as the focus is placed on checking the financial items.

Each of the audit models given above – classical, expanded, ABREMA, Beatie, Fearnley and Brandt, and risk-based audit – may be employed for evaluating the audit risk. However, an audit risk model should focus on certain aspects that are going to be discussed in more detail. Firstly, the audit risk model should identify only the key factors that increase the audit risk, i.e. the audit risk model should be attractive because of its simplicity and clarity. This is the case with the classical, expanded, and ABREMA audit risk models as distinct from the Beatie, Fearnley and Brandt and risk-based audit risk evaluation models. Secondly, the audit risk model should clearly show who / what an audit risk scope can depend on, i.e. the actions of the audited enterprise and the auditor / auditing enterprise. This is only revealed in the Beatie, Fearnley and Brandt model. Thirdly, the audit risk model should identify the key audit risk components that are analysed in the auditing standards as well as in other scientific works: the inherent, control, and detection risks. The first two depend on the actions and qualities of the audited company while the third one depends on the actions of the auditor / auditing company. The inherent, control, and detection risks are covered in all the aforesaid audit risk models. Fourthly, audit risk analysis should focus on the corporate client's business risk, i.e. the internal and external risks that may affect the profitability and survival of the enterprise. Fifthly, an audit risk model should also include the independence risk component as is emphasised in the Beatie, Fearnley and Brandt audit risk model. Although the requirement for the auditor to be independent of the customer and the audited enterprise is prescribed by the audit regulating legislation, i.e. the Law on Audit of the Republic of Lithuania and the auditor ethics codes (the Code of Ethics for Auditors), there still is a risk that

the auditor will not report material misstatements of information or get them right after they are detected either will not try to find them.

The aforementioned audit risk models (classical, expanded, ABREMA, Beatie, Fernley and Brandt, and risk-based audit) have certain common advantages and disadvantages which are shown in Table 1.

Although the said audit models are expressed in a simple form, i.e. in a formula, diagram or table, and they can be used in the auditing process, they 1) provide a general understanding of the audit risk and its components but do not offer a method for estimating the risks; 2) identify all audit risk components but do not reflect the interrelation among them; 3) declare that neither of the audit risk components can be equal to zero, as that would imply that no audit risk exists in the particular case; 4) enable to express one audit risk component through others and to define the scope of the auditing tests and procedures as well as the level of significance; 5) do not make it obvious that the audit risk and each of its components must be re-evaluated not only on the accountability, account balance, and economic

transaction level but also at each stage of the auditing process (except the ABREMA audit risk model); 6) do not reflect other risks that are not included into the audit risk model.

Following the analysis of the most commonly addressed audit risk models, it is expedient to have a look at how Lithuanian auditors evaluate audit risk. For this purpose an empiric research was carried out in March–April 2004.

A study on audit risk models in Lithuania

The arrangement of the research included the definition of the research purpose, object, sampling frame, sample, minimum sample size, and the initial data collection method. The details are given below.

Research objective: to investigate how Lithuanian auditors evaluate audit risk.

Research object: audit risk.

Research subjects. In research, it is essential to specify the sampling frame. V. Pranulis (1998) denotes the sampling frame as a set of “objects identified under a certain feature that are intended for yielding some information”. By virtue of this phrasing, the sampling frame

Table 1. General advantages and disadvantages of the audit risk models

AUDIT RISK MODELS	
<i>Advantages</i>	<i>Disadvantages</i>
<ol style="list-style-type: none"> 1) provide an understanding of the audit risk; 2) identify the audit risk components; 3) enable to express one audit risk component by using the others; 4) provide that neither of the audit risk components can be equal to zero; 5) are useful in audit planning. 	<ol style="list-style-type: none"> 1) do not offer a method for estimation of the audit risk; 2) do not reflect the relationship among the components; 3) do not show that the audit risk and each of its components must be re-assessed at different levels of occurrence and different stages of the auditing process; 4) do not include other risks that may affect the auditing results.

Source: made by the authors after Robertson, 1990; O'Reilly, 1990; Arens, Loebbecke, 1997; ABREMA, 1996; Mackevičius, 1999.

of this paper includes Lithuanian auditors. According to the data of the Lithuanian Chamber of Auditors, on March 1, 2003 there were 405 auditors who were entitled to perform audit.

Sample. In research, sampling is usually employed to obtain information on the sampling frame. Therefore a sample is denoted as part of a sampling frame selected for research, which is relevantly and sufficiently representative of the frame and can yield the required information. In this research, the frame elements were selected through random sampling "without replacement".

Minimum sample size. The results of the sampling-based research always imply a greater or smaller uncertainty which decreases as the sample size increases, leading to a greater accuracy of the findings. Therefore, it is important to identify the minimal sample size n_{\min} , which is calculated using the following formula (Martišius, 1997):

$$n_{\min} = \frac{z_{\alpha}^2 N p (1-p)}{(\Delta p)^2 (N-1) + z_{\alpha}^2 p (1-p)},$$

where N is the sampling frame size. Our analysis involves 405 Lithuanian auditors;

p is the feature probability, the accepted value is 0.5;

Δp is the deviation of the feature part. A 20% deviation will be applied for the results;

z_{α} is the normal distribution value. If the accepted level of confidence is 90%, the normal distribution value z_{α} is 1.96.

After all the values are inserted into the formula, the calculated n_{\min} equals to 23, i.e. in order to achieve results with a 90% confidence level and 20% deviation, data must be collected from at least 23 auditors.

Initial data collection method. The research aims at identifying how Lithuanian auditors evaluate the audit risk and what audit risk

components are taken into account. It is virtually impossible to perform such survey by visiting audit companies since the auditors usually refuse to talk. Therefore, in order to ensure the utmost anonymity of the respondents and the greatest possible reliability of the data, the questionnaire method was applied. The questionnaire used in the research contained four groups of questions. Group 1: general information on the auditor and the audit company (questions 1–7); Group 2: general questions on audit risk (questions 8–16); Group 3: employment of the classical audit risk evaluation model in auditing (questions 17–29); Group 4: evaluation of other audit risk components, i.e. independence, business risks (questions 30–35).

In the period from 25 March to 15 April 2004, 70 questionnaires were distributed; 42 respondents gave no response, 2 respondents claimed that they would not be able to provide answers to the questionnaire, 26 questionnaires were received back. All the 26 questionnaires were included in the analysis.

Since the research will analyse the data obtained from 26 questionnaires, the obtained results can be regarded as representative. They were obtained with a 90% confidence level and an 18.5% deviation.

Analysis of the collected data. When the replies to the general questions on the auditor and the auditing company were analysed, it was noted that over 92% of the auditors had a work experience of more than 6 years, and only 8% had a work experience from 1 to 5 years. All the auditors who filled in the questionnaire performed the audit of the financial accountability of an enterprise in pursuance of Lithuanian national standards, and only 15% followed the national audit standards. Therefore, it can be maintained that the surveyed auditors enjoyed sufficient work experience, had

a good understanding of the analysed problem, and provided competent replies to the questions. The auditors were employed by companies established in 1997–2001, the legal status whereof included sole proprietorships (31%), private limited liability companies (62%), and general partnerships (7%). The average number of people employed by those companies ranged from 1 to 10, including 1 to 3 auditors.

It is worth noting that in most sole proprietorships and private limited liability audit companies, i.e. 62 and 57% respectively, the number of employees ranged from 1 to 5. In most sole proprietorships (88%) there was only one auditor – the owner of the company – whereas the remaining 12% employed more than one auditor. The number of auditors in 57% of private limited liability companies ranged from 2 to 3. In general partnerships the auditors include only the partners themselves, their number must account for at least $\frac{3}{4}$ as prescribed by the Law on Audit of the Republic of Lithuania. Therefore, a conclusion can be made that the latter provision of the Law on Audit and the requirement that the shareholders of private liability audit companies must hold at least $\frac{3}{4}$ of the total number of the company shares affect the establishment of audit companies.

On average, the surveyed auditors perform from 1 to 35 audits per year; 31% perform 1 to 5 audits, 38% doing from 6 to 12 audits, 23% 13 to 19 audits, and only 8% performing 20 to 35 audits. It should be noted that as many as 75% of auditors with at least a 5-year experience perform more than 5 audits per year. Thus, it can be assumed that the greater the work experience of the auditor the larger the annual number of performed audits.

The research was aimed at finding out whether the auditors evaluate the audit risk

when they do the auditing, because any research object loses its sense if its essence is not perceived and thus is rejected as unnecessary. In order to recognize the auditor's view of the audit risk, the research examined 1) whether the respondent finds it important to evaluate the audit risk; 2) what audit risk components are evaluated in auditing; and 3) the structure of the employed audit risk model. All the auditors who took part in the research recognised the importance of audit risk and evaluated it separately during each audit. Since relevant audit planning and a prepared plan can reduce the occurrence of the audit risk, 54% of the surveyed auditors compiled an audit plan before auditing, 38% compiled the plan now and then, and 8% of the respondents made no plan at all. Moreover, as many as 85% of the surveyed auditors had designed their own audit risk evaluation methods, such as self-compiled questionnaires, audit tests, and procedures. Most of the respondents (77%) found that an acceptable audit risk level is less than 5%, whereas 23% of the auditors thought that it could be up to 10%. It should be noted that the acceptable audit risk level of up to 10% was pointed out by auditors whose experience in auditing was less than 6 years as well as by 18% of experienced auditors, whereas 82% of auditors with work experience exceeding 5 years set an acceptable audit risk level under 5% for each audit. Interestingly, one of the auditors, who indicated that the acceptable audit risk level should be below 5%, has emphasised that the acceptable audit risk level depends on the characteristics of the audited company as well as on other circumstances and therefore it is difficult to fix a general rate.

The respondents evaluated the audit risk differently: 46% of them declared that they performed a qualitative evaluation of the audit risk (large, small, or average), 31% perfor-

med a qualitative and quantitative evaluation, and 23% performed only quantitative evaluation (30%, 50%). The qualitative evaluation of the audit risk was emphasised by 1) 42% of auditors with more than 5 years of experience in auditing, 2) 31% of auditors who did more than 5 audits per year, and 3) 40% of auditors who had set an acceptable audit risk level below 5%. Whereas the quantitative evaluation of the audit risk was approved by 1) 25% of auditors with more than 5 years of experience in auditing, 2) 15% of auditors who did more than 5 audits per year, and 3) 30% of auditors who had set an acceptable audit risk level below 5%. This means that the auditors evaluate the audit risk in the manner they find acceptable. However, the qualitative audit risk evaluation method is more popular among practising auditors.

The next step of the research dealt with the employment of the classical risk model in auditing. The survey results were analysed to identify the audit risk components that the auditors evaluate in auditing financial accountability, and to look into the structure of the employed audit risk model. In the classical model, the audit risk is expressed as a product of inherent, control, and detection risks. Of all the respondents, 54% claimed that they pursued this audit risk model in their auditing, implying that more than 50% of the auditors followed the national audit standards that regulate the evaluation of those audit risk components; 42% of the respondents did that occasionally, whereas 4% did not employ the classical audit risk model in auditing. It should be noted that 23% of the auditors emphasised the theoretical rather than practical importance of this audit risk model by claiming that "it is hard to be applied in practice", whereas 77% of the auditors distributed as follows: 31% claimed that the classical audit risk model could be

always applied in practice, while 46% thought that it could not be always applied.

Analysis of the study results has shown that the detection risk represents the most important audit risk component: as many as 69% of the auditors considered this audit risk component to be very important. The other two classical audit risk model components – the inherent and control risks – were considered important by most of the auditors, i.e. 77 and 69% respectively (see Fig. 1).

As the audit risk components may be evaluated either individually or in relation to each other, the survey has shown that 46% of the auditors evaluated each component separately, 38% did that occasionally, and only 16% evaluated the components specifically in relation to the others and stressed that they performed a joint evaluation of the three audit risk components. Furthermore, the auditors that claimed they occasionally evaluated the classical audit risk model components separately from the others fell into the following groups: 20% undertook joint evaluation of the inherent and control risks, 20% evaluated control and detection risks, whereas 60% took all the components together. Therefore the study results show a tendency of the audit risk components to be evaluated by the auditors either disjointly or in relation to each other.

The survey was aimed at finding out the factors taken into account when evaluating the components of each audit risk model. Analysis of the inherent risk evaluation shows that the auditor's approach to the inherent risk factors plays an important role. The questionnaire presented six groups of corporate customer inherent risk factors: Group I – external factors, Group II – business characteristics, Group III – management structure, Group IV – management characteristics, Group V – accounting characteristics, and Group VI – relations

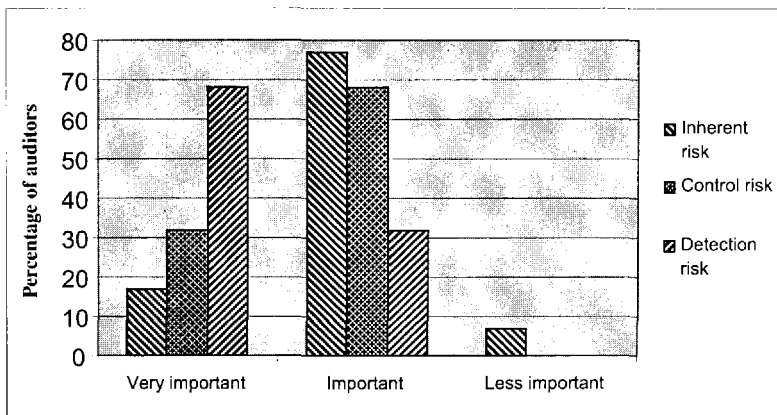


Fig. 1. Evaluation of the importance of the classical audit risk model components

with audit. Thus, different auditors give a different value to individual factors of inherent risk.

The most important of the *corporate customer external* factors are the economic and political-legal conditions; as many as 92 respondents considered this factor to be very important or important and no auditors found it unimportant (see Fig. 2). Alternations of the legislation are also attributable to important inherent risk factors. The needs of the customers represent the least important factor in this group: 31% of the respondents referred to it as unimportant. Then again, the most important among the *corporate customer business characteristics* include the complexity of technological processes and operation related to parties, which was stressed by 69% of the auditors (see Fig. 2). Over 75% admitted the importance of the corporate customer's business nature, failure, likelihood of bankruptcy, property flow, and likelihood of property plunders. While analysing the employment of high

technologies at the audited enterprise, the position of the auditors was as follows: 46% found this factor very important, 24% considered it important, 15% as less important, and 15% deemed it unimportant.

The factor of the *corporate customer management structure*, i.e. whether the enterprise is managed by a single person or a group of persons, was considered as a very important and significant inherent risk factor by most of the auditors, i.e. 62%, although 15% of the respondents disregarded this factor completely (see Fig. 3).

Since the *corporate customer's management characteristics* can determine the financial accountability of an enterprise, most of the auditors also emphasised the great importance of this factor group (see Fig. 3). Dishonesty of the management, lack of knowledge and experience, frequent removals and changes include the most important risk factors. Over 90% of the auditors that took part in the survey considered them very important or impor-

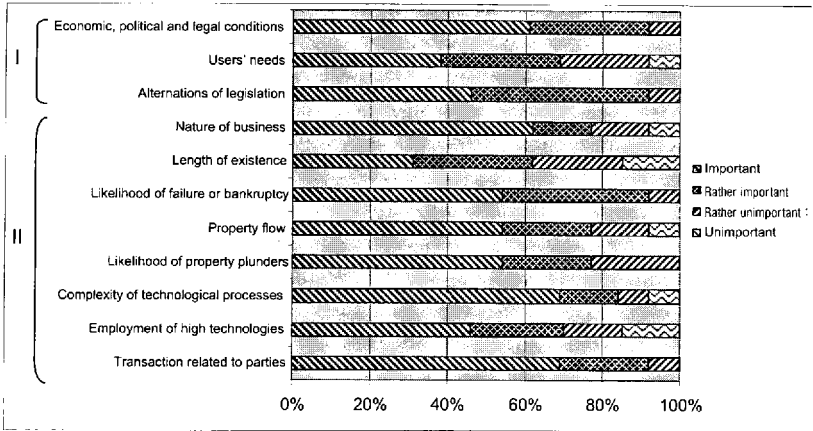


Fig. 2. Evaluation of corporate customer's external factors (I) and business characteristics (II)

tant. Less frequently analysed and less important characteristics of the corporate client's management include their ideas (as many as 38% of the respondents considered this factor as little important or unimportant), aptitude for taking risks (8% found it unimportant). Various accounting characteristics of the corporate customer were also indicated as important inherent risk factors, especially unconventional economic transactions (specified as very

important by 85% of the respondents), complex economic transactions (62%), organisation of accounting (61%) (see Fig. 4). The competence and turnover of corporating customer's accounts staff was attributed to an important inherent risk factor, and only 54% of the auditors agreed to that, while 46 and 31%, respectively, found those factors important. It should be noted that the auditors did not think that a large value expression of the account

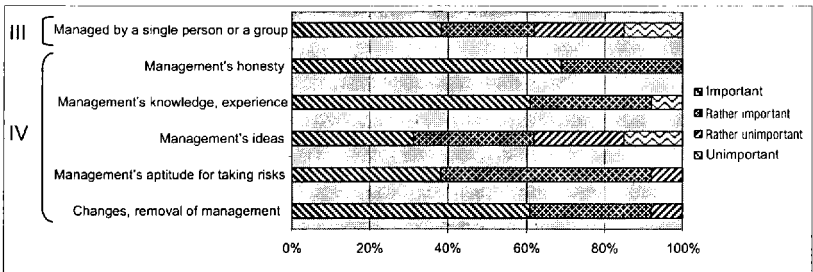


Fig. 3. Evaluation of corporate customer's management structure (III) and management characteristics (IV)

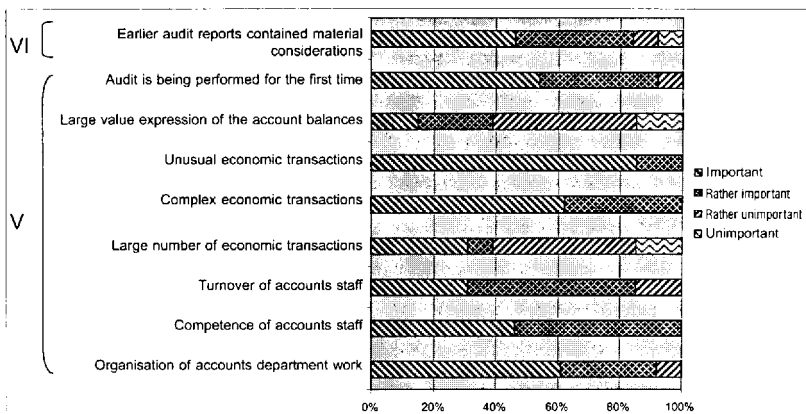


Fig. 4. Evaluation of corporate customer's accounting characteristics (V) and relations with audit (VI)

balances is an important factor: 61% of the auditors assented to that.

Analysis of the importance of the last group of inherent risk factors – *corporate customer's relations with audit* – revealed that the auditors gave quite a great attention to the first audit as well as to the cases when the earlier audit reports, whether made by the auditors themselves or by any other auditor, contained material considerations. Thus, 54% and 46% of the respondents, respectively, specify those factors as very important in the evaluation of the inherent risk. Consequently, most of the inherent risk factors given in the questionnaire were evaluated by the auditors as very important or important and only two factors (a large number of economic transactions and a large value expression of the account balances at the audited enterprise) were indicated as less important.

The results of the research showed that during auditing most of the auditors (92%), evaluated the corporate customer's internal con-

trol system and only 8% specified in their questionnaires that they performed such evaluation occasionally. The main sources employed by the auditors to evaluate the efficiency of the audited enterprise's internal control included interviews with the management (92%), interviews with the accounts staff (77%), and the auditor's actions (70%). It should be noted that most of the auditors use all the above sources to get an understanding of the efficiency of the audited enterprise's internal control. Figure 5 illustrates how the auditors ascertain the aspects of control environment (III), the efficiency of the accounting system (II), and employment of the control procedures (I) at the audited company.

To evaluate the control risk, all the respondents assess the way the accounting is organized, the accounting policy of the corporate customer, and check the arithmetic accuracy of the accounting items and the computer system; 92% of the respondents examine the correctness of justifying the economic transactions

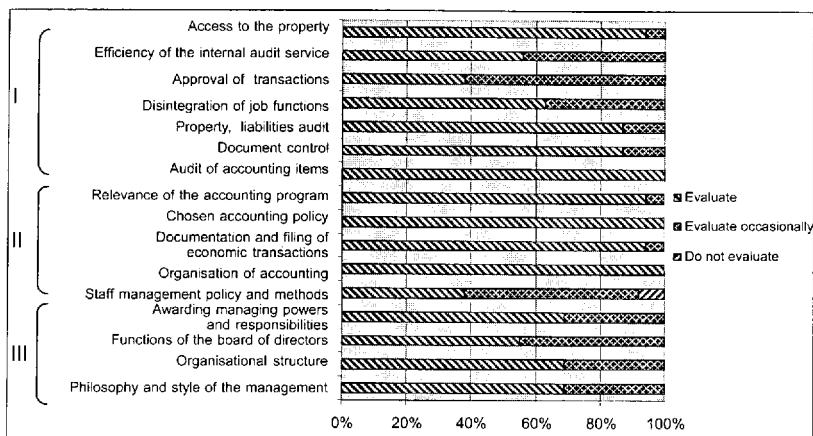


Fig.5. Trends of evaluation of corporate customer's internal control aspect

by accounting documents and filing the latter in a relevant period, the relevance of the computerised accounting program, and the possible access to the property of the audited enterprise. However, most of the respondents only occasionally evaluated the corporate customer's personnel management policy and methods, approval of the transactions, functions of the Board of Directors, and the efficiency of the internal audit service work. Thus, in establishing the control risk at the audited company the auditors mostly assess the efficiency of the accounting system (II) which represents an integral part of the internal control system: more than 90% of the respondents undertook this assessment in each audit, whereas the corporate customer's control environment (III) and control procedures (I) that prevent errors and fraud were given insufficient attention.

Analysis of the perception of the third classical audit risk model component – detection risk – showed that auditors consider the following three

factors as most important in determining the scope of detection risk: 1) practical experience of the auditor (highlighted by all the auditors), 2) the auditor's qualification (92% of auditors found it very important), 3) the adopted audit tests and procedures (69%) (see Fig. 6). Other detection risk factors (personal qualities of the auditor, the obtained evaluation of the inherent and control risks, the identified significance level) were picked by a small number of auditors, i.e. 15, 23, and 23% respectively.

Of the respondents, 85% indicated that they reduced the detection risk by performing extra auditing procedures and collecting more audit evidences. The rest (15%) did the above occasionally. Usually, attempt to collect as many audit evidences as possible is made when the audited enterprise may encounter problems of succession. That may be proven by the circumstances shown in Fig. 7. There is a tendency to accumulate more evidences if there is a probability of financial difficulties

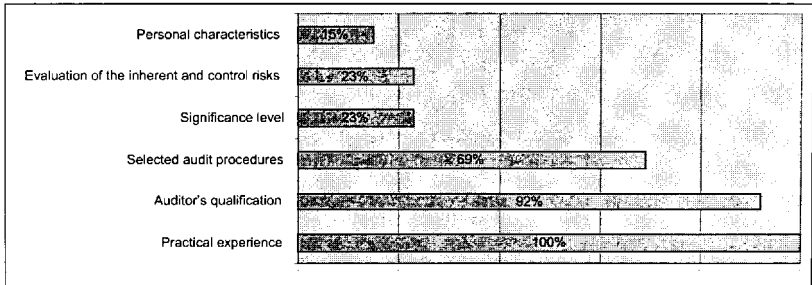


Fig. 6. Factors determining the detection risk

(the importance is indicated by 77% of the auditors), extensive liabilities (70%), if business activities bring about losses several years in succession (62%), there are extensive loans (62%) or low liquidity (46%). The factors that had no direct impact on the success of the audited enterprise were given less attention by the auditors. This applies to the legal status of the corporate customer (public or private limited liability company), the scope of the economic

transactions, and the amount of assets in the financial accounting.

The survey was intended also to find out how the auditors evaluated the risks that are not included into the classical audit risk model. The results have revealed that Lithuanian auditors (70% of the respondents) admit that the independence risk does exist in auditing an enterprise. All the auditors pursue the Law on Audit of the Republic of Lithuania and the

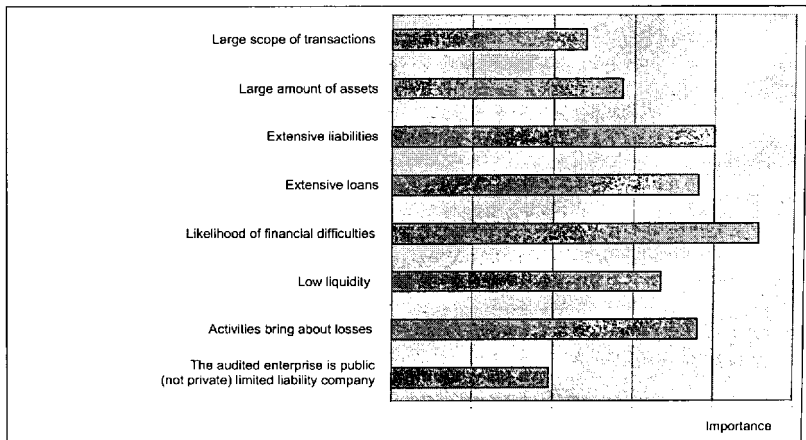


Fig. 7. Evaluation of the factors determining the scope of the detection risk in auditing

Code of Professional Ethics for Auditors and underline that they would not do / have not done audit at an enterprise where they do the book-keeping and make financial accounting. However, some of them state that they would not always refrain / have refrained from auditing a company if: at the enterprise, they are connected by family or other ties (8% of the respondents); they have been previously employed by a corporate customer or client (4%); they have been a shareholder of the corporate customer (8%); they have received a large gift or loan (8%); they are involved in legal transactions with the customer (4%); they feel pressure from the management or the customer (4%).

Furthermore, all the respondent auditors maintain that the business risk of the enterprise should be evaluated when the audit is being performed. Therefore in the course of the audit they highlight the reasons why the corporate customer wants to increase / reduce the business results; whether the enterprise has some "unusual" transactions; whether the enterprise is engaged into some transactions that are "recalled" at the beginning of the next year; whether the enterprise pays its consultants for unusual services. Although such auditors analyse the risks faced by a corporate customer,

only 77% of them accounted for the short-term and long-term objectives of the enterprise and the hindrances that prevent from achieving them as well as the risks faced on a daily basis; 54% revealed the difficulties encountered by the management day to day; 39% analysed how the enterprise forecasts its business results and how the forecasts fit the reality (see Fig. 8). These answers imply that an insufficient consideration is given to revealing the business risk of the enterprise.

As one of the questioned auditors puts it, "to evaluate the audit risk, first it is necessary to evaluate the environment in which the corporate customer performs, the likelihood of business risk (unusual transactions, related parties), and they should be analysed because the financial accountability data are greatly dependent on the competence and experience of the auditor." It can be concluded that when Lithuanian auditors perform the audit of the financial accounting of enterprises they evaluate the audit risk. Although the auditors usually admit the theoretical importance of the classical audit risk model, in the auditing process they carefully analyse the audit risk components and the factors that predetermine their scope. It should be noted that all the three components of the classical audit risk model (the

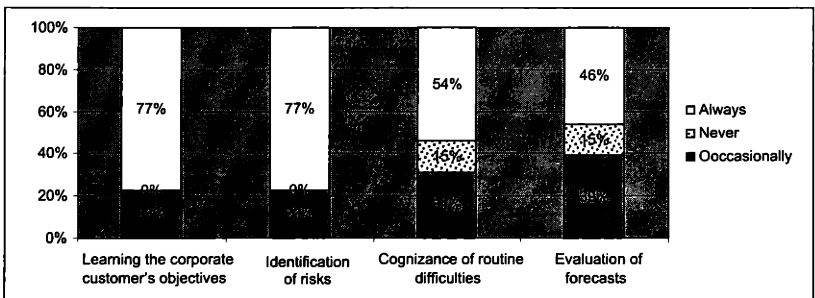


Fig. 8. Auditor's allowance for the factors determining the business risk of a corporate customer

inherent, control, and detection risks) are given sufficient attention, whereas the auditor independence risk, the business risks of the corporate customer, and the factors on which their occurrence scope depends should be given more consideration. Thus, the present research has revealed that Lithuanian auditors employ an audit risk model that does not conform to any audit risk model described above.

Premises for developing an improved audit risk model

Following the investigation of the audit risk evaluation performed by Lithuanian auditors and considering the advantages and disadvantages of the audit risk models described in the literature, we propose to improve the audit risk model. The proposed audit risk model (Fig. 9) emphasises that the audit risk is preconditioned by two main factors which are the actions of the corporate customer and the actions of the auditor (the audit company). The corporate customer's risk depends on its business, the inherent and control risks. The risk related to the actions of the auditor (the audit company) is understood as a combination of the

detection and independence risks, since a correct opinion on the financial accounting of a corporate customer may be only provided by a competent and independent auditor.

The structural picture of the model fails to reflect the essence of the model in full, therefore Table 2 presents its dynamic view. Such model expression demonstrates that the audit risk should undergo evaluation at various stages of the auditing process and at different levels of occurrence. At each stage of audit and each level of audit risk, a comparison of the acceptable and the achievable audit risk levels should be made. On reaching an acceptable audit risk level the auditor can proceed with the auditing activities. Should the acceptable audit risk level at a specific audit stage and / or level of occurrence be unachievable, the auditor should either turn down the audit or perform an extra number of audit procedures.

At the stage of *getting to know the customer* the preliminary acceptable and the achievable audit risk levels are compared at the level of financial accounting. At the level of account balances and economic transactions 1) during *the auditing process*, the auditor must weigh up the information on the customer, i.e. identify

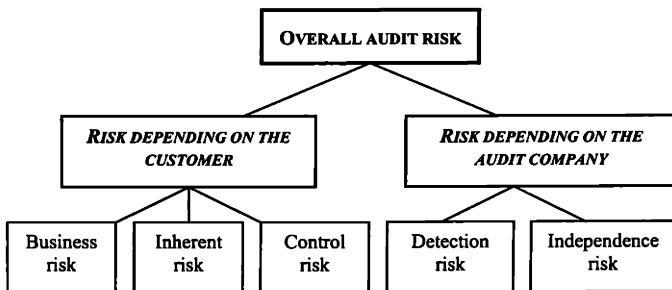


Fig. 9. The proposed audit risk model

Table 2. The proposed audit risk model

AUDITOR'S ACTIONS	AUDIT STAGES				
	Client acceptance/retention	Audit planning	Control testing	Substantive tests	Opinion formulation
Collection of proofs	Preliminary information on business	Detailed information on business	Efficiency of control	Independence of material facts	Total information held by the auditor on the client
Risk evaluation at the financial accountability level	AR ₁ * ~AR ₁	Na	Na	Na	AR ₅ * ~AR ₅
Risk evaluation at the account balance and economic transaction level	Na	AR ₂ * ~AR ₂ (IR; BR; NR)	AR ₃ * ~AR ₃ (CR; NR)	AR ₄ * ~AR ₄ (DR; NR)	Na
Decision making	Accept/reject	Audit approach	Confidence in control	Conclusions by important facts	Auditor's opinion

NB: AR: achievable audit risk level, AR*: acceptable audit risk level, DR: detection risk, CR: control risk, IR: inherent risk, BR: customer's business risk, NR: auditor's independence risk.

Source: compiled by the authors after ABREMA (1996).

the customer's business and inherent risks and eliminate the factors that may affect their independence; 2) during *the investigation of the corporate customer's internal control system*, the control risk and the auditor's independence risk should be defined; 3) at the stage of *substantive tests*, evaluation of the detection and independence risks should be performed. Here the auditor has to determine what set of proofs is required, what procedures are to be applied and when, what amount of information should be checked to minimise the detection risk. Thus, at each stage the audit risk is evaluated by employing specific audit procedures, their scope depending on the audit risk evaluation obtained at an earlier stage of audit. At the *stage of framing the opinion*, before the audit conclusion is made, a final evaluation of the acceptable and the achieved audit risk levels of material misstatement risk in the financial accounting is performed with respect to component evaluations obtained at earlier sta-

ges of the audit process. Since the audit risk components are dependent on each other and any disregard of this interrelation can affect the scope of the audit risk, the audit risk model will always fail to produce the desired results if the components are not evaluated in relation to each other. Information on one of the components must be weighed up to ensure a proper evaluation of the component together with other risks.

The audit risk model proposed by the authors makes it possible to evaluate the audit risk components, i.e. the audit risk structure, and reveals the consistency of audit risk evaluation in auditing, i.e. provides a dynamic picture of the audit risk.

Conclusions

A theoretical and practical research of the audit risk models brought to the following conclusions:

1. The classical audit risk model, the audit risk model that is most frequently analysed in the literature, integrates the inherent, control, and detection risks. The other audit risk models addressed in the paper (expanded, ABREMA, V. Beatie, S. Fearnley and R. Brandt, risk-based audit, and the model proposed by the author) are coupled with the classical audit risk model and include the key features thereof. It is noteworthy that the audit risk model proposed by V. Beatie, S. Fearnley, and R. Brandt clearly explains what can determine the scope of the audit risk, i.e. the actions of the audited enterprise and the auditor (the audit company). It also takes notice of the limitation of the auditor's independence in auditing. The risk-based audit model concentrates on the corporate customer's business risk rather than on the audit risk alone.

2. All the audit risk models covered by the paper 1) provide a general understanding of the audit risk and its components but do not offer a method for estimation of the risks; 2) identify each audit risk component but do not reflect their interrelation; 3) declare that neither of the audit risk components can be equal to zero as that would imply that no audit risk exists in a particular case; 4) enable to express one audit risk component through the others and to define the scope of the auditing tests and procedures as well as the level of significance; 5) do not make it obvious that the audit risk and each of its components must be re-evaluated not only on the accountability, account balance, and economic transaction

level but also at each stage of the auditing process (except the ABREMA model); 6) do not reflect the other risks that are not included into a certain audit risk model.

3. The audit risk analysis revealed that Lithuanian auditors 1) apply the audit risk models only for the purpose of understanding the audit risk and audit planning, 2) assess the audit risk components covered by the classical audit risk model (inherent, control, and detection risks), as well as the auditor's independence risk and the corporate client business risk, and 3) approve the audit risk model structure proposed by the authors.

4. The audit risk model proposed by the authors, in both structural and dynamic perspective, embraces the practice of Lithuanian auditors in assessing the audit risk and emphasises the advantages of the audit risk models described in the literature as well as eliminates their faults: 1) explicitly shows the factors that may influence its scope, i.e. the actions of the corporate customer and the audit company; 2) the audit risk results not only from the inherent, control and detection risks but also from the auditor's independence risk and the corporate customer's risk, while the corporate customer's risk depends on its business inherent and control risks. At the same time the risk resulting from the actions of the audit company is understood as a combination of the detection and independence risks, since a correct opinion on the financial reporting of a corporate customer can be presented only by a qualified and independent auditor.

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AUDITO RIZIKOS MODELIŲ NAUDOJIMO GALIMYBĖS

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Santrauka

Darbe išanalizuoti literatūroje pateikiami skirtingi audito rizikos modeliai, išskirti jų pranašumai ir trūkumai. Tačiau universalus audito rizikos modelio, kuris palengvintų auditoriaus darbą įvertinant audito riziką, mokslo darbuose nepateikiama. Atlikus tyrimą, Lietuvos auditoriai mano apie audito riziką, ir įvertinus literatūroje pateikiamus audito rizikos modelius, siūloma patobulinti audito rizikos modelį.

Klasikinis audito rizikos modelis – dažniausiai literatūroje analizuojamas audito rizikos modelis susijęs įgimta, kontrolės ir aptikimo rizikas. Kiti darbe analizuoti audito rizikos modeliai (išplėstasis, ABREMA, V. Beatie, S. Fearnley ir R. Brandt, rizika pagrįsto audito) siejami su klasikiniu audito rizikos modeliu ir apima esminius jo bruožus. Svarbu, kad V. Beatie, S. Fearnley ir R. Brandt siūlomame audito rizikos modelyje aiškiai parodoma, kas gali nulemti audito rizikos dydį, t. y. audituojamos įmonės ir auditoriaus (audito įmonės) veiksmai. Taip pat jame dėmesys kreipiamas į auditoriaus nepriklausomybės ribotumą atliekant auditą. Rizika pagrįsto audito ri-

zikos modelis sutelktas ne vien į audito riziką, bet ir į įmonės-kliento verslo riziką.

Visi darbe aptarti audito rizikos modeliai 1) pateikia bendrą supratimą apie audito riziką ir jos komponentus, tačiau nepateikia būdo šias rizikas apskaičiuoti, 2) išskiria kiekvieną audito rizikos komponentą, tačiau nerodo komponentų priklausomybės, 3) nurodo, kad nė vienas audito rizikos komponentas negali būti lygus nuliui, nes tai reikštų, kad analizuojamam atveju audito rizikos nėra, 4) leidžia išreikšti vieną audito rizikos komponentą per kitus ir nustatyti audito testų, procedūrų apimtį, reikšmingumo lygį, 5) neatskleidžia, kad audito riziką ir kiekvieną jos komponentą reikia (per)įvertinti ne tik finansinės atskaitomybės, sąskaitų likučių ir ūkinių operacijų lygmeniu, bet kiekvieną audito stadiją (išskyrus ABREMA modelį), 6) neparodo kitų rizikų, nes jos neįtrauktos į tam tikrą audito rizikos modelį.

Audito rizikos tyrimas atskleidė, kad Lietuvos auditoriai 1) taiko audito rizikos modelius tik audito rizikos supratimo ir audito planavimo tikslais,

2) įvertina ne tik klasikinio audito rizikos modelio analizuojamus audito rizikos komponentus (įgimtą, kontrolės ir aptikimo rizikas), bet ir auditoriaus nepriklausomybės riziką bei įmonės-kliento verslo riziką, 3) pritaria autorių siūlomo audito rizikos modelio sandarai.

Autorių siūlomas patobulintas audito rizikos modelis (pateikiamas ir struktūrinis, ir dinaminis vaizdas), sujungia Lietuvos auditorių praktiką įvertinant audito riziką, atskleidžia literatūroje pateikiamų audito rizikos modelių pranašumus ir panaikina trūkumus: 1) aiškiai išskiriama, kas gali lemti jos dydį, t. y. įmonės-kliento ir audito įmonės veiksmai, 2) audito

riziką lemia ne tik įgimta, kontrolės bei aptikimo rizikos, bet ir auditoriaus nepriklausomybės rizika, įmonės-kliento verslo rizika. Dėl to įmonės-kliento rizika labai susijusi su jos verslo, įgimta ir kontrolės rizika. O rizika dėl audito įmonės veiksmų suprantama kaip aptikimo ir nepriklausomybės rizikų derinys, nes pateikti teisingą nuomonę dėl įmonės-kliento finansinės atskaitomybės gali tik kompetentingas ir nepriklausomas auditorius. Šis modelis identifikuoja ne tik audito rizikos komponentus, t. y. audito rizikos struktūrą, bet ir atskleidžia audito rizikos vertinimo nuoseklumą vykdant auditą, t. y. pateikiamas dinaminis audito rizikos vaizdas.

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