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МАРКЕТИНГ МІРКУВАНЬ ДЛЯ БРЕНД-СПІЛЬНОТ

Більшість споживачів витрачають значну частину свого вільного часу на пошук інформації в Інтернеті про бренди, перш ніж приймати рішення про покупку. Інтернет є основним фактором, який призвів до значного збільшення часу, відведеного споживачами для пошуку і порівняння інформації про марки, як крок, що передує рішенню про покупку, а також одним з найбільш важливих факторів, що впливає на взаємодію між брендом і споживачем.

Хоча загальна тенденція така, що спільноти стають більш активними і більш залученими до вибору марки, відповіді споживача на їх повідомлення, очевидно, залежать від культурних, соціальних і економічних чинників. Робота має на меті з'ясувати, що означає бренд-спільнота, і як виявилося, – якщо вони дійсно були побудовані з нуля, або вже існували в латентному стані, і лише чекали на визнання – то які характеристики успішних спільнот, які з цілей брендів можуть бути досягнуті за допомогою цих груп, яка роль соціальних медіа в розвитку цих спільнот, якого типу елементи, ймовірно, можуть виникнути всередині онлайнових співтовариств і яка їхня частка, які є дослідницькі методики, що можуть надати підтримку компаніям в моніторингу цих груп.

Ключові слова: цифрова стратегія, соціальні медіа, інтернет-спільноти бренду.

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МАРКЕТИНГ СООБРАЖЕНИЙ ДЛЯ БРЕНД-СООБЩЕСТВ

Большинство потребителей тратят значительную часть своего свободного времени на поиск информации в Интернете о брендах, прежде чем принимать решение о покупке. Интернет является основным фактором, который привел к значительному увеличению времени, отведенного потребителями для поиска и сравнения информации о марках, как шаг, предшествующий решению о покупке, а также один из самых важных факторов, влияющих на взаимодействие между брендом и потребителем.

Хотя общая тенденция такова, что сообщества становятся более активными и более вовлеченными к выбору марки, ответы потребителя на их сообщения, очевидно, зависят от культурных, социальных и экономических факторов. Работа имеет целью выяснить, что означает бренд-сообщество, и как оказалось, – если они действительно были построены с нуля, или уже существовали в латентном состоянии, и только ждали признания – то какие характеристики успешных сообществ, которые из целей брендов могут быть достигнуты с помощью этих групп, какова роль социальных медиа в развитии этих сообществ, какого типа элементы, вероятно, могут возникнуть внутри онлайновых сообществ и какова их доля, какие существуют исследовательские методики, которые могут оказать поддержку компаниям в мониторинге этих групп.

Ключевые слова: цифровая стратегия, социальные медиа, интернет-сообщества бренда.

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SAMPLING IN EXTERNAL AUDIT – THE MONETARY UNIT SAMPLING METHOD

This article approaches the general issue of diminishing the evidence investigation space in audit activities, by means of sampling techniques, given that in the instance of a significant data volume an exhaustive examination of the assessed population is not possible and/or effective. The general perspective of the presentation involves dealing with sampling risk, in essence, the risk that a selected sample may not be representative for the overall population, in correlation with the audit risk model and with the component parts of this model (inherent risk, control risk and non detection risk) and highlights the inter-conditionings between these two models.

Key words: statistical selection models, non-statistical selection models, population, sampling unit, sampling risk, non- sampling.

Introduction

Auditors need to collect competent, relevant and reasonable audit evidence, in order to ground their opinion. In the instance of a significant data volume, it is not possible or effective to exhaustively examine the population to be assessed. In such instances, the investigation space is reduced through sampling techniques. Sampling in audit allows auditors to enforce audit procedures only on the items selected in the sample and to extend the resulting conclusion to the overall population of the economic operations under consideration.

Tests are conducted by examining documents and implementing audit procedures which would lead to conclusions drafting based on them. The population making up a category of economic operations may be represented by assets or invoices lists, centralised situations of the creditor or debtor and other similar ones.

The size of the sample depends on the sampling risk accepted by the auditor, the selection of adequate methods, in relation to the actual situation, representing a decision which contributes to sampling risk minimization; the selection method is chosen based on the auditor's professional judgement.

The article introduces an overall logical scheme of the selection process, based on which a succinct review is made – but dealing with all theoretical and practical interest items – the two important classes of selection methods: statistical methods (various types of selection: MUS, systematic, stratified, multi- level, random selection), as well as non statistical methods (judgemental selection, block selection).

The statistical selection methods use the probability theory and statistical formula to set the sample size, including to consider and to assess the sampling risk, making it possible to obtain conclusions valid for the overall population.

The non statistical selection methods offer rough results, which may not be extrapolated so as to be representative for the overall population, due to the selection process nature, which does not offer each element of the population equal selection chance.

The article further completes the theoretical, formal information (procedures, computation formula, selection of values for parameters) with specific calculation examples, analysed in detail for the MUS (Monetary Unit Sampling) method.

The final part of the article approaches two issues which close the series of options and procedures dealt with in the first two sections, respectively the results validation and errors interpretation and processing in the sampling process.

The article closes with a generic synthetic conclusions chapter (in the guise of recommendations), which define the main formal-procedural horizon and coordinates, which are decision grounding for the auditor involved in audit missions using sampling techniques.

Population, sample, sampling, sampling risk

In audit, the investigated and assessed population (records, lists, inventories etc.) as a rule, are very large in size, which makes an exhaustive inventory or enumeration of all values at the level of the population devoid of practical interest or even impossible.

A data sample is, in statistics and quantitative research methodology, a set of data collected and/or selected from a statistical population, through a defined procedure [1].

The sample is, as a rule, a sub-set reduced in size, easy to manage, of the source population. The samples are selected according to certain criteria and/or rules, while statistical processing is made on samples, so that inferences or extrapolations can be made, starting from a population sample. If the sample was adequately selected, then the conclusions resulting from the tests and processing of such (valid, obviously, within the sample) can be extended to the overall population, practically becoming the conclusions of the audit.

Sampling involves several stages[1]:

(1) Definition of the target population;

(2) Provision of a sampling framework, a set of items or events which can be measured;

(3) Provision of a sampling method to select the items or events within the sample;

(4) Setting the sample size;

(5) Implementing the sampling plan;

(6) Data sampling and collection;

(7) Data which can be selected.

The individual items of which a population is made are called sampling units. Sampling units can be physical items (for example: taking-over notes, individual store or account files, payment orders, receipts, invoices, contracts) or monetary units etc. The items of a population shall have equal chances to be selected in the sample to be tested.

The selected sample shall be representative and contain a sufficient number of items in order to make it possible to draft realistic conclusions on the overall audited economic operations categories. In this respect, auditors shall consider the characteristics of component items of the population from which the sample is extracted, so that they are as level as possible.

In order that the population of an economic operations category may candidate to the selection of a sample from its own set, it needs to fulfil the following two conditions (cumulatively):

a) to be adequate to the objective of the financial audit mission;

b) to be exhaustive, which involves including all relevant items pertaining to the period for which the selection is made in the respective category of economic operations.

Auditors need to consider sampling risk, the acceptable errors volume and the degree to which errors are anticipated when setting the sample size.

Sampling risk refers to the possibility that a selected sample be not representative for the overall population and it is correlated with the audit risk model and its component parts (inherent risk, control risk and non detection risk).

The size of the sample is influenced by the sample risk accepted by the auditor. Choosing adequate selection methods contributes to the reduction of the sampling risk. In case the sampling risk is overestimated, this may lead to the conduct of a too large number of detailed tests, and when it is underestimated, this may lead to the establishment of an incorrect audit opinion, due to the selection of a sample which is not representative.

Consequently, the sampling risk involves the risk that when applying an audit procedure on a sample, the conclusion of the auditor be different from the conclusion that would have been reached in case the overall population had been subject to the same audit procedure.

Sampling risk may lead to two error generating types of conclusions:

I. in the instance of a controls test, the conclusion according to which controls are more effective than they actually are, and in the instance of the detail tests, the conclusion that there is no significant deviation, when this deviation exists in fact.

II. In the instance of a controls test, the conclusion according to which controls are less effective than they actually are, and in the instance of a detail test, the conclusion that there exists a significant distortion, when this distortion does not exist in fact.

Sampling risk is a component part of non detection risk. Another element of the non detection risk is the non sampling risk, respectively the possibility that auditors reach an erroneous conclusion from any reason which is not related to the sample size (for example, auditors do not recognize an error because of having used inadequate audit procedures or may erroneously interpret the evidence, most of audit evidence being more exhaustive than conclusive).

Sample selection methods

The selection of the items to be part of the sample is conducted through statistical methods or through non statistical ones. Choosing the selection method, a process illustrated in Figure 1, is done based on the auditors' professional judgement.

The decision on whether a statistical or a non statistical method should be used to select the sample is up to auditors' professional judgement. Irrespective of the selection method chosen, auditors need to consider that the overall population pertaining to the economic operations categories to be tested should fulfil the following criteria:

a) Be characteristic to the objective pursued;

b) Be exhaustive, that is include all relevant items pertaining to the audited period.

When conducting sampling, auditors need to assess the risk level, the most probable error, the precision, and most important of all, materiality. Furthermore, they need to consider the nature of the population to be tested and to establish the adequate sampling methods.

Auditors need to also establish the highest value transactions within the population and decide whether these transactions can be audited separately.

To reduce sampling risk, to simplify the selection of the items in the sample, to level population, but also to make a more detailed analysis of the population of an economic operations category, auditors may opt for stratification and division in distinct sub-categories, based on the categories which define them (for example, division of the category "revenue" in sub-categories, according to their respective types: fiscal revenue, non fiscal revenue, equity revenues etc.).

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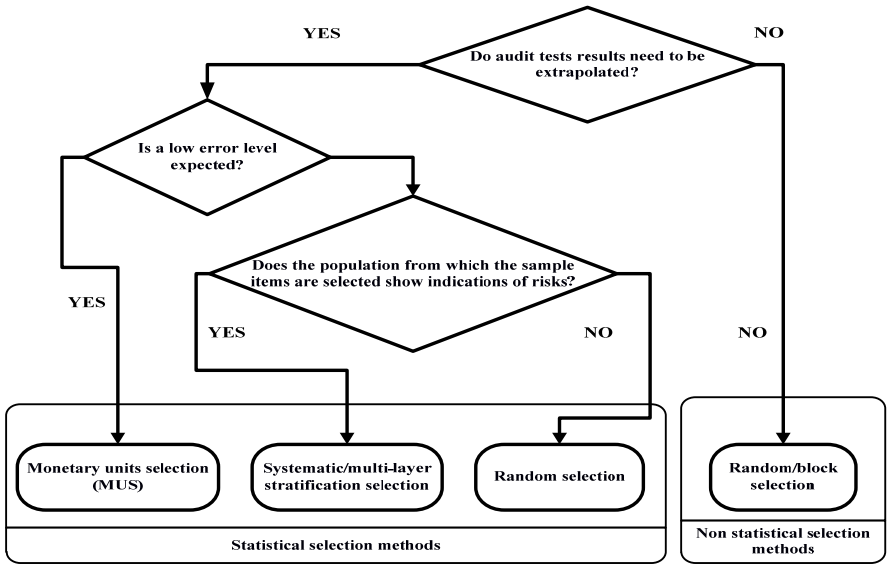

Fig. 1. Choosing the method to select the items which shall make the sample

Source: [9]

2.1 Statistical selection methods

The statistical selection methods use probabilities theory and statistical formula to establish sampling size, including for the assessment and consideration of sampling risk, making it possible to reach valid conclusions for the overall population.

The sampling statistical selection methods are as follows: (a) the monetary units selection (MUS); (b) the systematic selection; (c) the stratified selection; (d) the multi-stage selection, and (e) the random selection.

(a) Selection based on monetary units (MUS). MUS is a method to select the items which are to be tested.

(b) Systematic selection. This is a method in which the number of sampling units (items) in the population is divided by the sample size, in order to obtain a sampling interval, and after setting a randomly generated starting point, each N-th unit is selected. Systematic selection is applied when it is necessary that the sample spreads across the population, while values do not fluctuate much.

(c) Stratified selection. This is a method in which selection is based on the population being sub-divided into homogeneous groups. Groups may be set according to various criteria: transaction sizes (high or low values) or audit risk (high or low risk). After the population has been divided into groups, simple random sampling may be used to extract items from each group.

(d) Multi-stage selection. This selection method is used as a general rule when economic operations are unfold in different locations, which are too numerous to be exhaustively visited, while the items to be tested are found in these locations.

(e) Random selection. The selection supposes computation of the sample size by using a random number generator.

Non statistical selection methods

Non statistical selection methods offer rough results, which cannot be extrapolated to be representative for the population in its entirety, given the selection process nature, which does not offer each item in the population equal selection chances. Here are the non statistical selection methods: (a) judgemental selection; (b) block selection.

Monetary Units Selection Method (MUS)

MUS Selection Procedure

MUS is a method to select the items to be tested in relation to their monetary value, in which size, selection and assessment of the sample result in a conclusion expressed in monetary values. A benefit of this selection method is that auditor's effort is directed towards higher value items, since there is a higher probability that they be selected and may lead to smaller sample sizes.

The decision to choose this method is based on auditors' expectation that the population contains a reduced error level, while the method may be successfully used only if this assumption is valid.

The issues which the auditor needs to establish when sampling are: population size, confidence level, margin of error, precision, high values and specific items, extrapolated errors higher ceiling, error percent.

Example: *Let's assume that we have a population made of 6 items, of which 2 items need to be selected. The values of the 6 items are 60, 220, 340, 470, 620 and 1030. In the instance random sampling is used to select the 2 items, all items have equal selection chances. On the other hand, in case the MUS method is used, then the overall value of the 6 items shall be 2740 and to select the 2 items we need to calculate de sampling interval as follows: 2740/2 =1370. This means that the population will be divided into two cells of 1370 monetary units each, out of which 1 item shall be selected. In such cases, the chances that a 1030 monetary units item be selected are 10 times higher than that of 60 units item. Thus MUS has a predilection for high value monetary units.*

(a) Population size – is the value of the overall data set from which the sample shall be selected and on which the auditor wants to conclude.

(b) Confidence coefficient – the coefficient values were calculated based on the probability theory, the values of which are:

0,7	2	3

The coefficients of the confidence factor determine the size of the sample and implicitly the spread of the detail tests, so as to provide a 95% reasonable assurance that financial statements are free of significant deviations. The risk coefficient is selected by intersecting the inherent risk set level and the control risk in the risk matrix (Table 1).

Table 1. **Selecting the risk factor from the risk matrix**

		CONTROL RISK		
		HIGH	**AVERAGE**	**LOW**
INHERENT risk	**HIGH**	Risk factor **3**	Risk factor **3**	Risk factor **2**
	AVERAGE	Risk factor **3**	Risk factor **2**	Risk factor **0,7**
	LOW	Risk factor **2**	Risk factor **0,7**	Risk factor **0,7**

Source: The project – Financial and Audit Manual, The Romanian Court of Accounts

A step further is the identification of the relation among the level of confidence in the internal control system, the confidence factor and the way this impacts on the sample size (Table 2).

Table 2. **Relationships between the level of confidence in internal control systems, the confidence factor and the sample size**

Level of confidence in the internal control system	***HIGH***	***AVERAGE***	***LOW***
Confidence factor	**0,7**	**2**	**3**
The way in which the sample size is impacted and implicitly detail tests spread	**Low** Size and spread	**Average** Size and spread	**High** Size and spread

Source: The project – Financial and Audit Manual, The Romanian Court of Accounts

The error initially estimated in the population will be based on the previous experience and will lead to the establishment of the sample size in relation to the expected error level: low or high and a corresponding percent of 10% or 20%, according to this formula:

$$Ees = Pr\ sem \times (10 \text{ or } 20)\ \% \quad (1)$$

where: Ees – assessed error, and Pr sem – materiality threshold.

After detail tests have been performed, the identified errors shall be extrapolated and compared with the initially estimated error level and with the materiality threshold, to conclude on the overall population.

Precision is the accuracy with which auditors plan to attain the estimated error. This is, as a general rule, set at a value between 80% and 90% of the balance between the materiality threshold and the estimated error. Precision grants obtaining sufficient evidence to support audit opinion. In case the plan was really efficient, the higher errors ceilings shall be equal to the materiality threshold.

Precision planning is meant to provide a buffer to allow for a small manoeuvre margin, in case unforeseen errors are identified.

Precision value is calculated based on the following formula:

$$Vpr = (Pr\ sem - Ees) \times (80 \text{ or } 90)\ \%\ prec \quad (2)$$

where: Vpr – precision as a value; Pr sem – materiality threshold; Ees – estimated error; % prec – precision percent.

High values and specific items. Auditors may decide to 100% test the items exceeding a certain monetary value. For example, auditors may decide to test all the items exceeding the value of 100,000 lei in the above mentioned example. Similarly, based on the professional judgement, auditors may consider that certain items, given their nature, are prone to specific risks. These are called specific items. For example, in case auditors consider that the controls pertaining to a certain category of economic operations or existing in a certain department are ineffective, they may treat them as specific items and decide to verify them in their entirety.

In order to level the population from which the sample will be extracted, all high value and specific items are separated from the population they belong to, in order to be tested 100%.

Given the fact that these items are separated from the remaining population from which the sample is to be extracted, but also the fact that all of them are to be examined (100%), the possibly identified errors may not be extrapolated to the population they come from, because it will no longer contains such errors, these shall only be added to the errors found in the sample.

Upper ceiling of extrapolated errors. This is the maximum possible error estimated in the population, resulting from detail testing of the sample.

In case extrapolated errors exceed the materiality threshold, auditors shall extend the substantive testing in order to check for significant errors and draw a conclusion there upon.

The error rate. The percentage error (% pr) is constant in monetary terms, in relation to an item in the sample.

For example, the value of 11,000 is recorded in the client account receivable "x" in the verification balance, but actually auditors found that the entry should have been 1,100. There results a balance from the overestimation of 11,000 – 1,100 = 9,900 and the error percent (%pr) of the item is 2,000/10,000 = 10%.

Here are the MUS method selection benefits:

1. as a rule, it generates smaller samples than other sampling methods;
2. it does not involve difficulties in expressing a conclusion in monetary terms;
3. it is not necessary to conduct a previous monetary unit stratification, given that it is going to be conducted automatically, thus avoiding issues related to establishing the optimal size of the strata;
4. it is relatively easy to apply, as compared to other sampling methods;
5. high value errors detection problem is taken care of, given that high value items have higher chances to be selected in the sample.

Here are the main limitations of the MUS method:

1. the sampling units the values or balances of which are zero have minimum chances to be selected in the sample;
2. the more underestimated an element is, the less chances there are for it to be selected in the sample;
3. it is very difficult to use the MUS method in an environment which does not use IT;
4. MUS sampling is more time consuming than other samplingbmethods, given that normally sampling units exist in a much higher number than physical items (invoices, payment orders, cheques, contracts etc.).

Here are the steps involved in sample size calculation and sample selection based on the MUS method:

Step 1 – setting the sample size;

Step 2 – selecting the items which will make up the sample and which will be subject to detail testing;

Step 3 – detail testing.

Short descriptions of these procedural steps are given below.

Step 1 – Setting the sample size.

The sample size is calculated using the following formula:

$$Des = (Vpop \times Fi) / Vpr \quad (3)$$

where: Des – sample size; Vpop – population value – represents the value of the overall data set; Fi – confidence factor – is a coefficient calculated based on the theory of probabilities and selected from the risk matrix; Vpr – precision: represents the accuracy with which the auditor plans to attain the estimated error.

Example. Setting the sample size:

- Population value (Vpop) = 400,000,000 lei
- Materiality threshold (Pr sem) = 400,000,000 x 2% = 8,000,000 lei
- Confidence factor (Fî) = 3
- Estimated error (Ees)= 8,000,000 x 10% = 800,000 lei
- Precision value (Vpr) = (8,000,000 – 800,000) x 90% = 7,200,000 x 90% = 6,480,000 lei
- Sample size (Des) = (400,000,000 x 3)/6,480,000 = 185 item cells
- Sample interval (Ies) = 400,000,000/185 = 2,162,162 lei

Step 2 – Selecting the items which will make up the sample and which will be subject to detail testing.

Sample selection is conducted by dividing the overall value of the population by the size of the sample required to obtain a sampling interval (Ies). Thus, the population is divided by the average interval in cells, the component items of which shall have the value of 2,162,162 lei. An item is then selected at random from each cell. In order that this method operates, all high value items, those exceeding the average sampling interval, need to be removed from the population and tested separately – that is 100%.

In the example below (see Figure 2) we have a population with an overall value of 400,000,000 lei. The population is divided by means of the sampling interval (2,162,162) into 185 items cells and one item of each cell is extracted at random to be part of the sample.

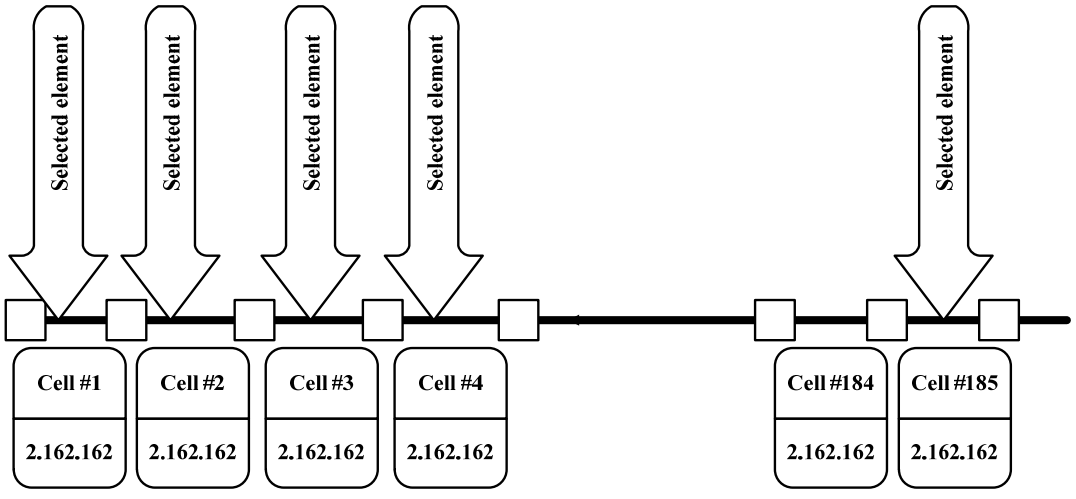

Fig. 2. Selection of the items that shall make up the sample and which shall be detail tested

Source: [9]

To gain additional assurance, the auditor shall always see to it that the minimum sample size is not under 30 items and to extend by 25% the samples exceeding this dimension.

Step 3 – Detail testing.

Auditors shall detail test the items selected in the sample, in order to make sure that recordings of certain operations have not been omitted (exhaustiveness); fictitious or double recordings have not been included (emergence); correct amounts have been allotted to the operations or recordings (assessment and allotment); the operations are reflected in recordings in the corresponding period (closing date); the operations are recorded in the correct accounts and if applicable, in the corresponding analytical accounts (classification); all calculations are correct (accuracy); the totals of the analytical balances are correctly taken over in the synthetic account and are reflected in the totals of the accounting record books (classification and understanding degree) and economic operations are in keeping with law and regulations applicable to the economic entity (legality).

Assessment of MUS method selected samples testing results

MUS based sampling is used, as a general rule, in the audits aiming at testing a numerous series of operations, with a low value and, in general, in the instance of homogeneous operations involving a reduced error assessed risk.

MUS sampling method is based on certain monetary units, considered individually. The auditor needs to establish the measure in which each sampled item is erroneous, then to extrapolate the error to the overall sampling interval in the respective transaction category.

Table 3 provides an example of the way this type of error is calculated.

Table 3. **MUS sampling – Extrapolation of the error**

Example. A sample was extracted based on the MUS method meant to test the expenses involved by the operation of entity X. The sampling interval (Ieș) was set at 250,000 lei. The item identified in view of testing is an invoice. When the invoice is examined, it is found that the invoiced amount was exchanged at an incorrect rate of exchange and was recorded in the accounting record book at the value of 2,560 lei instead of 2,650 lei, respectively, underestimated by 90 lei.						
	(a)	(b)	(c)	(d)	(e)	(f)
Item in the sample erroneously recorded	Recorded value	Audited value	Error (a-b)	Misrepresentation (c/a)	Designed error (d x Ieș)	Audited entity adjustment
Invoice 0002	2,560 lei	2,680 lei	- 90 lei	0.035156 %	- 8.789 lei	0 lei
Total	2,560 lei	2,650 lei	- 90 lei	0.035156 %	- 8.789 lei	0 lei
Notes (1). Column (c) calculates the balance between the audited value and the recorded value and it results that this is 2,560 – 2,650 = – 90 lei (UNDERESTIMATION) (2). Column (d) calculated how much it is in percent the error in the recorded value, that is 90/2,560 = 0.035156 (3). Column (e) the error percent is multiplied by the sampling interval (Ieș) 250,000 lei since it is considered that the tested item is representative (it contains a systematic error) and it is supposed that it shall occur again with the same frequency along all the interval and there results the extrapolated error 0.035156 x 250,000 = 8,789 lei.						

Source: The Financial and Audit Manual (working draft), The Romanian Court of Accounts (2015)

Errors interpretation and processing

Errors balancing

In each operation category, auditors compare overestimation and underestimation to obtain the estimated error within the category of operations. Significant overestimations or underestimations may exist, and despite of this the financial statements be correct from a material point of view. Nevertheless, if a high error percent (%) is found, the auditor may review the original assessment of the risk level set in the planning stage. This review may lead to the increase of the risk factor, a situation in which the auditor shall make use of additional testing. Mention shall be made that, in this instance, the auditor may include in the report comments relating tu the high level of error percent (%).

Error limiting

When monetary errors or internal control system deviations are found, it shall be seen whether the errors are limited in character.

As a first investigation option, auditors need to clarify whether certain errors emerge only in special instances. Special instances could include, for example, special types of operations which are authorised by a certain person. If it is certain that a certain type of error occurs only in special instances, then the respective error should not be extrapolated to the overall population from which the sample has been selected, but only the under-population made of the operations conducted in "special instances".

Establishing the materiality of errors and irregularities level.

Auditors shall establish whether there are material errors or irregularities, both at the level of operations categories, and at the level of the overall financial statements. Furthermore, auditors shall assess the impact of possible shortcomings of audit evidence. For example, in case auditors could not obtain audit evidence that would ground the amounts listed in the financial statements or could not follow an audit trail, they shall quantify the impact of these shortcomings in the audit evidence, considering that these limit the audit opinion sphere.

The materiality threshold offers a comparison basis in relation to which auditors should establish the global level of errors or irregularities in financial statements, since they are so material that:

Financial statements do not offer a realistic and reliable image or they are not adequately presented;

the operations recorded in the financial statements of the entities do not comply with the intentions of the Parliament or with those of the authorities governing them.

When auditors compare the global error with the level of the materiality threshold, they also need to consider quality factors referring to specific circumstances of the audited entity activity.

Establishing the existence of material errors in financial statements.

To assess the level of the errors in financial statements it is necessary that the following requirements are met:

all planned samples have been extracted;

the sample sizes resulted following auditors' reasonable assessment and are based on a full understanding of the audited entity and also on risk assessment;

the assessments have been reviewed all along the audit process, also considering other reasonable information.

Mention shall be made that the error level in the population is made of two parts: (a) the error which auditors find following testing and (b) the non detection margin/percent of the auditor, which may show that the non detected error could be bigger or smaller than the assumed one, as follows:

A higher assurance obtained by the auditor following performance of substantive testing, on the operation in the sample, supposes a higher non detected error level. On the other hand, a higher assurance, obtained following control testing or following analytical procedures enforcement, generates a lower level of undetected error. This is possible because both control testing and analytical procedures provide an assurance level which refers to the overall population.

Auditors may consider a higher level of undetected error for entities prone to risk.

If auditors initially estimated a high level of the error, but finds subsequent to direct substantive testing a lower level, then they shall consider reducing the level of the undetected error level.

Documentation

Auditors shall take down audit tests results for each category of economic operations, including to document the fact that they considered all quality factors when implementing professional judgement.

Conclusions

Choosing the method to select the representative sample depends on auditors' professional judgement and on the aim pursued, on the uniformity of the population and on the risk they are willing to undertake. Furthermore, auditors shall assess the results of the tests on the sample, to clarify with the auditee management the nature of the identified misrepresentations and to decide whether the conclusion reached may be extended to the overall population or it is necessary to extend the sample in order to diminish the sampling risk.

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ВИБІРКА В ЗОВНІШНЬОМУ АУДИТІ – МЕТОД ВИБІРКИ НА БАЗІ ГРОШОВОЇ ОДИНИЦІ

У даній статті розглядає загальне питання зменшення досліджень в аудиторській діяльності, за допомогою техніки вибіркових досліджень, з огляду на те, що в разі, значного обсягу даних, вичерпний аналіз оцінки населення не представляється можливим і / або ефективним. Загальна перспектива презентації говорить про ризик вибірки, по суті, ризик того, що обраний зразок не може бути репрезентативним для населення в цілому, про кореляції з моделлю ризику аудиту, а також про складові частини цієї моделі (властивий ризик, контрольований ризик і ризик не виявлення) і висуває на перший план внутриобумовленість між цими двома моделями.

Ключові слова: статистичні моделі вибору, нестатистичні моделі вибору, населення, одиниця вибірки, ризик вибірки, невиборність.

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ВЫБОРКА ВО ВНЕШНЕМ АУДИТЕ – МЕТОД ВЫБОРКИ НА БАЗЕ ДЕНЕЖНОЙ ЕДИНИЦЫ

В данной статье рассматривается общий вопрос уменьшения исследований в аудиторской деятельности, с помощью техники выборочных исследований, учитывая то, что в случае, значительного объема данных, исчерпывающий анализ оценки населения не представляется возможным и / или эффективным. Общая перспектива презентации говорит о риске выборки, по сути, риск того, что выбранный образец не может быть репрезентативным для населения в целом, о корреляции с моделью риска аудита, а также о составных частях этой модели (неотъемлемый риск, контролируемый риск и риск выявления) и выдвигает на первый план внутриобумовленисть между этими двумя моделями.

Ключевые слова: статистические модели выбора, нестатистические модели выбора, население, единица выборки, риск выборки, невіборность.