Methodological Aspects Of Determining The Levels Of Significance And Risk In Planning An Audit

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Abstract

The identification of materiality and risk is essential for auditors to use their practical skills and experience properly. It depends on how the auditor applies data and data analysis, as well as what tests and tests he performs. A proper explanation of importance and risk is essential to making calculations effective. The audit of the financial statements of the economic entity and its related financial information determines the reliability and accounting of the audited financial statements and related financial information. will be conducted by the auditing organization in order to determine compliance with the legislation (Law of the Republic of Uzbekistan "On audit activity" (new edition), 2021). During the audit process, the auditor should consider the reliability of the audit and the risk of the audit. The concepts of materiality and audit risk are interrelated, and the results of audits, which are subjectively determined by the auditor, are related to the reliability of the financial statements or, in fact, confirms that there are no material misstatements in the financial statements. In order to properly plan and organize the audit, the auditor needs to understand not only the assessment of audit risk, but also the relationship between its components and the level of materiality. The auditor's determination of materiality is a matter of professional judgment and the auditor's consideration of the financial information needs of users of financial statements depends on how you understand it" (International Standard on Auditing (IAS) 320 "Materiality in planning and performingan audit"). At the time of planning the purpose of the audit, the auditor should consider the standards used for the financial reporting of economic entities is a designation. Before starting the audit, the auditor needs to determine what type of client he is.

1. Introduction

Methodological aspects of materiality are aligned by auditors with laws, standards and principles of auditing practice. Auditors control the process of identifying and verifying audit-related risks by determining the level of materiality through the materiality methodology.
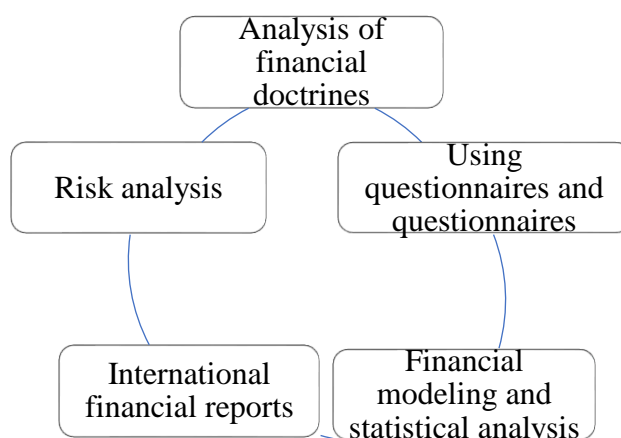
Figure 1. Methodological aspects of determining risk levels in planning an audit.

Of course, there are reasons why risk appears in an audit. These reasons are reflected in the following figure (Figure 2).
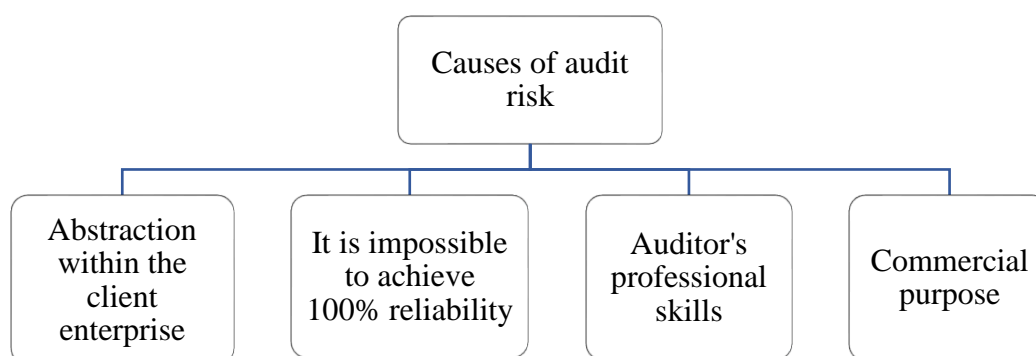
Figure 2. Causes of audit risk.

The following are the main indicators for determining the audit risk based on IAS No. 320 (Figure 3).
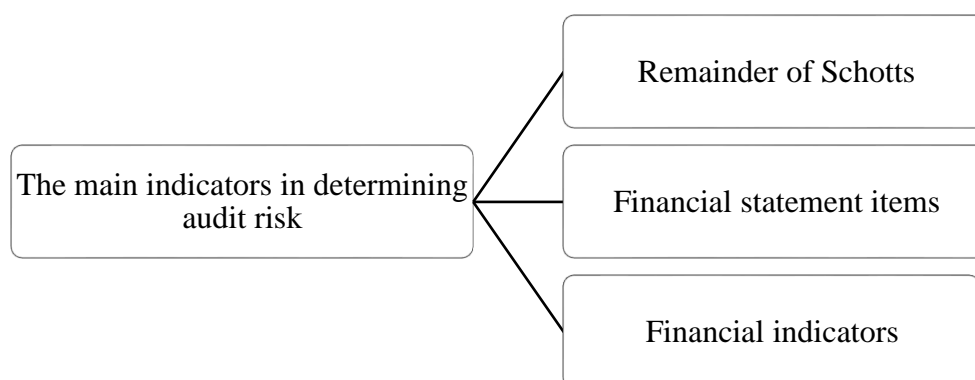
Figure 3. The main indicators in determining audit risk.

Provides general planning with some examples of methodological aspects of determining risk levels.

The level of audit risk is closely related to the level of materiality. In order to properly plan and rationally organize the audit, the auditor must not only assess the

audit risk, but also understand the relationship between its components and the level of importance.

2. Data And Methodology

The correlation between materiality and audit risk should be 5%. If the risk increases with deviation in one of them, the auditor will have to recognize minor deviations with importance.

The calculation method involves the assessment of audit risk by constructing and solving a special factorial model of relative values. We can do this using formula 1.

$$AR = IR \times CR \times DR \quad (1)$$

from which: AR- acceptable audit risk;

IR- domestic risk;

CR- control risk;

DR- risk of non-detection

The above model of audit risk serves as a basis for planning an audit, as it allows to understand the relationship between the individual components of audit risk and to estimate the amount of work to be performed.

The Russian practice is similar to the European practice, in which the amount of acceptable audit risk should not exceed 5%. It follows that it is necessary to determine the risk of non-detection based on the modified factorial model of risk (formula 2).

$$DR = AR/IR \times CR \quad (2.2)$$

When creating an AR, the auditor must first examine and evaluate the factors on which the IR and CR depend. Next, the auditor must determine the value of the DR by calculating the other three risks included in the overall audit risk model.

It is important to note that auditors cannot rely on the effectiveness of the client's accounting system to the extent that it reduces the need for data collection procedures.

Thus, in order to prepare an optimal audit plan, when calculating the audit risk, it is necessary not only to systematically consider the general, main aspects of control, but also to pre-evaluate the sum of factors affecting them. Using the above risk model, the auditor can use the following methods when planning an audit.

1.   The first method helps assess the plan in terms of the auditor's skill level. For example, an auditor assumes that IR is 80%, CR is 50%, and DR is 10%. After simple calculations, we get a risk value of 4% (0.8 x 0.5 x 0.1 x 100) for the audit.

2. The second method can be used to calculate the risk to make a more effective plan - DR and determine the appropriate number of evidence to be collected.

3. The third way (more general) is to use the auditor's risk model simply to relate to the auditor the relationship between the various risks and the evidence of the risks.

The level of audit risk for the audit department is determined by the number of positive responses related to the value of the total audit risk previously assessed. At the same time, it is proposed to measure the size of the risk quantitatively and qualitatively according to the following formula and give its qualitative interpretation (formula 3).

$$AR = IR \times CR \times AnR \times ER \quad (3)$$

where: AnR- analytical risk;

ER- risk of selected procedures.

In our opinion, it is most appropriate to divide the percentages for the main indicators, where the resulting values are in the same order. This provides a comparison of indicators and an objective assessment. If the value of one indicator is at least 2-3 degrees greater than the others, the influence of the other will be small. Therefore, we propose the following method of determining the share of each basic indicator:

Table 2.3

Calculated percentage intervals for key indicators

Main	Calculation interval
Net profit	5 to 10%
Capital	8 to 10%

Current liability	3 to 7%
Accounts receivable	3 to 7%
Income	1 to 2%
Costs (damages)	1 to 2%
Long-term assets	1 to 4% for balance currency. *
Current assets	1 to 4% for balance currency. *

*- the calculated percentage range of long-term and working capital is distributed taking into account the share of these items in the balance sheet.

Then, the share of each indicator in the total sum of all indicators is calculated(Formula 2).

$$B_i = B_i / \sum V_i \, (4)$$

In this:B_i-the value of the i-th key indicator;

V_i- the weight of the main indicator,$V_i = (0-1)$

Based on the range of the main indicators shown above, the share of each indicator is distributed over the entire interval with one step.

It is proposed to mitigate the subjectivity inherent in general auditing, including the process of determining the level of materiality, and to provide more objective results of the evaluation results. The results obtained in the second stage are presented by coefficients K_1 (takes into account the data of the integrated economic analysis report of a particular enterprise) and K_2 (determines the transparency of the values of the indicators in accordance with the principle of importance for the reporting persons) according to the account book.

The values of the coefficients are selected on a scale from 0 to 8. At the same time, a value of "1" is assigned to the least important indicator, and a value of "8" is assigned to the most important indicator. If there is no influence of any indicator, the value of the coefficient is taken as 0.

When corrected for the K_1 coefficient, the indicators of "long-term assets", "current assets" and "equity capital" are evaluated according to the affiliation of the company to the sector. Additional preliminary data for calculation are the cost of basic production stocks, labor costs and material resources.

Table 4
K_1 values depend on the enterprise

Indicators	If the customer belongs to an enterprise,K_1 values:			
	Capital demanding	Rich in materials	Labor intensive	Average type
Long-term assets	8	2	3	4
Private equity	6	4	3	4
Current assets	2	6	2	4

The importance of the indicators "income from the main activity", "total operating expenses" and "net profit" is the highest for any enterprise, regardless of its affiliation to any industry or other evaluation criteria, and for these indicators K_1 8 is accepted as equal. Adjustment of current receivables and current liabilities is carried out as shown in table 5 below.

Correction for K_2 coefficient is carried out by the auditor directly according to the principle of importance for external users of financial statements on the actual values of the main indicators of a particular enterprise.

Table 5
To proofread CD and CL K_1 values

The value of the ratio of CD to CL (CD / CL)	K_1 coefficient values:	
	CD	**CL**
> 2	6	4
[1:2]	4	4
[0.75:1]	4	6
[0.5:0.75]	3	7
< 0.5	2	8

As you know, statistics use mean values to study any variable set of characteristics. There are several different types of averages in statistics, but the determination of significance in this dissertation research is based on two types of averages: the weighted average and the arithmetic mean.

Average weighted in calculation, it is used to study the effect of some characteristic to be taken into account on the average mark, by which the arithmetic average value takes into account the weight of each condition that is calculated.

Arithmetic mean is the sum of the individual values and divided by the number of these values. Individual values of indicators are called options and are denoted by x_1; gross indicators are determined by the number of units n, their average value is determined by Khor (formula 5).

$$X_{averge} = 1/n \times \sum x_1. \quad (5)$$

However, the classical formula (5) given for finding the arithmetic mean value when determining the overall level of significance does not suit us, because it does not take into account the main indicators (x_1 values). The methods of calculating the level of importance include a large amount of subjectivity, and the task of mathematical modeling is to reduce it, therefore, in this dissertation research, the following formulas were used to determine the average value of the level of importance (formulas 2.6 and 2.7).

$$S_1 = \sum x_i \times k_i^1 \times k_i^2 / \sum k_i^1 \times k_i^2 \quad (6)$$

$$S_2 = \sum x_i \times (k_i^1 + k_i^2) / \sum (k_i^1 + k_i^2) \quad (7)$$

Using formulas (6 and 7), the average value is calculated taking into account the effect of two correction factors (K_1 (κ_i^1,) and K_2(κ_i^2)) and is determined as the final average value of the significance level.

In mathematical statistics, there is a formula for finding the average value, taking into account the "significance" of each value (formula 8).

$$X_{averge} = \sum x_i \times m_i / \sum m_i \quad (8)$$

x_i - values; m_i their "weights".

The average value, taking into account the "weights", is also calculated in the formula (6), where $m_i = \kappa_i^1 \times \kappa_i^2$. Let's show the correctness of using this formula to calculate the average value.

Formula 9 obtained on the basis of formula 8 is equal to the following formula:

$$M(X) = \sum x_i \times p_i \quad (9)$$

where: **M(X)** is the mathematical expectation of a discrete random variable;

x_i - discrete random variable;

p_i - the probability of a random variable.

$p_i = m_i / \sum m_i$ and since $\sum p_i = 1$, from the fact : $\sum p_i = \sum (m_i / \sum m_i) = \sum m_i / \sum m_i = 1.$

The mathematical expectation of a discrete random variable is the sum of the product of all its possible values and their probabilities. The random variable X can take only the values x_1, x_2, x_n, the probabilities of which are p_1, p_2, p_n, respectively.

Then the mathematical expectation M(X) of the random variable X is determined by the equation:

$$M(X) = x_1 \times p_1 + x_2 \times p_2 + \ldots + x_n \times p_n \quad (10)$$

Using the formula (8), we determine the mathematical estimate when the probability of a random variable is calculated according to the following formula:

$$P_i = m_i \div \sum m_i \quad (11)$$

where, $S_1 = \sum [x_i \times k_i^1 \times k_i^2] \div M \sum m_i \quad (12)$

Formula (2.7) is similar to (2.6), only the

coefficient mi is defined as the sum of the coefficients k^1 and k^2. The main difference between formulas (6) and (7) is the definition of probability as follows (formula 13).

$$P_i = (k_i^1 + k_i^2) \div \sum (k_i^1 + k_i^2) \quad (13)$$

Thus, formula 13 can also be used to calculate the average value. Accordingly, formulas 12 and 13 apply to calculate the average value, then the overall significance level (OSL) is determined according to the following formula (formula 14).

$$OSL = \sum(B_i \times k_i^1 \times k_i^2) / \sum (k_i^1 \times k_i^2) + \sum B_i \times (k_i^1 + k_i^2) / \sum (k_i^1 + k_i^2) / 2 \quad (14)$$

where: Bi is the corresponding base index;

k_i^1-coefficients that take into account the data of the aggregated economic analysis of the report of a certain enterprise to correct the corresponding base indicator;

Coefficients that correct the values of k_i^2-key indicators according to the principle of importance for third parties (reporters).

When distributing the importance level by balance sheet items, its total value is divided by 2 (asset and liability) and is distributed according to the weight share in the balance currency for each balance sheet item.

3. Results

Using the formulas and tables given above, we selected the data of JSC "Territorial Electric Networks" as the object of research.

According to the recommended methodology, the determination of the level of importance was carried out in five stages:

1. Selection of key indicators.

2. Feelingdetermine the share (%) of each key indicator to be covered.

3. Kcorrecting the values of the main indicators taken into account using coefficients.

4. Determining the overall level of significance.

5. Feelingdistribution of the overall level of importance for the elements of the obot.

Below are the results of each phase for the specified customers.

Table 6

Values of the main indicators of the enterprise under study

The name of the main indicator	As of December 31, 2022, the value of the indicator is one million soums
	JSC "Territory Electric Networks".
Net profit	-56 683,758
Private equity	8,683,567,375
Long-term assets	15 178 500,482
Current assets	1 862 804,134
Current accounts receivable	1,561,036,741
Current liability	2,203,655,759
Income	424 895,493
Costs (damages)	1,171,752,914
Total	**31,029,529.14**

The reason for the loss of the net profit is that according to the information provided by the Ministry of Energy of the Republic of Uzbekistan, the cost of 1 kilowatt-hour of electricity is 970 soums. So, even when an average of 200 kilowatt-hours of electricity is consumed in a month, the state actually provides a subsidy of 135,000 soums for each consumer. The number of consumers in the country is 7.4 million households.

But, nevertheless, the methodology we propose is universal and can be used to calculate the level of

importance in the examination of any network enterprises, because in the next stages their individual and specific characteristics are taken into account.

-56 683.758/ 31 029 529.14= -0.0018. The value of -0.0018 belongs to the range [0:0.17] (for the "net profit" indicator in table 2.4), respectively, the percentage accepted for calculation is equal to 10, then the basic accepted for calculation value of the indicator: -56 683,758 *10% = -5.6

Table 7

Accepted values of the main indicators of JSC "Territory electric networks".

ame of the main indicator	As of December 31, 2022, the value of the indicator is one million soums	The weight of the total indicator (shares)	Accepted for calculation % base rate %	Value of the base indicator accepted for calculation (million soums)
rofit	3,758	8		3.37
e equity	,567,375	8		56.73
term assets	8 500,482	**0.5491/** 1.78120.2186	2	59.45
nt assets	804,134		8	81
nt accounts receivable	,036,741	3		72.57
nt liability	,655,759	0		55.90
ne	95,493	6		91
(damages)	,752,914	7		5.06
	9,529.14			**584.7**

The share of the "Private capital" indicator is calculated as follows:

8,683,567.375 / 31,029,529.14 = 0.2798. The value of 0.2798 belongs to the range [0:0.33] (for the "Equity" indicator in table 2.4), the percentage accepted for calculation is 10, the value of the calculated indicator is: 8 683 67,375 *10% = 868,356.73

To determine the shares of "long-term and current assets", first of all, their share in the total sum of all key indicators is calculated. So: (15,178,500.482+ 1,862,804.134) / 31,029,529.14 = 0.5491.

The value of 0.5491 belongs to the range [0.5:0.75] (for the total amount of long-term and current assets in table

2.4), which corresponds to the accepted percentage of the base indicator for calculation, which is equal to 2% is coming. Next, we determine the ratio of long-term and current assets in the total amount of these two indicators:

(15 178 500.482/ (15 178 500.482 + 1 862 804.134 = 17 041 304.616)) = 0.8906

(1 862 804.134 / (15 178 500.482 + 1 862 804.134 = 17 041 304.616)) = 0.1093.

The percentages taken to calculate the "long-term assets" indicator are 0.8906*2%*100=1.7812% and for "current funds" are 0.1093*2%*100 = 0.2186. Thus, the values of the relevant key indicators accepted for calculation are equal to:

15 178 500,482 * 1.7812% = 26 125 234.2

1 862 804.134 * 0.1093% = 203 604.49

We account for current accounts receivable as follows:

1 561 036.741 / 31 029 529.14= 0.0503. The value of 0.0503 belongs to the range [0:0.2] (according to the indicators "current liabilities and current receivables" in Table 2.4), the percentage accepted for calculation is 7. The value of the calculated indicator: 1 561 036.741 *7 % = 109 272.57

The calculation of the share of "current liabilities" in the total amount is described below: 2 203 655.759 / 31 029 529.14 = 0.0710

The value of 0.0710 belongs to the range [0:0.2] (according to the indicators "current liabilities and current receivables" in Table 2.4), the percentage accepted for the corresponding calculation is 7. Then the value of the base indicator accepted for calculation: 2 203 655.759 * 7% = 154 255.90

The share of the "Income" indicator is calculated as follows:

424 895.493 / 31 029 529.14 = 0.0136. The value of 0.0136 corresponds to the range [0:0.5] (according to the "income and expenses" indicators in Table 3.3), the percentage accepted for calculation is equal to 2. The value of the calculated indicator: 424 895.493 * 2% = 8

497.90

The share of the "Expenses (damages)" indicator will be equal to:

1,171,752.914 / 31,029,529.14 = 0.0377. The value of 0.0377 belongs to the range [0:0.5] (for the "incomes and costs (losses)" indicators in Table 2.4), respectively, the percentage accepted for calculation is equal to 2, then the basic accepted for calculation the value of the indicator: 1 171 752.914 * 2% = 23 435.05.

When determining the coefficient K1, the ratio of current receivables (CD) and current liabilities (CL) was taken into account. Adjustment of current receivables and current liabilities by the K1 coefficient is carried out taking into account the intervals given above by the author in Table 2.5. For JSC "Territorial power grids" - a labor-intensive sector entity, the ratio of CD and CL is 0.7083, and K1 is set at the level of 3 for CD and 7 for CL, respectively. Because the value of their ratio[0.5:0.75]fits in between.

The given table 2.8 contains all the necessary information for the third step in determining the level of significance, i.e., the baseline taken into account using the coefficients of groups K_1 and K_2 corrections of indicator values, for which the calculated base indicator of each analyzed enterprise is multiplied by K_1 and K_2 coefficients: -362,775.68 million soums (-5 668.37x8x8).

Table 2.8
Compared to the baselineK_1 and K_2 values

The name of the base indicators	JSC "Territory Electric Networks".		
	Estimated value of the base indicator (million soums)	K_1	K_2
Net profit	-5 668.37	8	
Private equity	868 356.73	4	
Long-term assets	270 359.45	2	
Current assets	4075.81	6	
Current accounts receivable	109 272.57	4	
Current liability	154 255.90	4	
Income	8,497.91	8	
Costs (damages)	23 435.06	8	

Total:	1 432 584.7		

Thus, medium levels of significance JSC "Territory Electric Networks" in the calculation of importance 121,616.94 million soums (38,917,421.36/320) and 155,305.73 million soums (15,530,573.31/100). And the total importance level138,461.33 million soums (121,616.94+155,305.73)/2. The final values of the general materiality level for the enterprise under analysis are presented in Table 9.

Table 9

"Regional power networks" JSCcalculating the significance level

ame of the base indicators			₁ x K₂	K₂	K₁xK₂)/∑(K₁xK₂)
			3x4	4	: ∑6
"Territory Electric Networks".					
rofit	3.37		775.68		
e equity	56.73		7,415.36		
term assets	59.45		,594.5		
nt assets	81		84.02		
nt accounts receivable	72.57		,631.96		16.94
nt liability	55.90		141.6		
he	91		66.24		
(damages)	5.06		363.36		
	584.7		7,421.36		

Table 10

"Regional power networks" JSCsignificance level calculation (continued)

			₁+K₂)	K₂)	K₁+K₂)/∑ (K₁+K₂)	
			3+4)	4	:∑6	
Net profit	3.37		93.92			1.33
Private equity	56.73		0,280.76			
Long-term assets	59.45		,516.15			
Current assets	81		5.53		05.73	

Current accounts receivable	72.57			,998.27			
Current liability	55.90			559			
Income	.91			66.56			
Costs (damages)	5.06			60.96			
	584.7			**0,573.31**			

Accordingly, when calculating the overall level of importance for the analyzed enterprises the breakdown of balance sheet items (assets and liabilities), income and expense reports is presented in Table 2.11 above. The significance value for the enterprise's balance sheet asset is 69,230.66 million soums (138,461.33/2) JSC "Territorial Electric Networks", because the enterprise's balance sheet consists of two sections - assets and liabilities. It is necessary to divide the level of importance between the income and expenses of the same enterprise under analysis. This was done based on the data of Table 3.5, from which it follows that the total income is 424,895,493 million soums, and expenses (losses) are 1,171,752,914 million is soum. The sum of income and expenses is 1,596,648.4 million soums without mathematical symbols.

Table 11

Values of the overall importance level of the inspected enterprise (million soums)

ess name	al level of materiality	tance values for item distribution		
		(passive)	1e	1ses
Territory Electric Networks".	61.33	0.66	6.93	14.39

The level of general materiality (138,461.33 million. soums) its share in revenues is 36,846.93 million soums (424,895,493/1,596,648.4) x 138,461.33, and its share in expenses is 101,614.39 million soums (1,171,752,914 /1 596,648.4) x 138,461.33.

All obtained values of the level of importance of the book value **Not more than 5%.**

In the last stagethe author's modernized methodology for determining the level of materiality, the overall level of materiality is distributed by balance sheet and income statement items. The balance sheet is divided into 2 assets and liabilities, and according to each item of the balance sheet according to its share in the currency of the balance sheet (Appendix 3).

According to generally accepted world practice, if the object's share on the balance sheet is less than 1 percent (170 million soums), it can be ignored when organizing the audit. can come In this case, any violation is not considered significant.

Analyzing the obtained values of the level of importance by balance sheet items, we can conclude that the highest level of importance in the asset corresponds to 59% of long-term investment, and in the passive part of the balance sheet, the importance 49% of the level. the share capital indicator occupies. Such a distribution is the result of applying the method of relative rather than absolute importance of the report elements. This is a more objective method, because it takes into account the share of each substance in the balance.

Table 12.
Importance of income and expenses (losses).
JSC "Territory Electric Networks".

Indicator name	String code	million soums as of December 31, 2022	Weight of the indicator in revenues (expenses), (shares).	Distribution of importance (million soums)

Net income from the sale of products (goods, work and services).	95,493.00	0	6.93
Cost of goods sold (goods, work and services).	248 349.00	1	5.19
Selling expenses	52,982.00	2	.46
Administrative expenses	45,505.00	3	.45
Other operating expenses	182 330.00	3	.32
Expenses in the form of interest	850,824.00	7	7.77
Losses from exchange rate differences	950,807.00	8	0.90
costs of financial activity	2,117.00	3	8

Importance level is net income from sales as income (importance level is 36,846.93 million soums), and cost of goods sold (goods, work and services) is 35,575.19 million soums is soum. The indicated amount of deviation means 36,846.93 million soums, in other words, it can go up and down by 0.0008 percent. The auditor can make such a conclusion about the reliability of the financial report according to the indicator.

The qualitative aspect of materiality can only be assessed by the auditor's professional judgment. The values of the importance levels can be changed by the auditor depending on the results of the audit to determine the importance indicator itself.

4. Conclusion

In the process of auditing a joint-stock company, in our opinion, the data of the joint-stock company that the auditor should keep in his report as audit evidence when compiling the audit report Copies of documents will include:

-the charter of the joint-stock company;

-issue of a prospectus of a joint-stock company for the issue of shares;

-certificate of registration;

-organizational structure of the joint-stock company (open or closed);

-extracts from legal documents, minutes of the meeting of shareholders, management or the general meeting of shareholders;

-accounting policy of the joint-stock company;

-forms of financial statements that the auditor must confirm (confirm) correctness.

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