Analytical procedures

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Abstract: *The aim of the financial statement audit is to express a reasonable opinion of the auditor about the financial statement. In order to be able to express such opinion about the financial statement the auditor has to apply procedures that will allow him to obtain sufficient and appropriate audit evidence on the grounds of which the auditor is able to express his reasonable opinion. Analytical procedures represent a type of auditing procedure specific in the fact that it can be applied at various audit stages, whereas analytical procedures focus in this context on various aspects. Analytical procedure applied at the stage of audit planning can reveal areas with possible increased risk of occurrence of significant incorrectness. On the other hand, analytical procedure applied as substantive procedure can provide the auditor with relevant audit evidence about the matter in question.*

Keywords: *financial statement audit, auditor, analytical procedures*

JEL codes: M42

1 Introduction

Analytical procedures have an indispensable role in financial statement audit. Competently applied analytical procedure helps to make the financial statement audit more efficiently, economically and ultimately also more effectively. The term analytical procedure (or also analytical solution) generally represents searching for solution (result) by means of known relationships and gradual modifications. Although the term belongs more to the philosophy of mathematics, it can be applied also as part of the financial statement audit. Analytical procedures can be defined as evaluation of financial information on the grounds of analysis of acceptability of relations between financial and non-financial data. Analytical procedures include also the need to examine detected fluctuations or relations that are not consistent with other relevant information or that significantly differ from expected values. (ISA 520) Utilization of analytical procedures brings more reliable result in case if there is a powerful and effective internal control system implemented in the entity. Various methods can be used for the performance of analytical procedures, from simple comparisons up to complex analyses using modern statistical methods. The procedure selected by the auditor is a matter of his professional judgment. Analytical procedures usually provide warning that something appears to be incorrect and do not provide conclusive evidence about what it is that is incorrect, and therefore they usually do not provide sufficient, relevant and reliable audit evidence if applied alone (DOMORACKÁ, D. - HUNYADY K., 2016). Application and objective of analytical procedures differ depending on the stage of the financial statement audit. Analytical procedures can be applied also at the *stage of audit planning*, where they serve as procedures for risk assessment and for determination of areas where the risk of significant incorrectness could be higher. They are in such case known also as preliminary analytical procedures. Analytical procedures can be applied also at the stage of examination, what means that analytical procedures are used as procedures for examination of factual correctness (as part of substantive procedures), where their application can be more effective than the application of tests of details and where they can provide audit evidence (Kareš, 2016). Analytical procedures are under such circumstances (used for the purpose of obtaining evidence) known as substantive analytical procedures. Finally, analytical procedures can be used *at the end of audit* as general review whether information is in compliance with audit findings.

2 Methodology and Data

The object of study is the application of analytical procedures in the financial statement audit. The studied issue is extensive and the application differs depending on the area where it is used in the symbiosis with the application of auditor's professional judgment. The primary source we used for the preparation of theoretical definition of the studied issue included foreign and national papers and methodological guidelines of international professional institutions. We used our own practical skills and experience as part of practical application of obtained findings. We used especially the method of analysis, which provided us with a view of the substance and significance of analytical procedures from the theoretical perspective. Application of practical experience allowed us to deduce and determine those areas of the audit in which the application of analytical procedures has the highest significance. Using the method of synthesis we joined the studied area into one whole having both theoretical and practical aspects and subsequently we applied determined facts on practical examples. The issue is processed within a wider context and offers a general view of analytical procedures, their significance and application in order to achieve the aim of financial statement audit.

3 Results and Discussion

Application of analytical procedures in financial statement audit means information is obtained from various sources with the aim to determine the expected value, to compare the real value (situation) with the expected one and to determine reasons for any detected difference. Analytical procedures can be applied for instance in following areas:

a) **analysis of relationships** – with the aim to analyse relationships between one another, or also relationships on the grounds of auditor's knowledge of the entity and environment in which it operates,
b) **predicting values** – which can be compared with real values.

Analytical procedures include also the evaluation of financial information of the entity in question as compared for instance to:

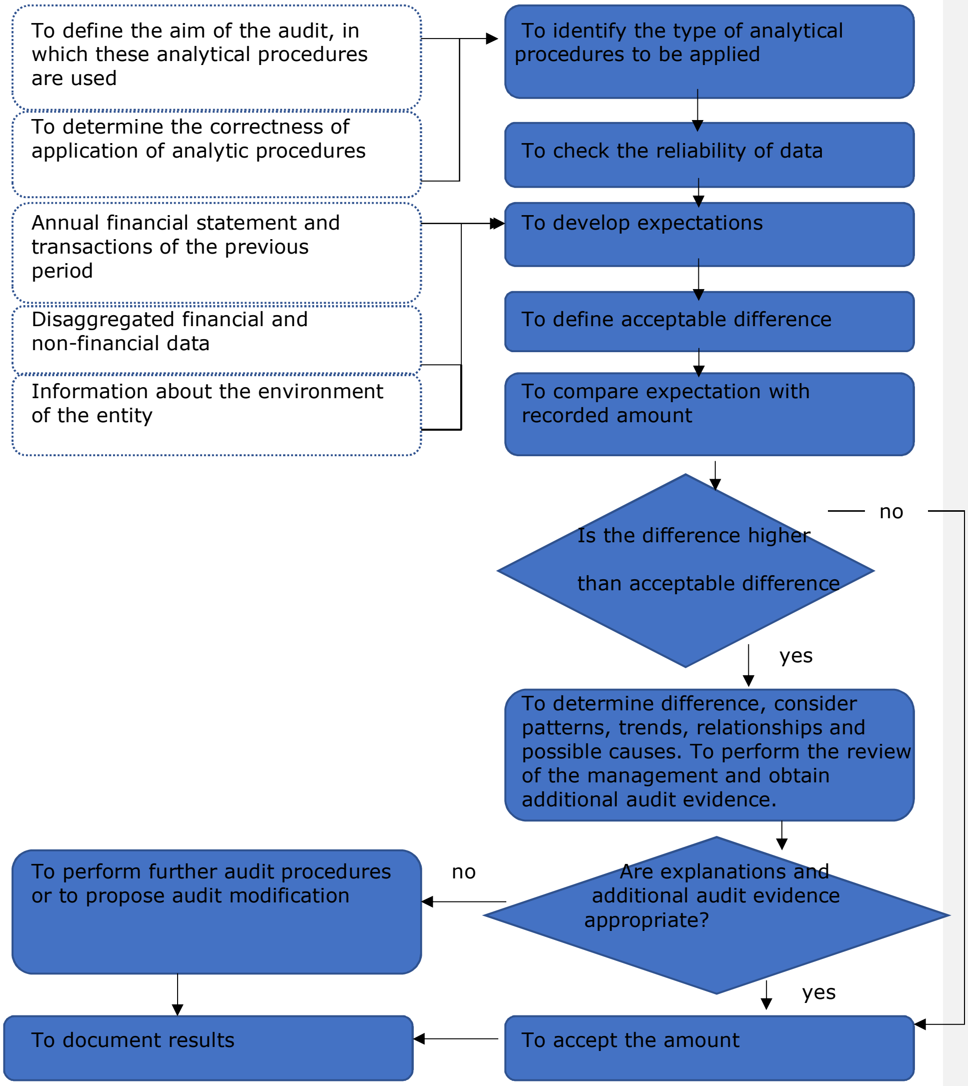
- comparable information of the previous period,
- similar data in the sector, or
- prognoses, plans and budgets (MADĚRA F., 2016).

In addition to the above mentioned evaluation of financial information, analytical procedures can cover also the area of assessment of relationships, where their application can help in searching for relationships between:

- financial information and corresponding non-financial data (for instance salary costs and number of employees) and
- elements of financial information where it is expected that they will correspond to the model that can be predicted on the grounds of entity experience (i.e. the percentage of gross margin).

The process of application of analytical procedures is shown on the following scheme No. 1.

Scheme No. 1 Analytical examination of the process



Source: ECA, 2017

3.1 Analytical procedures as procedures for risk assessment

Analytical procedures serving to reveal potential risk areas in the financial statement are used especially at the stage of audit planning. Provided that the auditor uses them in this way, he is able to incorporate into the audit plan those areas, in which it is necessary to extend audit testing for the purpose to eliminate the occurrence or failure to reveal a significant incorrectness. Analytical procedures are applied at this audit stage usually as a comparative method, i.e. comparison of information with the previous period, or as analysis of relationships between individual reported information. It must be emphasized that analytical procedures applied as risk assessment procedures do not provide any audit evidence. Their significance in this area is in the revelation of potential risk areas where an occurrence of significant incorrectness might exist.

These facts can be illustrated on selected data from the ledger, where potential risk areas are identified by means of the analysis of relationships (i.e. application of analytical procedures).

Table 1 Selected data from the ledger

Account	Account name	Initial value	Debit turnover	Credit turnover	Final balance
01310	Non-current intangible assets – Software	15 075,02	8 212,00	0,00	23 287,02
02110	Non-current tangible assets – Buildings	48 403,01	93 592,81	48 403,01	93 592,81
02210	Non-current tangible assets – Machinery, equipment and devices	89 812,38	0,00	0,00	89 812,38
02220	Non-current tangible assets – Transport means	44 706,69	0,00	23 289,41	21 417,28
02230	Non-current tangible assets – Furniture	0,00	4 584,17	0,00	4 584,17
02310	Non-current tangible assets – Transport means	0,00	65 538,30	0,00	65 538,30
04110	Procurement of non-current intangible assets	0,00	11 625,00	8 212,00	3 413,00
04210	Procurement of non-current tangible assets	4 020,00	166 538,21	170 558,21	0,00
07310	Software value adjustments	-15 075,02	0,00	547,47	-15 622,49
08110	Building value adjustments	-48 403,01	48 403,01	3 250,50	-3 250,50
08210	Machinery, equipment and devices value adjustments	-82 448,55	0,00	3 365,78	-85 814,33
08220	Transport means value adjustments	-42 713,70	24 309,41	3 012,99	-21 417,28
08230	Furniture value adjustments	0,00	0,00	382,20	-382,20
08310	Transport means value adjustments	0,00	0,00	14 712,64	-14 712,64

Source: prepared by authors

Note: The entity has created its own accounting spreadsheet.

If the auditor applies analytical procedures on selected data from the ledger, i.e. if the auditor analyses mutual relationships between individual information and at the same time changes that occurred as compared to the previous period, then the auditor finds out the following:

1. The credit side of the account 042 does not equal the debit side of 02* accounts (the same turnover is assumed; difference can be caused by error or incorrect accounting.

2. Compared the credit side of 07*08* accounts with accounts 541, 551, or 549 (comparison with accounting on respective cost accounts must be made on the grounds of accounted amounts on the credit side of these accounts).
3. The debit side of the account 08220 does not equal with regard to correlation the credit side of the account 02220.
4. Verify gains of non-current assets in accounting documents (based on finding there were gains).
5. Verify losses of non-current assets in accounting documents (based on finding there were losses).
6. Obtain inventory of non-current assets and compare with account balances.
7. The account 041 reports account balance. Information about reason must be obtained.
8. Compare depreciation (credit 07*,08) with expected depreciation.
9. Compare accounting and tax depreciation and records of tax and accounting residual price.
10. With regard to importance of non-current assets determine the security of assets – insurance etc.

The auditor shall on the grounds of found facts communicate with the management and if possible obtain from the management necessary information about found facts. Findings shall be documented in the audit plan and procedures need to be planned in reaction to found facts assessed by the auditor as risk facts.

3.2 Analytical procedures as procedures for examination of factual correctness (substantive analytical procedures)

In addition to the performance of tests of details (which represent the substantive procedure of the auditor for the purpose of obtaining audit evidence) the auditor can apply also analytical procedures. If the auditor applies the analytical procedure as the procedure for examination of factual correctness, such procedure is called substantive analytical procedure. Similarly as with the test of the detail, the auditor is able to obtain audit evidence by means of substantive analytical procedure. In general it applies that substantive analytical procedures have relevant application for large transaction volumes, which in time become predictable.

Various types of analytical procedures provide various degree of assurance. Analytical procedures related for instance to the prediction of total revenues from the lease of building divided to flats can, taking into account rent rates, number of flats and share of flats not rented, provide conclusive evidence and eliminate the need of further verification by means of tests of details provided that individual elements are appropriately verified. On the other hand, calculation and comparison of the percentage of gross margin as means for the confirmation of the amount of revenues can provide less conclusive evidence, but if it is used in combination with other auditing procedures it can represent an appropriate confirmation. (ISA 520)

The application of substantive testing, i.e. tests of details and substantive analytical procedure, is the matter of professional judgment of the auditor. The auditor can perform the testing by an individual test of details, individual substantive analytical procedure or combination of both (KRŠÍKOVÁ, V. - RYBKA, L., 2012). The important thing is to obtain audit evidence by such testing, which evidence will be relevant for the creation of reasonable opinion of the auditor about the financial statement.

3.3 Analytical procedures applied for general review at the end of the audit

Analytical procedures applied for the final review, i.e. at the end of the audit, are applied in order to confirm general conclusions reached by the auditor during the performance of the financial statement audit. Analytical procedures used at the stage of general review can be the same as procedures used during the stage of planning and can thus be compared. The review can show that obtaining of an additional audit evidence for the confirmation of auditor's conclusions is required (KUBAŠČÍKOVÁ, Z. - JUHÁSZOVÁ, Z., 2016).

Conclusions

Analytical procedures are an important part of auditor's procedures used for the financial statement audit in all its areas. We illustrated on practical examples of application of analytical procedures the possibility of their utilization at various audit stages as well as the possibility to increase the effectiveness and efficiency of the audit. Possibilities of utilization of analytical procedures in the financial statement audit are given by knowledge of the auditor about the entity and field of its business, about used accounting procedures, as well as by the degree of functioning of the internal control system (KAREŠ, L. - KŇAŽKOVÁ, V., 2016). It can be established on the grounds of shown examples that presented analytical procedures have wider options of utilization. In addition to the financial statement audit, they can be used in control and analytical processes in the entity or in the group of entities as well as part of the internal audit.

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