THE COMPARATIVE ANALYSIS OF TAX AUDIT FILES

Abstract. This study was designed to collect data on key issues related to implementation of the digital forms of tax checks, in particular e-audit. Fiscal Services of different countries. The research is focused on three-areas: a) to explore the essence and the structure of Standard Audit File for Tax; b) to learn the international experience of using tax audit files; c) to develop recommendations on the possibility of introducing the most effective methods in national practice.

Standard Audit File for Tax (SAF-T) is an electronic file, which contains accurate audit data, exported from the initial accounting system. SAF-T 1.0 consists of four sections: «Header», «Master Files», «General Ledger Entries» and «Source Documents». In version 2.0, 8 subunits were added to the «Master Files» section: «Taxonomies», «UOMT Table», «Analysis Type Table», «Transaction Type Table», «Products», «Physical Stock», «Owners» and «Assets».

The experience of the implementation and components of tax audit files of the leading European countries indicate that: a) most countries use the tax audit file in accordance with the recommendations of the OSER (Portugal, Norway, Austria, Lithuania), but there are some that have substantially modified it (Singapore); b) there are different ways to provide data: from pilot projects and voluntary application, to mandatory filing by certain categories or by all taxpayers; c) mainly the fiscal authorities apply the phased implementation of tax audit files in practice (Austria, Lithuania, Norway, etc.).

It is established that before introducing SAF-T into national practice, it is worth considering that the standard approach can be neither practical nor desirable because each tax service faces a variety of conditions, the legislative environment, administrative practice and the tax culture of taxpayers.

Keywords: Standard Audit File for Tax, Tax Audit File, tax checks, e-audit.

JEL Classification H2, H3

Formulas: 0; fig.: 7; tabl.: 0; bibl.: 13.
ПОРІВНЯЛЬНИЙ АНАЛІЗ ПОДАТКОВИХ АУДИТОРСЬКИХ ФАЙЛІВ

Анотація. Дослідження здійснено з метою збору даних щодо основних питань впровадження цифрових форм податкових перевірок, зокрема електронного аудиту, фіскальними службами різних країн. Воно охоплює такі напрями: а) вивчення сутності та структури стандартного податкового аудиторського файла; б) аналіз міжнародного досвіду використання податкових аудиторських файлів; в) розроблення рекомендацій щодо можливості впровадження найбільш ефективних світових напрацювань у національну практику.

Стандартний податковий аудиторський файл (SAF-T) — це електронний файл, який містить точні облікові дані, експортовані з вихідної системи обліку. SAF-T 1.0 складається з чотирьох розділів: «Заголовок», «Основні файли», «Журнал бухгалтерських записів» та «Первинні документи». У версії 2.0 до розділу «Основні файли» було додано вісім підрозділів: «Таксономія», «Таблиця UOMT», «Таблиця типів аналізу», «Таблиця типів операций», «Продукти», «Запаси», «Власники» та «Активи».

Досвід упровадження і складові елементи податкових аудиторських файлів провідних Європейських країн свідчать про те, що: а) більшість країн використовують податковий аудиторський файл відповідно до рекомендацій ОСЕР (Португалія, Норвегія, Австрія, Литовська Республіка), але є й такі, які здійснили суттєву його модифікацію (Республіка Сінгапур); б) вживаються різні способи надання даних: від пілотних проектів і добровільного застосування до обов'язкового патрулювання певними категоріями або всіма платниками податків; в) в основному фіскальні органи застосовують поетапне впровадження податкових аудиторських файлів у практику (Австрія, Литва, Норвегія тощо).

Установлено, що перш ніж запровадити SAF-T у національні практики, варто врахувати, що стандартний підхід не може бути ні практичним, ні бажаним, оскільки кожна податкова система має різні умови, законодавчу базу, адміністративне середовище та податкову культуру.

Ключові слова: стандартний податковий аудиторський файл, податковий аудиторський файл, податкові перевірки, електронний аудит.

Формул: 0; рис.: 7; табл.: 0; бібл.: 13.

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СРАВНИТЕЛЬНЫЙ АНАЛИЗ НАЛОГОВЫХ АУДИТОРСКИХ ФАЙЛОВ

Аннотация. Исследованы сущность и структура стандартного налогового аудиторского файла. Раскрыто опыт внедрения и составляющие элементы налоговых
аудиторских файлов ведущих Европейских стран, а именно: а) большинство стран используют налоговый аудиторский файл в соответствии с рекомендациями ОСЕР (Португалия, Норвегия, Австрия, Литовская Республика), но есть и такие, которые осуществили существенную его модификацию (Республика Сингапур); б) используются различные способы предоставления данных: от пилотных проектов и добровольного применения к обязательной подачи определенными категориями или всеми налогоплательщиками; в) в основном фискальные органы применяют поэтапное внедрение налоговых аудиторских файлов в практику (Австрия, Литва, Норвегия и т. д.). Установлено, что прежде, чем использовать SAF-T в национальных практиках, следует учесть, что стандартный подход не может быть ни практическим, ни желательным, поскольку каждая налоговая система имеет разные условия, законодательную базу, административную среду и налоговую культуру.

Ключевые слова: стандартный налоговый аудиторский файл, налоговый аудиторский файл, налоговые проверки, электронный аудит.

Формул: 0; рис.: 7; табл.: 0; библ.: 13.

**Introduction.** The development of digital technologies makes an impact on every sphere of human life and on every kind of activity, including the sphere of public administration and control. That’s why today’s more and more of the Fiscal Services of different countries implement in their activity the digital forms of tax checks, in particular, e-audit, which makes possible the verification/checking of accounting transactions (and their sources/origins) processed in an electronic environment, using analysis, evaluation and testing audit methods, assisted by computerised tools [1].

The use of an e-audit not only helps with the intensification of the campaign against tax fraud and tax evasion, but also allows the achievement of greater audit efficiency compared with paper audit methods, which can reduce the maintenance expenditures for tax services and for the administrative needs of companies.

The main requirement for an e-audit is the access to the audit data. However, the advances in technology and the increasing number of operating systems, data formats, backups and file storage options complicate the work of auditors. The international companies face additional problems in providing complete and adequate information about the requirements of a particular country.

In response to this the Organization of Economic Cooperation and Development created the Standard Audit File for Tax (SAF-T), which contains accurate audit data, exported from the initial accounting system. SAF-T is easy to read thanks to standardization of the layout and format and has the ability to expand if needed. The main advantage of the Standard Audit File for Tax it’s the ability to check and control it with the help of proprietary software, which can increase the efficiency and productivity of the audit.

This kind of simplification in the process of identifying major violations of tax legislation lead to more frequent acceptance of SAF-T by European countries as a tool to submit of accounting information in electronic form. But the requirements of every single country are making it impossible for the simple borrowing of a standard tax audit file, which needs to take into account the existing tax system and administration practices. This requires an analysis of worldwide practices of the use of tax audit files with the goal of choosing the most optimal path for its implementation.

**Analysis of the research and the problem statement.** The features of implementation, functions, tasks and methods of e-audit are detailed in the scientific literature. However, there are currently no publications devoted to the essence and structure of the standard tax audit file, as well as its features and comparative analysis of its implementation in different countries around the world.
The purpose of the article is to study the international experience of using tax audit files and to develop recommendations on the possibility of introducing the most effective practices in national practice.

**Research Results.** The Ottawa Taxation Framework Conditions from 1998 declares the need for tax authorities to use modern technologies and developments to improve the administration of taxes and payments, by forming complete, reliable information on the economic activities of taxpayers, as well as the creation of internationally compatible information requirements for the data format [2]. This document has become the basis for the introduction of e-audit in the activities of fiscal authorities from different countries, which today is an integral part of the implementation of inspections of compliance with tax legislation by economic entities.

The creation of the OECD standard tax audit file (SAF-T), which is a standardized format and structure electronic file containing reliable and easy-to-read accounting data derived from the original accounting system, has become the first step towards transforming the Ottawa Taxation Framework Conditions into practical administrations.

SAF-T is designed to provide auditors with access to credentials in an easy-to-read format. The file data is easily exported electronically from the accounting software system, which allows it to carry out control activities without going to the taxpayer. Also, due to the standardization of the format and structure, the tax audit file is convenient for both fiscal servants and external and internal auditors.

The first version of SAF-T was published by the OECD Fiscal Affairs Committee in May 2005. It is based on records of accounting journals, contains customer and supplier information, invoice details, and payments [3].

SAF-T 1.0 consists of four sections: «Header», «Master Files», «General Ledger Entries» and «Source Documents» (Fig. 1).

* shading shows the difference between SAF-T 1.0 and SAF-T 2.0

Fig. 1. The Structure of SAF-T
Source: compiled by authors based on data [3; 4].

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«Header» discloses information about the company, on behalf of which the tax audit file has been created, its contact persons, legal address and registration data. This section specifies the year and reporting period for which the tax audit file is compiled. Also in the «Header» is information about the software that generated the tax audit file, its version and developer.

The «Master Files» section contains four subdivisions in its structure, namely:
- «General Ledger» which provides information on all accounting accounts used by enterprises, as well as on the balances of funds in these accounts at the beginning and end of the reporting period;
- «Suppliers» where the main data of the vendors of the enterprise (name, address, contact data, registration data, etc.) are disclosed;
- «Customers» where information about the customers of the enterprise is displayed in a fashion similarly to the suppliers subdivision;
- «Tax Table» allows you to select a tax type and see all details related to its charge.

The third section of SAF-T «General Ledger Entries» contains details of all business operations of the enterprise for the relevant period.

«Source Documents» - section, which displays the source accounting documents in the context of the relevant units: «Sales Invoices», «Purchase Invoices» and «Payments».

In April 2010, a second, significantly extended version of the standard tax audit file came out. So in version 2.0, 8 subunits were added to the «Master Files» section: «Taxonomies», «UOMT Table», «Analysis Type Table», «Transaction Type Table», «Products», «Physical Stock», «Owners» and «Assets» (see Fig. 1). The section «Source Documents» has also been extended to information on the movement of goods and asset transactions. Also in the «Header» is information about the company, on behalf of which the tax audit file is compiled. Its version and developer.

Although OECD does not require a specific format for a tax audit file, recommending that fiscal authorities develop their structure, SAF-T is now increasingly accepted by European countries as a means of submitting electronic information.

Portuguese Republic. The first European country to start using the tax audit file was the Portuguese Republic. Since 2008, the use of SAF-T (PT) has been voluntary, and since 2010 — mandatory. The Portuguese SAF-T (PT) standard is based on SAF-T 1.0, but it has a slightly different structure and contains some special features that are specific to the tax legislation of the Portuguese Republic. In particular, SAF-T (PT), adopted by Decree No. 321-A of March 26, 2007 [5], consisted of four typical sections: «Header», «Master Files», «General Ledger Entries» and «Source Documents». However, the master files section contained an additional «Products» section, and the «Source Documents» section did not include any sub-sections in its structure (Fig. 2).

* shading shows the difference between SAF-T (PT) and SAF-T 1.0

Fig. 2. The Structure of SAF-T (PT)
Source: compiled by authors based on data [5].
Subsequently, changes to SAF-T (PT) were made several times (in 2009, 2013, and 2016), and the modern version of the Portuguese tax audit file has a much wider structure [5]. In particular, the section «Source Documents» is supplemented by the subdivisions «Sales Invoices», «Documents on the accounting of goods», «Working Documents» and «Payments». The structure of the «General Ledger Entries» has also been substantially changed (see Fig. 2).

The Portuguese Tax Administration has also developed its own program for reading and analyzing a tax audit file, which, moreover, conducts 50 tests with file data.

**Republic of Austria.** In Austria, the standard tax audit file has been adapted by the Austrian Finance Board to national requirements and has been in use since April 2009.

The Austrian Tax Audit File (SAF-T) has six sections in its structure: «Header», «Master Files», «General Ledger Entries», «Inventory Stock Levels», «Source Documents» and «Asset Statement» [6]. The «Master Files» section includes eight divisions: «General Ledger», «Customers», «Suppliers», «Products», «Owners», «Table», «UOMT Table» and «Transaction Type Table»; and the «Source Documents» section includes in its structure: «Sales Invoices», «Purchase Invoices», «Payments» and «Movement of Goods». Also, somewhat simplified form has a «General Ledger Entries» (Fig. 3).

![Diagram of the Structure of SAF-T AT](image)

* shading shows the difference between SAF-T AT and SAF-T 1.0

Source: compiled by authors based on data [6].

**Grand Duchy of Luxembourg.** The Grand Duchy of Luxembourg began to use the tax audit file with the adoption in 2008 of a normative act on cooperation between tax authorities. In November of the 2009, the first version of the FAIA came out, which began to be implemented in November of the 2010 [7]. During 2011—2013, the comments were taken into account and the tax audit file was revised, as a result of which the FAIA. 2.01 was published.

There are currently three versions of FAIA in Luxembourg, which are used depending on the software designed to reflect the economic activity [7]. Thus, FAIA 2.01 full is applicable if the accounting program of the taxpayer shows all business transactions and processes, namely: cash accounting, invoicing, inventory management, etc. If the accounting system used only displays
settlements and payments, FAIA 2.01 v. A applies. The version B FAIA 2.01 is applied, if there is only the accounting module, and the databases have a different format (for example Word).

The differences between the versions FAIA 2.01 full, FAIA 2.01 v. A and FAIA 2.01 v. B consist of a set of elements that they cover (Fig. 4).

**Kingdom of Norway.** Work on the implementation of SAF-T in Norway began in 2014, when a project team of representatives of the tax service, enterprises, accountants, auditors and software developers presented a project file of financial data. In the autumn of 2015 a working group was created to make the necessary adjustments and additions to the SAF-T project version, as well as to carry out its preliminary tests. The result of the work was SAF-T Financial 1.0, created on the basis of SAF-T 2.0 [8]. This version of SAF-T Financial was limited to accounts and supplier and customer information.

Although the Norwegian government was careful about changes in the structure of the SAF-T Finance, declaring that the first version was originally recommended and the practical results of its implementation had to be obtained, in July 2017 the SAF-T Financial 1.2 was released. The second version of SAF-T Financial consists of three sections: «Header», «Master Files», «General Ledger Entries». In turn, the «Master Files» section combines subunits such as «General Ledger Accounts», «Customers», «Suppliers», «Tax Table», «Analysis Type Table» and «Owners». It is also worth noting that the Norwegian tax audit file does not contain the section «Source Documents» (Fig. 5).

Another feature of the introduction of electronic tax audit in the Kingdom of Norway is the SAF-T Cash Register, which is designed to export data from cash registers [8]. This file can be generated at the request of the Norwegian tax administration, accountants and other participants, or may be used as means of transferring cash registers to accounting systems.
**Republic of Lithuania.** In Lithuania, the tax audit file has been applied since 2015 [9]. The structure of the Lithuanian SAF-T corresponds to the structure of the SAF-T v. 2.0. In particular, the «Header» contains general information about the entity that created the SAF-T (personal identification code, address, contact person, and other information). The section «Master Files» consist of such subsections as «General Ledger», «Taxonomies», «Suppliers», «Customers», «Tax Table», «UOMT Table», «Analysis Type Table», «Transaction Type Table», «Products», «Physical Stock», «Owners» and «Assets». The «General Ledger Entries» discloses information about the details of business operations (transaction date, correspondent accounts, amount, etc.). «Source Documents» contain data on sales, purchases, payments, moving goods, changes in the value of assets. The changes made by the Lithuanian government to the SAF-T specification are insignificant and concern only national disclosure traditions.

**Republic of Poland.** Poland has started introducing a standard tax audit file since 2016 [10]. Initially, only a large taxpayer had to submit a single control file (JPK) to the fiscal authorities, and since January 2017 this obligation has been assigned to small and medium-sized enterprises.

The Polish tax audit file differs according to the structure from the standard tax audit file by the fact that it is divided into seven parts:

- VAT registration register — JPK VAT;
- accounting books — JPK KR;
- bank statements — JPK WB;
- magazines — JPK MAG;
- VAT invoices — JPK FA;
- book of income and expenses — JPK PKPIR;
- income records — JPK EWP.

JPK VAT is obligatory and is submitted to the controlling bodies by the 25th of the month following the reporting period. The single control file, in addition to data on the taxpayer and its counterparties, in its structure discloses information on transactions subject to VAT (Fig. 6).

**Other versions of the JPK are filed at the request of the fiscal authorities within three days, or a fine of up to 2,800 zlotys will be imposed on the entity.**
Republic of Singapore. Among non-European countries, the tax audit file is used in Singapore. The first version — the IAF v1 (IRAS Audit File) — was created in 2005 on the basis of the standard tax audit file. In 2008, 2009 and 2014, changes were made to it and the fourth version of the IAF consists of information about the company, the main files and source documents [11]. The singularity of the Singaporean audit file is the classification of the «General Ledger Entries» as part of «Source Documents» not the distinction, as in SAF-T (Fig. 7).

![Diagram of Tax Audit File (IAF v.4)](image)

* shading shows the difference between IAF and SAF-T 1.0

Source: compiled by authors based on data [11].

It should also be noted that the Singapore government offers a subsidy of up to 50% of the cost for the use of accounting software that meets the requirements of the electronic audit and is included in the IRAS register.

Conclusion. A study showed that more and more tax administrations around the world are beginning to use SAF-T. The reason for this trend is clear: e-filing greatly simplifies the processing of information on taxes and payments, and also makes tax checks faster and more efficient. In addition, the electronic submission of data of a standard format and structure enables fiscal authorities to use audit tools based on information denominations, which in turn reduces the cost of tax administration and makes it more effective in combating fraud and tax evasion. An additional advantage of SAF-T is the possibility of its use as in a multinational corporation, as well as in small and medium enterprises.

The article explores the experience of using tax audit files in leading countries: Portuguese Republic, Republic of Austria, Grand Duchy of Luxembourg, Kingdom of Norway, Republic of Lithuania, Republic of Poland, Republic of Singapore. For each of the countries was evaluated the structure of the tax audit file, determined the features of its implementation in the accounts and revealed the features of the tax audit file in accordance with the country's tax legislation. To analysis the global experience was found that the implementation tax audit files was gradual and needed further correction, but none of the countries that started this process gave up its implementation. For example, the Singapore government offers a subsidy of up to 50% of the cost for the use of accounting software that meets the requirements of the electronic audit and is included in the IRAS registry.

However, before introducing SAF-T into national practice, it is worth remembering that most countries that apply the tax audit file provided for its phased introduction and implementation: from pilot projects and voluntary application, to mandatory submission of a standard file by certain categories or by all types of taxes payers. Often, the scheduled dates were delayed, due to the need to refine the file format, incompatibility software, etc. Also, a significant number of companies had problems setting up their accounting system in accordance with the SAF-T rules or the necessary information was in different accounting systems, which caused the need to create a converter that would enable the data from the source systems to be converted to the required format.

That is why the standard approach is neither practical nor desirable. Each tax service faces a
variety of challenges, such as the legislative environment, administrative practice and tax culture of taxpayers. It is necessary to consider the experience of a country carefully and to evaluate in detail the factors that have shaped each approach.

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