Audit financiar, XIX, Nr. 4(164)/**2021**, *724-742*
ISSN: 1583-5812; ISSN on-line: 1844-8801

Paper presented at 7th Congress of the Romanian Audit Profession

Aspects Regarding the Structure of the Financial Audit Market

in the European Union from Fees Perspective

Univ. Prof. Habil. Ovidiu Constantin BUNGET, Ph. D.,
correspondent author, e-mail: ovidiu.bunget@e-uvt.ro
Univ. Lecturer Alin Constantin DUMITRESCU, Ph. D.
Univ. Lecturer Rodica Gabriela BLIDIŞEL, Ph. D.
Oana Alina BOGDAN, Ph. D.
Valentin BURCĂ, Ph. D.
West University of Timişoara

Abstract

The audit market, developed out of the need to strengthen the credibility and the quality of financial reporting, has led since the 1980s to a concentration around large audit firms, the dominance effect being marked on the one hand by the auditor's increasing reputation and notoriety, and on the other hand by the client's association with a reputed auditor, which contributes to improving the company's image on the market.

In this context, a major issue is represented by the level of the fees charged, as they represent key elements that may affect the auditor's independence. Moreover, a sensitive aspect is the relationship between the fee charged for financial audit services and the one for non-audit services and the compensation practices between them.

The European Commission wants to facilitate competition in an overly concentrated market and also provide the opportunity for small and medium-sized audit firms to become active players in the large corporate audit market through joint audit, in which at least one of the audit firms is not part of the Big4 group.

The mandatory audit firm rotation and the limitation on the non-audit services provided are the main aspects of the recent audit reform that directly influences the fee level.

The main purpose of this study is to analyse whether there is a pattern of audit costs at the community level. In this context, this paper aims to assess the uniformity of audit costs, namely to determine the structure of the audit market in the European Union. The research involves data set comparison methods, by analysing a sample of 2,896 firms listed on the stock exchange in 35 different states over the period 2013-2021.

To cite this article:
Bunget, O.-C., Dumitrescu, A.-C., Blidişel, R.G., Bogdan, O. A., Burcă, V. (2021), Aspects Regarding the Structure of the Financial Audit Market in the European Union from Fees Perspective, *Audit Financiar*, vol. XIX, no. 4(164)/2021, pp.724-742, DOI: 10.20869/AUDITF/2021/164/024

To link this article:
http://dx.doi.org/10.20869/AUDITF/2021/164/024
Received: 1.09.2021
Revised: 7.09.2021
Accepted: 5.10.2021

The main results of the research highlight the fact that entities outside the Big4 charge lower rates than large firms for the audit or audit-related services they provide. There is an obvious declining trend in the percentage of non-audit fees against the total fees since the entry into force of the two European reform regulations in 2014.

Key words: *audit market structure; fees; financial audit services; non-audit services;*

JEL Classification: *M42, M48*

1. Introduction

The major financial scandals have revealed the instability of the economic and financial system, having required the adoption within the European Union of a new legislation on auditing financial statements issued by public-interest entities, the entities listed on a regulated market representing a significant percentage, being designed to help increase the quality of audit missions and reinforce the credibility of financial reporting.

Through the Directive 56/2014/EU (European Commission, 2014a) and the Regulation 537/2014/EU (European Commission, 2014b) issued in 2014, applicable since 2016, the European Union aims to reform the architecture of the audit market and to create a single market for professional services among the member states.

The concentration around large audit firms began in the 1980s, when the market included 8 major players. Over time, the Big Eight group has become the Big Five (Abidin et al. 2008). Since 2002, Arthur Andersen's involvement in the Enron scandal has generated further massive market concentration around the four firms that form the Big Four, namely KPMG, PricewaterhouseCoopers, Ernst & Young and Deloitte, which dominate the audit market of listed companies within the EU member states. On the one hand, the audit of a large company listed on regulated markets increases the auditor's reputation and notoriety (European Commission, 2010), which can amplify, through a domino effect, the concentration and lack of dynamism of the market. On the other hand, the client's association with a reputed auditor leads to the improvement of the company's image on the market (Chersan et al., 2012a), which may determine the concentration of the market around the auditors who contribute to increasing investor confidence.

Thus, the excessive concentration of the market harms the competitiveness, impacts the independence, but also the level of the fees charged by external auditors for the services provided (Bottaro de Lima Castro et al. 2015; Xu, 2017). Researchers have shown interest in establishing the level of fees charged ever since 1980 (Simunic, 1980), but the topic is still relevant nowadays (Averhals et al., 2020; Cho et al., 2020; Zhang, 2021). Legislative texts issued at the European Union level, through which the European Commission aims to reform the statutory audit among member states, consider fees as key elements that may affect the auditor's independence. Moreover, a sensitive issue requiring additional regulations is the relationship between the fee charged for financial audit services and the one charged for non-audit services and the compensation practices between them. Thus, the high fees for non-audit services as opposed to low audit fees may pose a threat to the auditor's independence, with a negative impact on the opinion expressed in the report, or they may reveal an attempt to corrupt it in order to influence opinion (Robu, 2014).

The mandatory audit firm rotation and the limitation on the non-audit services provided are the basic aspects of the audit reform that directly influence the level of the fees charged. Through these measures, the European Commission aims to facilitate competition on an overly concentrated market and provide an opportunity for small and medium-sized audit firms to become active players on the market for large-scale corporate auditing through joint audit, where at least one of the audit firms is not part of the Big4 group.

Do the measures adopted change the market structure at the EU level? Does the implementation of legislative regulations influence the level of the fees charged? Does the market allow the access of small players or is auditor rotation limited to Big4 firms?

The topic of our research led us to the following objectives:

- OB1: *assessing the uniformity of audit costs*, and
- OB2: *determining the structure of the audit market at EU level*.

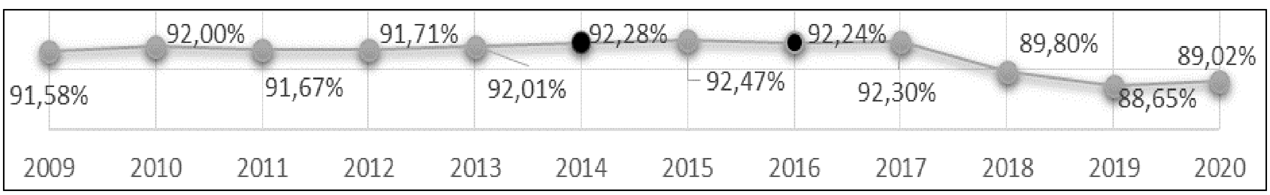
The proposed study is structured in five sections. The first section presents the context of our research. The second section is dedicated to reviewing the literature, and the next two sections present the research methodology, the results obtained and the discussions around them. The last section, the fifth, highlights the conclusions of the case study.

2. Literature review

The audit reform was based on the regulators' concerns regarding the negative effect that the excessive market concentration may have on the quality of the services provided by the statutory auditor and on its independence, which may be threatened by the level and structure of the fees charged. On the one hand, the studies performed highlight a direct link between the level of concentration and the audit fees, namely the more concentrated the market, the higher the fees charged by the auditor (London Economics, 2006; Audit Analytics, 2020; Xu, 2017). On the other hand, the market is concentrated around the strongest consulting and audit companies, capable of providing insurance services to large corporations and of aligning with new trends, such as auditing a new asset class, the cryptocurrencies, a service found in the portfolio of the giant PwC (PwC, 2019). Large audit firms also invest in digitization and emerging technologies such as Blockchain, Big Data, Data Analytics, Cloud Accounting or RPA that take over redundant tasks in the audit business and contribute to increasing efficiency, work productivity and the quality of the services provided (Farcane & Deliu, 2020; Tiron-Tudor et al., 2021; Tiron-Tudor & Deliu, 2021; Oncioiu et al., 2019).

The overall picture of the market structure at European level highlights the market concentration around the large audit firms in the Big4 group. The latter hold a dominant position on the market of statutory audit services provided to public-interest entities, with an average of over 90% of the total revenues (European Commission, 2021), an aspect highlighted in ***Figure no. 1***.

Figure no. 1. Big4's share of fees



Source: Authors' processing after Audit Analytics database

Regardless of the level of market concentration, the fees charged in the statutory audit sector must justify the auditor's effort to ensure the quality of the information presented in the financial statements, being correlated with the audit risk associated with the audited entity (Robu, 2014). The higher the risk, the higher the fees charged by the auditor (Popa et al., 2014). Thus, the entities operating by the going concern principle, which are efficient and transparent in financial reporting, pay lower audit fees compared to entities that have low financial performance (Chersan et al., 2012a). However, due to the high-quality services they provide, large audit firms charge higher rates than the rest of the competition (Chersan, 2012b). Nevertheless, studies reveal that there are also situations where, with a view to attract new clients in the portfolio, some firms set lower rates than the audit cost during the first year of contracting the audit mission, a practice known as "low balling", and which may threat the auditor's independence and audit quality (Desir et al., 2014). Thus, the reduced fee represents an incentive to retain the customer for several commitments, so that the initially granted discount is recovered (Cho et al. 2020). Naturally, the fee for the first year should be higher because the time invested in getting to know the customer, in analysing the internal control system, etc. is higher during the first year. Signing multi-year contracts reduces the pressure of the first-year budget. There are also studies showing that, in order to lower the fee level, audit firms are committed to providing other non-audit services to compensate for them (Antle et al., 2006), but which negatively affect independence (Meuwissen & Quick, 2019; Dart, 2011; Chen et al., 2005).

In this context, the provisions of the Directive 56/2014/EU and of the Regulation 537/2014/EU generate significant changes both for professional audit service providers and for audited entities, in order to contribute to the stabilization of the financial markets in the European Union and to increasing the trust in the statutory audit (Ratzinger-Sakel & Schoenberger, 2015).

A first measure prevents the auditor from providing non-audit services, within the meaning of article 5, para. (1) of the Regulation 537/2014/EU. However, statutory auditors are allowed to provide other non-audit services, but are limited to no more than 70% of the average of the fees paid in the last three consecutive financial years for the statutory audit performed (European Commission, 2014b).

The impact of the legislative provisions issued in 2014 at the European level with regard to the percentage of fees for audit and non-audit services provided for the entities listed on regulated markets in the European Union can be seen in **Table no. 1**. There is an obvious declining trend in the percentage of the non-audit fees against the total fees since the entry into force of the two European regulations, in 2014, when the fees charged for non-audit services represented the largest percentage against the total fees. In 2016, when the provisions began to be transposed into the national regulations of the member states, there was a 10.36% drop in percentage, a decreasing trend that continues until 2020.

Table no. 1. Audit services fees vs. non-audit service fees Big4 (euro)

Year	Big4 audit fees	Non-audit service fees – Big4	Share of non-audit services in total – Big4
2009	3,454,952,106	530,198,981	13.30%
2010	4,138,909,059	668,022,294	13.90%
2011	4,306,551,137	670,896,691	13.48%
2012	4,417,345,853	712,032,547	13.88%
2013	4,532,882,208	725,734,298	13.80%
2014	**4,886,852,289**	**799,224,420**	**14.06%**
2015	5,020,277,229	777,305,318	13.41%
2016	**5,134,304,686**	**593,292,544**	**10.36%**
2017	5,197,008,745	594,683,534	10.27%
2018	5,408,955,237	612,747,892	10.18%
2019	5,578,161,748	585,979,758	9.51%
2020	5,328,177,152	555,846,278	9.45%

Source: Authors processing based on information extracted from the Audit Analytics database

The same decreasing trend can be noticed for the entities that are not part of the major market players' group (**Table no. 2**). The fees charged confirm that the entities outside the Big4 charge lower rates for the audit or audit-related services they provide, compared to big audit firms.

The trust relationship between the auditor and the client is built over time, but there are fears that a long-term partnership might reduce professional scepticism and threaten the auditor's independence. Thus, the mandatory audit firm rotation after a maximum period of ten years is another measure through which the European Union wants to ensure the auditor's independence and objectivity and, at the same time, contribute to the dynamization of the audit market.

Table no. 2. Audit services fees vs. non-audit service fees non- Big4 (euro)

Year	Non-Big4 audit fees	Non-audit service fees – non-Big4	Share of non-audit services in total – non-Big4
2009	342,837,021	23,744,549	6.48%
2010	391,702,914	26,260,791	6.28%
2011	418,255,755	34,037,043	7.53%
2012	431,148,437	32,415,414	6.99%
2013	423,598,256	33,323,247	7.29%
2014	**438,519,916**	**36,934,081**	**7.77%**
2015	440,580,684	31,451,705	6.66%
2016	**453,634,123**	**28,026,749**	**5.82%**
2017	458,136,173	24,933,810	5.16%
2018	652,576,364	31,270,022	4.57%
2019	765,800,871	23,334,750	2.96%
2020	702,801,921	23,037,106	3.17%

Source: Authors' processing based on information extracted from the Audit Analytics database

In the study performed on 198 companies listed on the Warsaw Stock Exchange, Indyk (2019) points out that the mandatory audit firm rotation does not reduce the level of market concentration because the auditors' rotation is also performed in Big4 firms. Moreover, in the context imposed by the legislative provisions, the entities in the Big4 group have a greater bargaining power and benefit more from customer rotation than from their retention. The results of the study conducted on the Polish market are also supported by those identified by Bleibtreu & Stefani (2013), attesting that, in concentrated markets, the mandatory audit firm rotation determines an even greater homogeneity, thus opposing the objectives of the European Commission.

However, there are other studies that highlight the positive impact of this measure imposed among the EU member states, such as those performed by Bulucea (2020) and Kim et al. (2015), which highlight that the mandatory audit firm rotation improves audit quality.

A solution to reducing concentration may be the joint audit, a concept rooted in France but not so widespread among other member states. This practice involves auditing the entity by at least two auditors who share the audit work and prepare and sign a joint audit report. Companies opting for such a mechanism benefit from a longer auditor rotation period (the Regulation 537/2014/EU provides in this context a 24-year period without the need for a tender) compared to single auditors, who can audit the same public-interest entity for 20 years only if a public tender takes place after the first ten years.

Joint audits represent a way to improve the European audit market (European Commission, 2010), and the EU is promoting this concept through legislative provisions issued in order to reform the audit. The Regulation 537/2014/EU requires the audit committee to make two or more recommendations on the choice of the new auditor, while ensuring that small audit firms are not ignored during the tender process. Thus, the aim is to reduce the level of concentration by facilitating market access for audit firms that are not part of the Big4.

The studies performed show that hiring two Big4 audit firms does not ensure a higher quality audit mission, than in the case where both a Big4 firm and one outside the group are involved in the engagement (Lobo et al., 2017). In the research undertaken, Bianchi (2018) finds that joint audits facilitate knowledge transfer, increase the auditors' expertise and investor trust, the audit quality being influenced by the collaboration between the firms involved in the joint audit mission. However, there are also studies that reflect the opposite. André et al. (2016) analyse the situation of the listed entities in France, a country where joint audit is mandatory, and finds out that joint audit involves higher fees than in other countries such as the UK and Italy, where this system is not required. The authors also point out that these higher rates do not implicitly improve audit quality, as there is no direct relationship between the two variables.

The globalization trend has also left its mark on the business environment. Companies have expanded and diversified their activities both within and outside the European Union, thus generating the need for audit firms to adapt and widen the range of insurance services provided to their customers. However, large audit firms are becoming stronger, with an increasingly rich client portfolio, representing an important market segment. This is a concern for regulators who need to ensure the proper functioning of the market in order to allow for fair competition and help improve the quality of the audit missions performed.

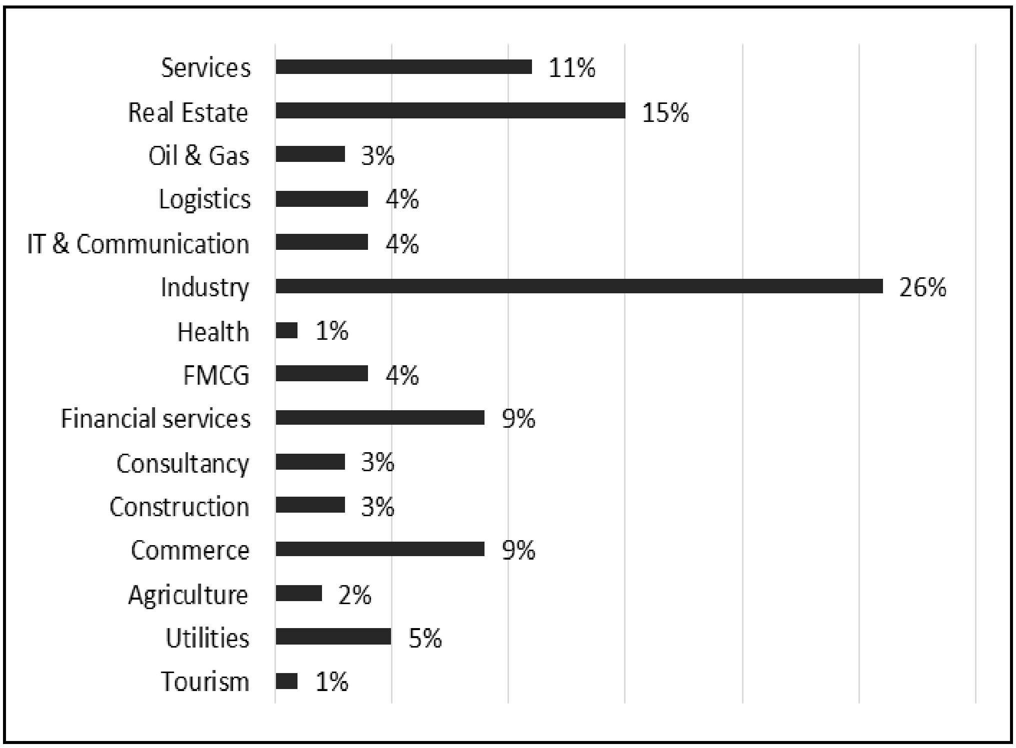
3. Research methodology

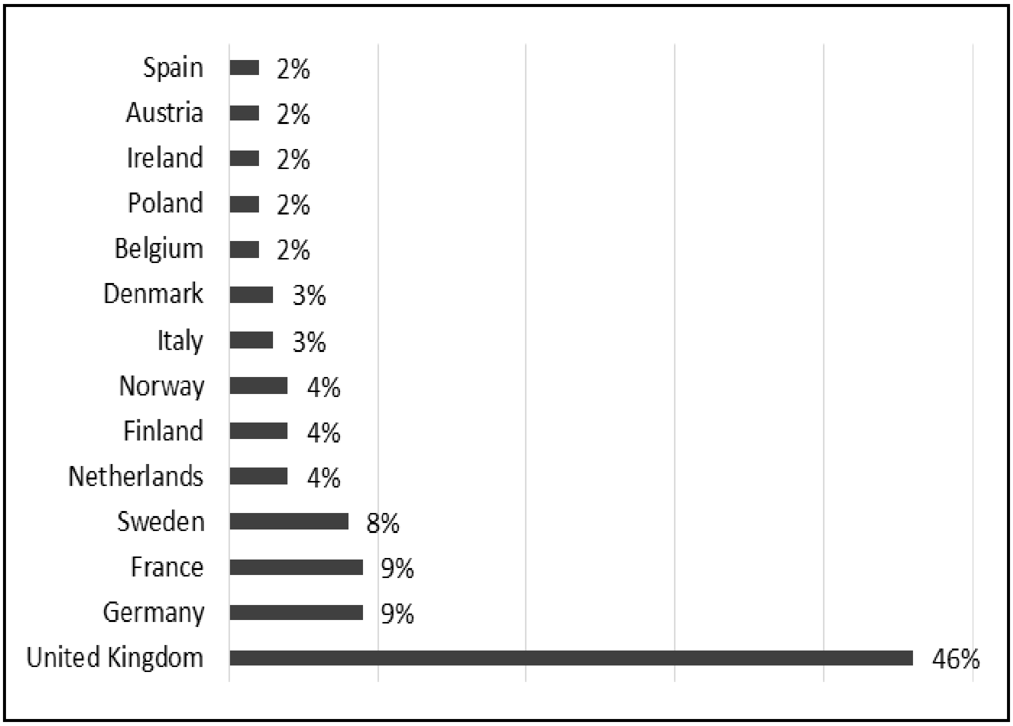
3.1. The structure of the analysed sample

The analysis of the audit market from the fees' perspective is performed on a global sample, consisting of listed companies. The 2,896 companies included in the analysis belong to 35 states. In total, the sample we refer to includes 9,489 observations. Due to the availability of the data extracted from the Audit Analytics database, we notice that 93.79% of the total sample is covered by companies in 14 states. The distribution of the companies by their country of origin is described in *Figure no. 2*. This graph illustrates that around 46% of the analysed sample are UK companies, followed by 9% companies from Germany, 9% companies from France and 8% companies from Sweden.

Although the sample reflects to a greater extent the audit market in the United Kingdom, the distribution of the sample describes a mix of information regarding the audit market in the Community economic space. Given the analysed period, and despite the fact that the United Kingdom has left the EU since 2021, the sample best reflects the pre-Brexit period. The period under study is 2013-2021. Most of the observations included in the analysis (84.99%) refer to the 2017-2020 period. Consequently, the analysis of the available information will also be linked to the significant changes made in terms of the Community acquis on the audit market.

Figure no. 2. Sample distribution





Source: Authors' processing

Our approach focuses on analysing the specific effect of the business segment where the analysed companies operate. We notice in ***Figure no. 2*** a concentration of observations showing that most companies operate in industry (26%), real estate (15%), services (11%), financial services (9%) and trade (9%), representing over 70% of the total sample of analysed data.

3.2. The empirical data analysis

The main objective of this study is to analyse the extent to which there is a pattern of audit costs at the Community level. For this purpose, we proceeded to assess the existence of regional disparities and disparities in the business segments under analysis, from the perspective of the statutory audit costs. The amplitude of these disparities was highlighted by conducting an assessment of the degree of concentration of audit costs, especially in the business segments where the analysed firms operate.

The concentration analysis concerns, on the one hand, the extent to which the Big4 market share has changed substantially during the period analysed. Moreover, we proceeded to analyse the degree of uniformity of audit fees, by calculating a concentration coefficient, taking into account the analysis at the level of the business segment covered by the analysed sample. At the same time, we performed the dynamic analysis of the concentration coefficient, by checking the existence of a significant evolution that could be generated by any substantial legislative change to the methodology for calculating the audit fee.

The concentration coefficient is calculated by using the trapezoidal estimation method, starting from the definition of the Lorenz curve and the two consecrated areas. In a formal expression, considering *n* intervals and a variable *x* representing the amount of audit costs corresponding to the analysed audit reports, we calculated both A and B areas corresponding to the Lorenz curve. We therefore considered the probability distribution of the variable *x* as variable:

$$X: \begin{pmatrix} x_1, & x_2, & \dots, & x_i, & \dots, & x_k \\ x_1, & n_2, & \dots, & n_i, & \dots, & n_k \end{pmatrix}$$

The cumulative frequencies relative to the analysed audited reports are given by the relation $N_i = \sum_{i=1}^{k} n_i$, for each value group of the level of logarithmic audit costs. Based on the resulting histogram, starting from intervals of equal values, we obtained 9 such intervals, so that *k = 9*. The probability starting from the number of audited reports that have associated audit costs falling within the value interval *i* of the audit cost population is determined by the relation $q_i(\%) = \frac{N_i}{\sum_{i=1}^{k} n_i}$. The probability corresponding to the cumulated product corresponding to the value interval *i* of the audit costs, is given by the relation $p_i(\%) = \frac{\sum_{i=1}^{k} x_i \cdot n_i}{\sum_{i=1}^{k} x_i \cdot n_i}$.

We calculated the cumulative probability of the number of audit reports that do not exceed the upper limit of the interval *i*, starting from the relation $Q_i(\%) = \sum_{j=1}^{i} q_j(\%)$. Similarly, we calculated the cumulative probability of the cumulative amount of the audit costs corresponding to the intervals up to the maximum limit of the interval *i*, namely $P_i(\%) = \sum_{j=1}^{i} p_j(\%)$. The difference $Q_i(\%) - P_i(\%)$ is applied to each value interval *i*.

By summarizing the differences $Q_i(\%) - P_i(\%)$ we obtained the area of the zone *A* specific to the representation of the Lorenz curve. In parallel, we proceeded to the cumulation of probabilities $\sum_{i=1}^{k-1} n_i$, describing the area *A* + *B* corresponding to the representation of the Lorenz curve. We thus obtained the concentration coefficient defined by the relation $\frac{\sum_{i=1}^{k}(Q_i(\%) - P_i(\%))}{\sum_{i=1}^{k-1} n_i}$ (Tarca, 1998).

This indicator reveals a high level of uniformity of audit costs as long as its value approaches 0. On the other hand, it is recommended that a high level of disparities of the fees charged approaches the value 1 of this concentration indicator.

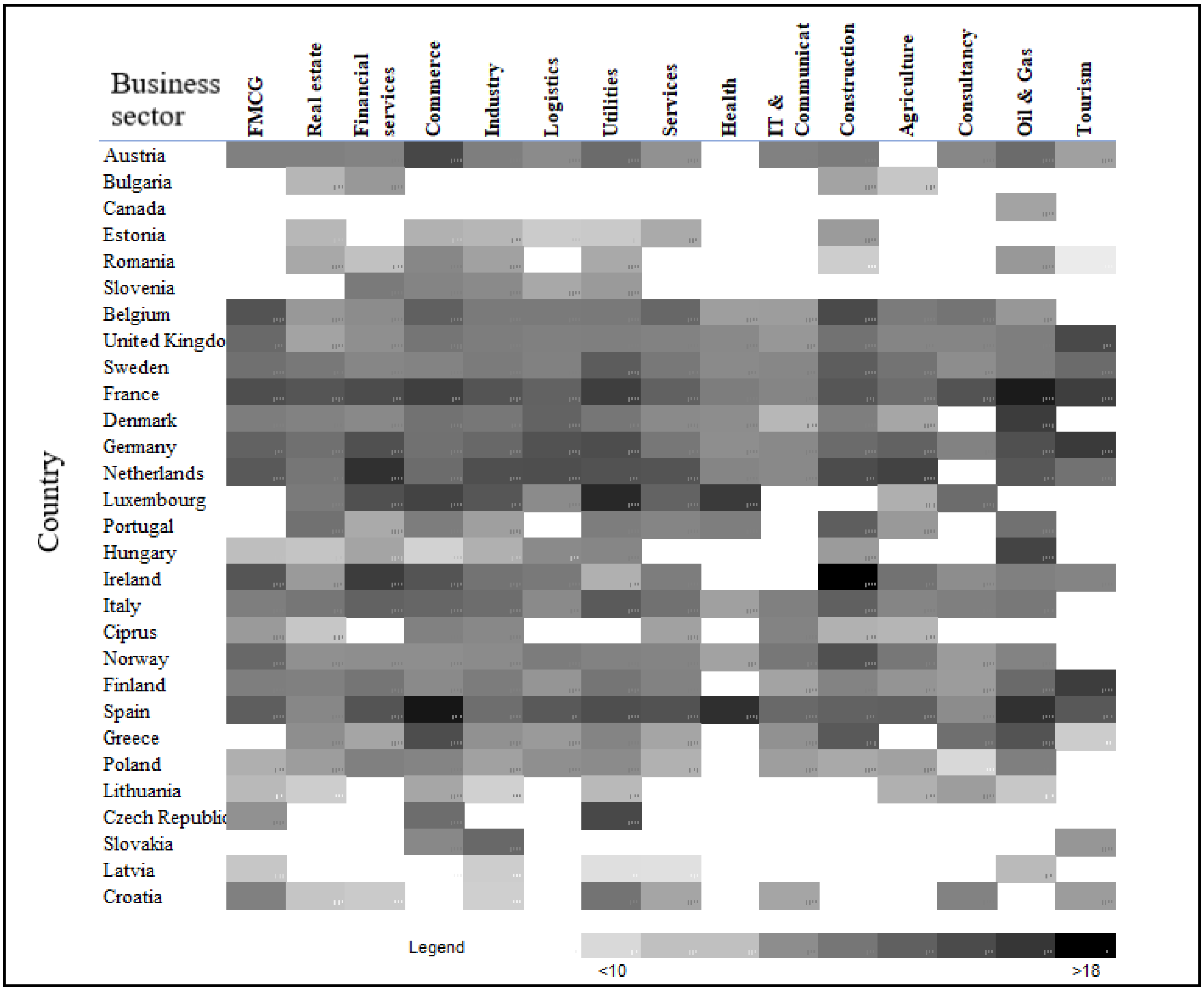
The analysis of the degree of concentration of the audit services market is performed by using the Herfindahl-Hirschman concentration index, calculated with the relation HH $_i$= $\sum_{j=1}^{k} S_j^2$, where s_j is the market share of the firm j, corresponding to the analysed sample, i represents the analysed industry, and k represents the number of audit firms that provided services and obtained revenues from the statutory audit activity in industry i. The market share s_j is calculated at the level of the revenues obtained from the audit activity, limited to the sample analysed.

4. Results and discussions

4.1. Assessing the uniformity of audit costs

In ***Figure no. 3*** we represented the matrix of the fee level of the statutory audit services, corresponding to the analysed sample. We easily notice a high level of audit fees, especially in highly developed economies. As noted by Gunn et al. (2019) or Eierle et al. (2021), the differentiation of audit fees is significantly influenced by economic and institutional factors specific to each jurisdiction. The more developed national economies are, the more complex business models become and the more exposed they are to interference with other national economies, with direct implications for the level of audit risk that increases significantly. Consequently, audit fees are higher, covering the audit risk supplement assumed by the auditors (Popa et al., 2014; Chersan et al., 2012). There is a similar explanation for the high level of audit fees in certain business segments, such as extraction and production of petroleum products.

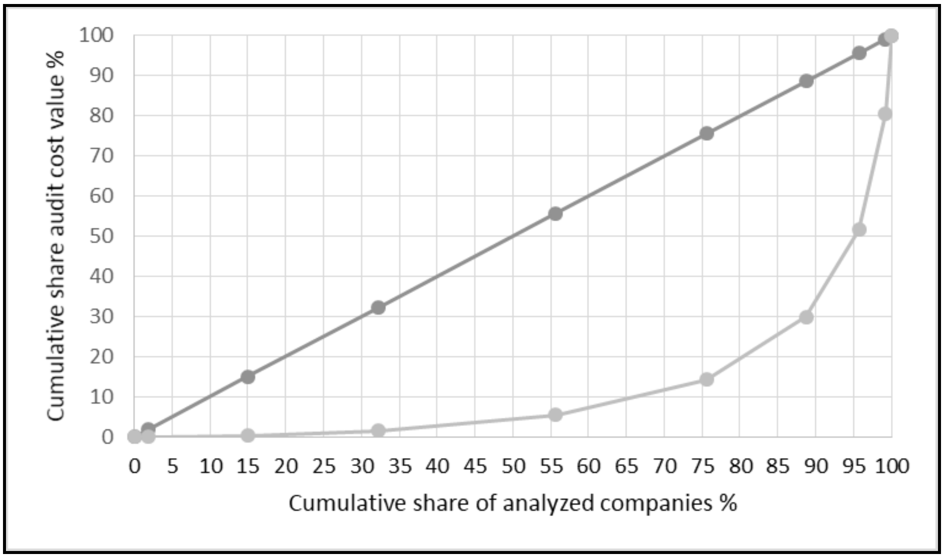
Figure no. 3. Audit fee market map – average analysis (logarithmic)



Source: Authors' processing

At the same time, it should be noticed that audit fees do not have standard patterns, as each audit commitment is described by a significant degree of specificity. This differentiation of audit fees is also noticed in the degree of uniformity of audit costs, represented by the Lorenz curve in *Figure no. 4*. This graph is representative of a concentration (standardization) coefficient of audit fees of approximately 0.605, which is a significant standardization level. However, this level of uniformity of audit fees is largely due to the high degree of concentration of the audit market, where most of the revenue from audit activities is obtained by Big4 audit firms (London Economics, 2006; Audit Analytics, 2020; European Commission, 2021). These companies are known for the high level of standardization of audit activities, implementing policies, processes, procedures and support tools that outline a framework which allows the systematization of audit activities to a significant extent. At the same time, these audit firms are, in most cases, promoters of the adoption and implementation of emerging technologies and best auditing practices, both internationally and regionally or locally.

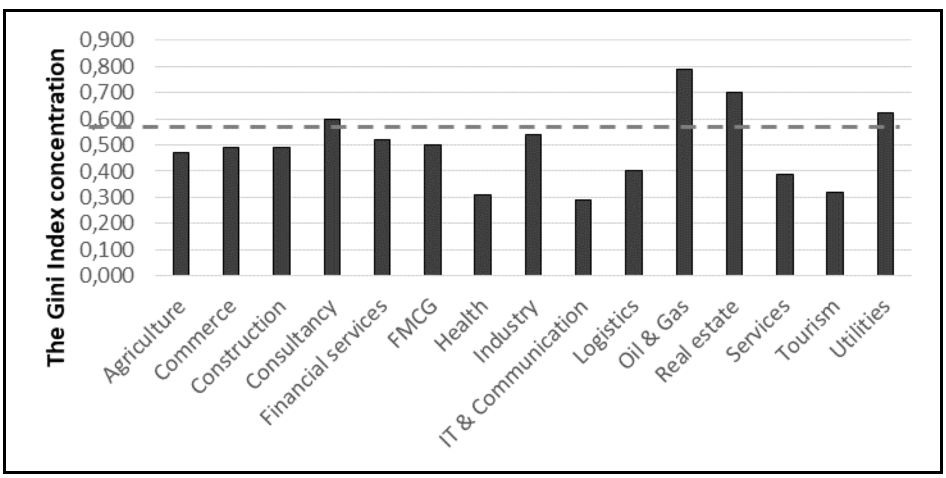
Figure no. 4. Evolution of the degree of standardization (concentration) of audit costs



Source: Authors' processing

However, these results have to be analysed with caution, given that the sample analysed by the authors consists of large firms listed on international capital markets, which is why most audit engagements are contracted by Big4 audit firms, with direct negative implications on establishing competitive audit fees throughout the bidding process. Big4 audit firms have similar bargaining power, and the approach to audit commitments is similar for the most important key elements, which is why there is a relatively high level of uniformity of audit fees. However, we would like to point out that there are differences in the audit fees charged, even among Big4 audit firms. The differentiation is reduced mainly to the specifics of the audited firms and less to the institutional framework and the level of macroeconomic development.

Figure no. 5. The degree of concentration of audit costs across business segments

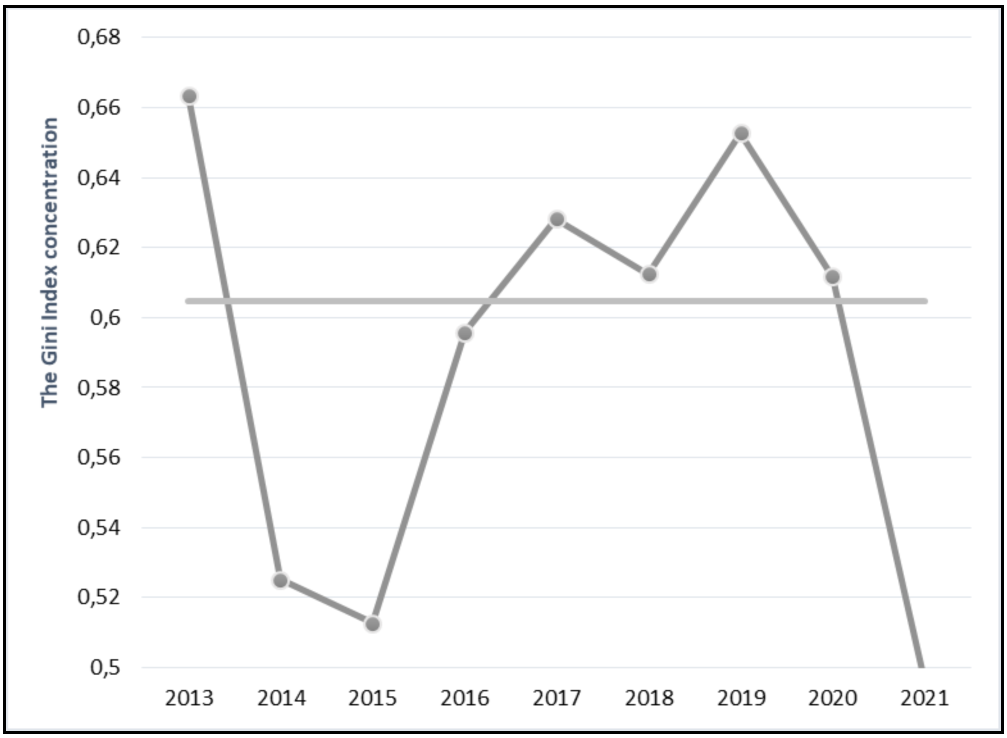


Source: Authors' processing

Figure no. 5 shows visible differences in terms of the inequalities of the aggregate audit costs across the business segments where the audited firms operate. As expected, in business sectors with a higher degree of specificity of the audited companies' operations, there is a higher level of uniformity, precisely because there is a lower margin for negotiating audit fees, as the audit firms must be specialised in the specifics of the business model and the implications on accounting estimates, and on the audit risk assumed. This is the case of oil and gas extraction, or real estate investments sectors. On the other hand, in the sector of services, tourism, or IT, the audit activity is characterised by a lower level of complexity, and the audit risk is lower, which is why in these areas the bargaining power of audit clients is higher.

In time, the degree of uniformity of audit fees has fluctuated, as can be seen in *Figure no. 6*. However, there is a significant increasing trend in the degree of uniformity (concentration) of audit fees with the adoption and implementation of the Directive 2014/56/EU, which has been integrated into national regulations over a period of 2 years.

Figure no. 6. The evolution of the degree of concentration of audit fees



Source: Authors' processing

However, we equally have to mention the opinion of Zhang et al. (2021), who point out that reducing audit costs should not be confused with a decline in audit quality, but it may also be associated with improving the auditor's efficiency, who may propose bids for more competitive bidding audits, in the context of certain cost reductions. These cost savings are even greater for large audit firms, given the more rigorous systematic approach to audit commitments. However, the common approach to audit activities across multiple audit engagements is closely linked to the homogeneity of the business models in the business segment where audit clients operate, leading to significant economies of scale, with indirect effects on the audit firms' competitiveness by price (Bills et al., 2015).

At the same time, we notice the impact of the COVID-19 crisis on the audit market, through a significant drop in the degree of uniformity of audit fees, most likely due to the intensification of activities meant to capitalize the competitive advantage. Under the conditions imposed by the COVID-19 crisis, the high level of economic uncertainty leads to an increase in audit risk, which generates more differentiated audit fees in pandemic times. In the context in which economic crises increase the degree of economic uncertainty, companies are forced to reduce costs, which is why audit firms reduce their audit fees until the return of economic growth (Zhang et al., 2018). Under these conditions, audit firms carry out different marketing strategies and pricing policies in order to remain competitive (Cho et al., 2020; Desir et al., 2014) and avoid impacting the quality of audit services (Popa et al., 2014). This behaviour is all the more visible at the level of Big4 audit firms that have to face real competition from competitors of the same size and bargaining power (Francis et al., 2013; Willekens et al., 2020).

4.2. Assessing the degree of concentration of the audit services market

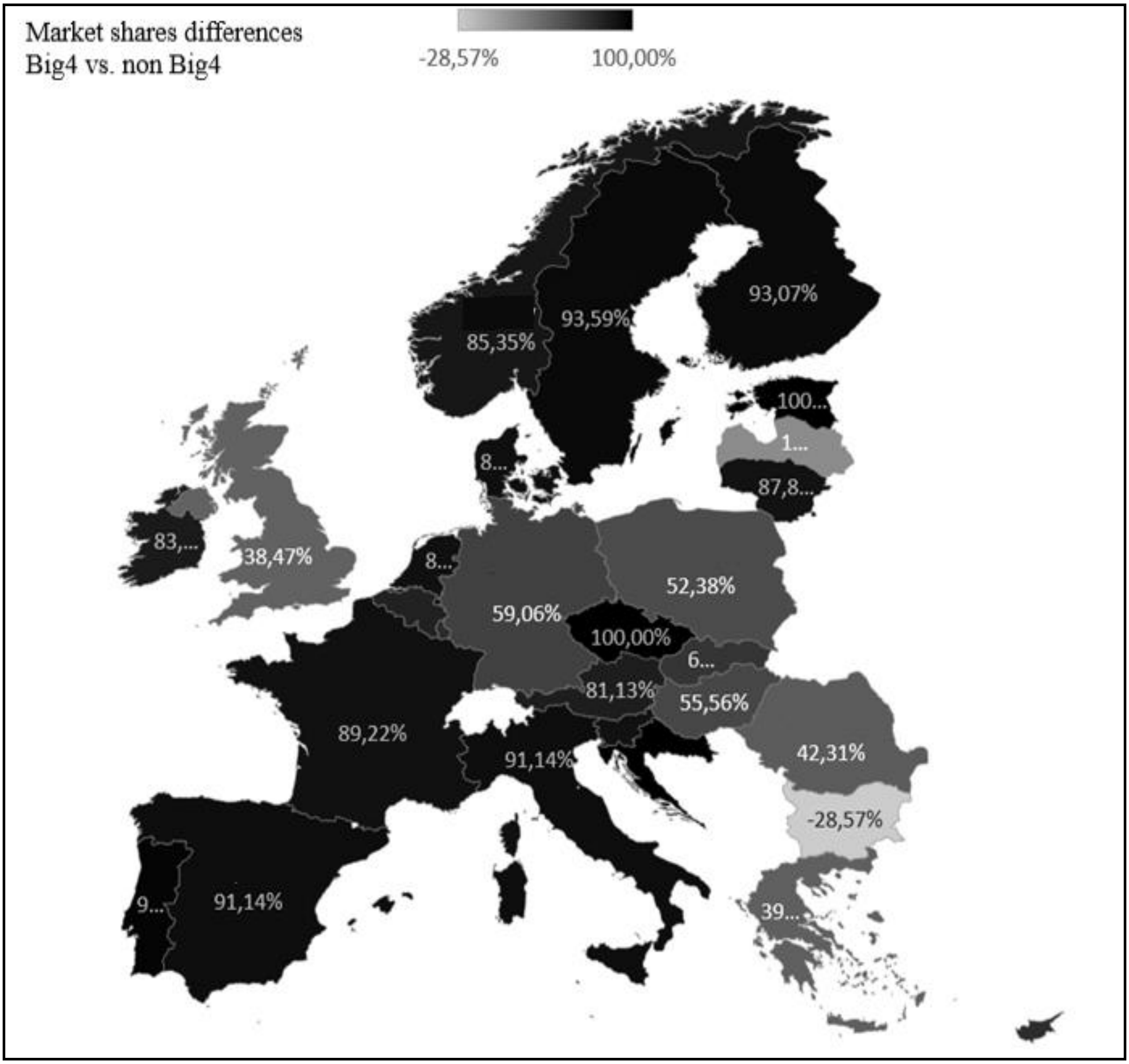
The overall picture of the audit market shows that the size of the audit market, the existence of real competitors and the emergence of a competitive advantage by specializing in specific business segments are the main pillars in shaping the structure of the audit market and its degree of concentration. However, given the higher degree of concentration of the audit market, it seems that the central pillar conditioning audit quality is the dominant position of the market leader over its competitors, while the competitive advantage obtained by industrial specialisation is of secondary importance (Willekens et al., 2020). The indirect effects of the degree of concentration of the audit market are felt, most often, at the level of audit costs, especially in the case of certain heterogeneous business segments, in which audit firms must specialise. However, indirect effects are also felt at the level of the financing costs of audit clients, given that financial institutions perceive negatively an increased level of audit market concentration, with possible negative implications on audit quality (Geng et al., 2019). Under these circumstances, domestic regulators are not the only ones interested in reducing disparities on the audit market, but audit clients as well.

The audit market is currently perceived as an oligopoly formed by Big4 audit firms, with implications on the level of audit fees and barriers imposed on new audit firms that wish to bid at the request of listed firms to select an auditor. As long as the process of negotiating audit commitments does not allow or condition the quality of the information disclosed in the audit report at the level of audit fees, there are no signs of concern. However, this negotiation process is implicitly reflected in the quality of audit reports, precisely for the auditor to ensure continuity and keep the audit client in its own portfolio and in the following financial years (Cho et al., 2020; Desir et al., 2014).

The literature reveals an increase in audit fees if there is an oligopoly of audit firms on the audit market, in the context of a limited number of audit firms that offer audit services with a high degree of specialisation in each business segment. On the other hand, at the level of the audit market where audit clients do not require auditors' specialisation in the particularities of the field they operate in, a concentration of the audit market is achieved only in the context of a significant reduction of audit fees (Xu, 2017).

Figure no. 7 shows a higher concentration of the audit market in highly developed economies, justified by the higher complexity level of audit commitments and by the need for auditors to specialise in various business segments, with a direct effect on the level of audit fees (Guo et al., 2020; Scheidt, 2020). However, these additional costs paid by audit clients for the specialisation of large audit firms are rather accepted by large firms, as smaller firms prefer to turn their attention even to smaller audit firms, that do not specialise in specific business segments (Zhang et al., 2021). Thus, the premises of a higher level of audit fees are outlined especially in the case of highly developed economies and with a consolidated institutional framework, which is mature enough to sanction any non-compliance with the domestic legal framework (Eierle et al., 2021).

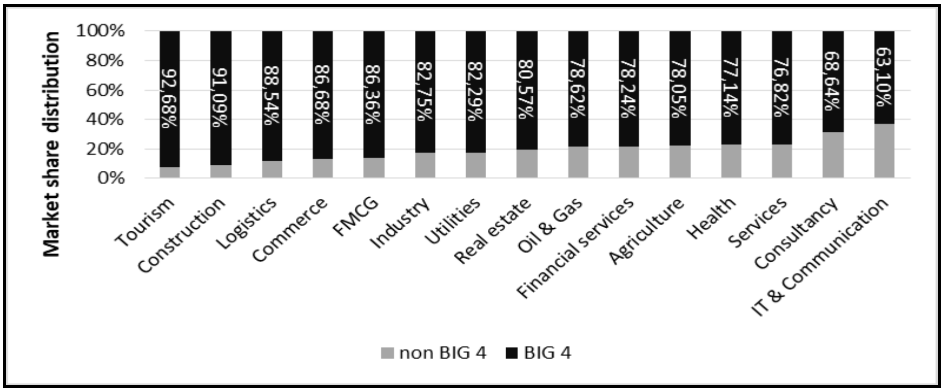
Figure no. 7. Differences between the number of audit missions performed by Big4 companies vs. non- Big4



Source: Authors' processing

Figure no. 8 emphasizes the existence of an oligopoly type of audit market, outlined at the level of audit services requested by the large listed companies included in our sample. As mentioned above, the requirements for auditor specialisation prevent the entry of non-Big4 firms in the bidding process, which explains the high degree of concentration in the business segments characterised by companies with complex business models and significantly higher audit risks.

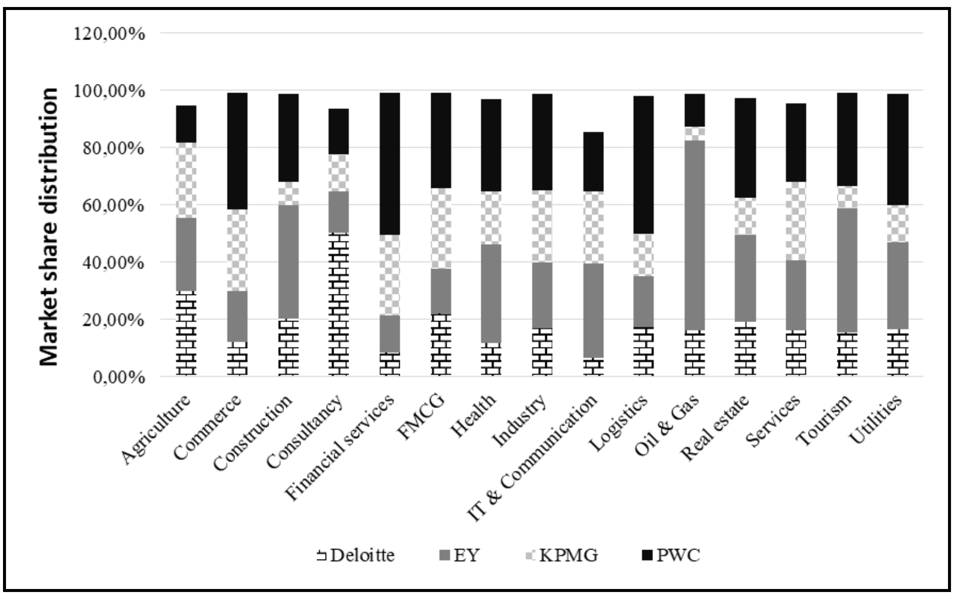
Figure no. 8. Distribution of market share according to the class of the audit firm



Source: Authors' processing

Under these circumstances, audit clients have limited opportunities to obtain competitive rates, especially in the context of bidders with similar capabilities in terms of business specialisation and a coherent framework for planning and performing audit commitments. However, we notice that Big4 audit firms are not present to the same extent in all business segments, as revealed by the market share we calculated, corresponding to the sample under analysis. For example, in ***Figure no. 9*** we can easily notice that Ernst & Young is more present in the gas and oil extraction segment, or in tourism. On the other hand, PwC is more present in the financial services sector. We are used to the research activities, the guides and public consulting campaigns of these audit firms in different business segments. These tools are fundamental marketing elements of Big4 firms that illustrate the degree of specialisation in certain business segments.

Figure no. 9. Representation of the market share of Big4 audit firms by business sectors



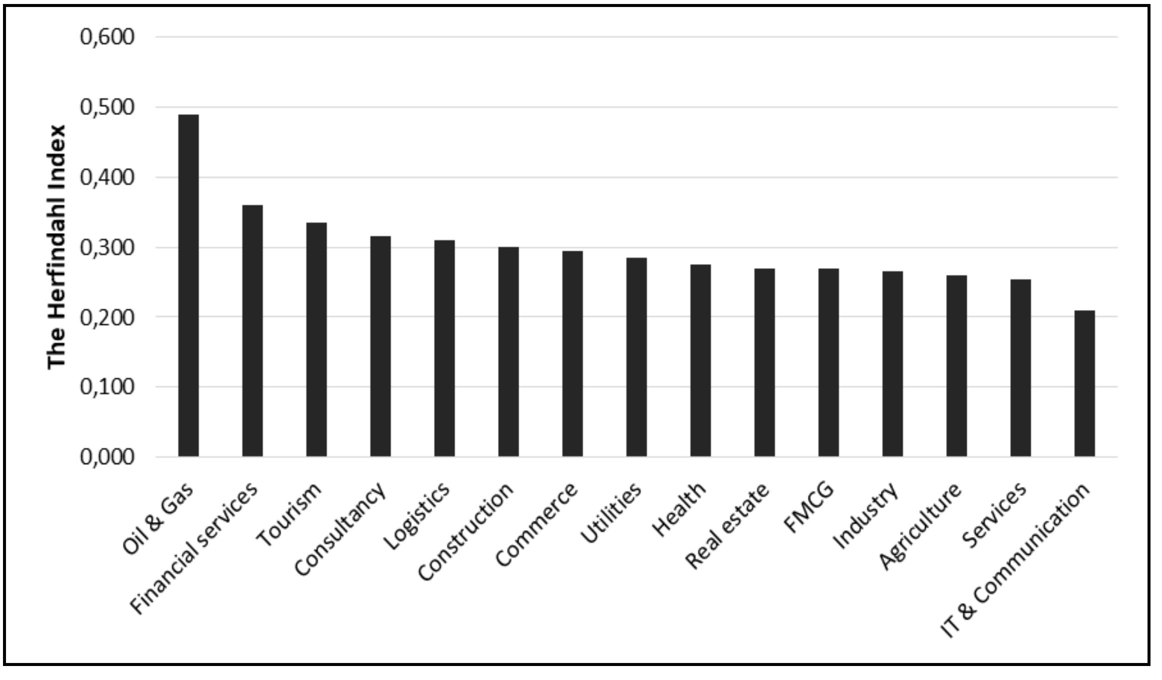
Source: Authors' processing

Figure no. 10 illustrates a representation of the HHI index (Herfindahl–Hirschman index) for audit market concentration. As noticed earlier, in the business segments that require the specialisation of audit firms, there is a higher level of audit market concentration, precisely because Big4 audit firms have turned this business specialisation into a competitive advantage, which has reduced competitiveness and raised visible barriers preventing the entrance of other audit firms.

The relationship between the level of audit fees and the degree of audit market concentration is even more visible in large economic sectors with a small number of customers (Xu, 2017). However, Francis et al. (2013) pointed out the importance of Big4 audit firms seen as leaders and promoters of audit practices that ensure the detection and punishment of the earnings management reported by audit clients. However, the authors point out that this position as a promoter of sound audit practices is conditioned by similar market shares of the Big4 audit firms. This conclusion is similar to the position of Willekens et al. (2020), who emphasize the importance of the audit firm's dominance over its competitors in ensuring a quality audit.

Thus, the dominance of Big4 audit firms can be perceived as a good sign in the audit market. However, the institutional framework of each jurisdiction should be able to control and monitor this phenomenon, either by a more careful regulation of the audit market, or by implementing a transparent, continuous, efficient and fair penalty system for the violation of legal provisions or the auditors' ethics and professional conduct.

Figure no. 10. Statutory audit services market concentration index



Source: Authors' processing

In this respect, we reiterate some of the most acknowledged regulations outlined at an international level, namely:

- the mandatory auditor rotation;
- the mandatory audit partner rotation;
- mandatory joint-audit auditors, in the case of companies of public-interest or of key importance for the economy;
- limiting the percentage of revenues from an audit client, in relation to the total revenues obtained by an audit firm (fee caps);

- the mandatory transparency in reporting audit costs;
- preventing or limiting the provision of insurance services or of joint-audit services, exclusively to statutory audit services.

Conclusions

In the context of an excessive audit market concentration marked by the presence of the Big4 group, especially in highly developed economies, the arising issue is the damage to competitiveness, the influence of independence, but also the level of fees charged by external auditors for their services. At the level of literature, we identified ideas arguing that high values of non-audit fees as opposed to low values of audit services may pose a threat to the auditor's independence, with a negative impact on the opinion expressed in the report or they may reveal an attempt to corrupt it in order to influence opinion.

In order to facilitate competition in an overly concentrated market and provide the opportunity for small and medium-sized audit firms to become active players in the audit market of large corporations, the European Commission has initiated reforms in the field of joint audit, which specify that at least one of the audit firms is not part of the Big4 group. Another aspect of the reform concerns the mandatory audit firm rotation and the limitation on the amount of non-audit services provided, which have a direct impact on the level of fees charged.

By analysing the literature, we can conclude that the structure of the audit market at the European level focuses on Big4 dominance. However, regardless of the level of market concentration, the fees charged in the statutory audit sector must justify the auditor's effort to ensure the quality of the information presented in the financial statements, being correlated with the audit risk associated with the audited entity.

The study of the impact of the legislative provisions issued in 2014 at a European level regarding the percentage of audit and non-audit fees charged for the entities listed on regulated markets in the European Union reveals an obvious declining trend in the percentage of fees for non-audit services against the total fees since the entry into force of the two European regulations, in 2014, when the fees charged for non-audit services represented the largest percentage of the total fees. In 2016, when the provisions started to be transposed into the national regulations of the member states, there was a 10.36% drop in percentage, a decreasing trend that continues until 2020.

Given the specifics of the business segment where the analysed companies operate, we noticed that over 70% of the analysed companies operate in industry (26%), real estate (15%), services (11%), financial services (9%), trade (9%), 46% being concentrated in Great Britain, 9% in Germany, 9% in France and 8% in Sweden.

In order to highlight the regional disparities in terms of the reported costs of statutory audit in the analysed business segments, we calculated a concentration coefficient based on a significant market share for a small sample of audit firms, or by practicing differentiated audit rates, thus concluding that Big4 audit firms form an oligopoly in the audit services market, due both to their experience, expertise and global exposure, but also to the power to negotiate with the audited firms.

At the level of highly developed economies, we noticed a high level of audit fees, justified by the complexity of audit commitments and by the need for auditors to specialise in various business segments, with a direct effect on the level of audit fees. We identified the increasing tendency in the degree of uniformity (concentration) of audit fees with the adoption and implementation of the Directive 2014/56/EU, which was integrated into national regulations over a period of 2 years. The impact of the COVID-19 crisis cannot go unnoticed either, as we identified a significant drop in the degree of uniformity of audit fees, most likely due to the intensification of the competitive advantage. The high level of economic uncertainty leads to an increase in audit risk, which generates more differentiated audit fees in pandemic times. In the context in which economic crises increase the degree of economic uncertainty, companies are forced to reduce costs, which is why audit firms adjust their audit rates until the return of economic growth.

REFERENCES

1. Abidin, S., Beattie, V., Goodacre, A. (2008). Audit Market Structure, Fees and Choice following the Andersen Break-Up: Evidence from the UK. *British Accounting Review*, 42(3), 187-206;
2. André, P., Broye, G., Pong, C. K. M., & Schatt, A. (2016). Are joint audits associated with higher audit fees? *European Accounting Review*, 25(2), 245-274;
3. Antle, R., Gordon, E., Narayanamoorthy, G., Zhou, L. (2006). The joint determination of audit fees, non-audit fees, and abnormal accruals. *Rev. Quant. Finance. Acc*, 27 (3): 235-266;
4. Audit Analytics. (2020). Monitoring the audit market in Europe. Available on-line: http://auditanalytics-2020euauditmarketreport.pagedemo.co/(accessed: June 14, 2021);
5. Averhals, L., Van Caneghem, T., Willekens, M. (2020). Mandatory audit fee disclosure and price competition in the private client segment of the Belgian audit market. *Journal of International Accounting, Auditing and Taxation*, 40;
6. Bianchi, P. A. (2018). Auditors' joint engagements and audit quality: Evidence from Italian private companies. *Contemporary Accounting Research*, 35(3):1533-1577;
7. Bills, K.L., Jeter, D.C., Stein, S.E. (2015). Auditor Industry Specialization and Evidence of Cost Efficiencies in Homogenous Industries. *The Accounting Review,* 90 (5): 1721-1754;
8. Bleibtreu, C., Stefani, S.U. (2013).The Effects of Mandatory Auditor Rotation on Low Balling Behavior and Auditor Independence.*Working Paper Series* of the Department of Economics, University of Konstanz 2013-14;
9. Bottaro de Lima Castro, W., Peleias, I.R., Peres da Silva, G. (2015). Determinants of Audit Fees: a Study in the Companies Listed on the BM&FBOVESPA, Brazil. *R.Cont.Fin*. 26(69): 261-273;
10. Bulucea, M.C. (2020). Audit firm rotation and audit quality: case of the listed Romanian firms. *Annales Universitatis Apulensis Series Oeconomica*, 22(2): 158-168;
11. Chersan, I. C., Mironiuc, M., Robu, I. B. (2012a). Influența performanței financiare a firmei-client asupra onorariilor de audit. *Audit Financiar*, 10: 3-12;
12. Chersan, I.C., Robu, I.B., Carp, M., Mironiuc, M. (2012b). A Circular Causality Analysis on the Determinants of the Audit Fees within the NYSE-Quoted Companies. *IBIMA*, (2012), Article ID 896676;
13. Chen, K.Y., Elder, R.J., Liu, J.L. (2005). Auditor Independence, Audit Quality and Auditor-Client Negotiation Outcomes: Some Evidence from Taiwan, *Journal of Contemporary Accounting & Economics*, 1(2): 119-146;
14. Cho, M., Kwon, S.Y., and Krishnan, G.V. (2020). Audit fee lowballing: Determinants, recovery, and future audit quality, *Journal of Accounting Public Policy*;
15. European Commission. (2010). Green Paper – Audit Policy: Lessons from the Crisis, available at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0561:FIN:RO:PDF(accessed: June 14, 2021);
16. European Commission. (2014a). Directive 56/2014 / EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2006/43 / EC on the statutory audit of annual financial statements and consolidated financial statements, available at: https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32014L0056&from=EN, (accessed: June 14, 2021);
17. European Commission. (2014b). Regulation (EU) no. Regulation (EC) No 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding the statutory audit of public interest entities and repealing Commission Decision 2005/909 / EC, available at: https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32014R0537&from=NL, (accessed: June 14, 2021);
18. European Commission (2021). Report from the Commission to the European Parliament, the Council, the European Central Bank and the European Systemic Risk Board on developments in the EU market for the provision of statutory audits to public-interest entities pursuant to Article 27 of Regulation (EU) No 1095/2010. 537/2014, available at: https://op.europa.eu/ro/publication-detail/-/publication/eeeae9d5-6151-11eb-8146-01aa75ed71a1, (accessed: June 14, 2021);

19. Dart, E. (2011). UK investors' perceptions of auditor independence. *The British Accounting Review*, 43(3): 173-185;
20. Desir, R., Casterella, J.R., Kokina J. (2014). A Reexamination of Audit Fees for Initial Audit Engagements in the Post-SOX Period. *Auditing: A Journal of Practice & Theory* 33(2): 59-78;
21. Eierle, B., Hartlieb, S., Hay, D. C., Niemi, L., Ojala, H. (2021). Importance of country factors for global differences in audit pricing: New empirical evidence. *International Journal of Auditing*, 25(2): 303-331;
22. Farcane, N., Deliu, D. (2020). Stakes and Challenges Regarding the Financial Auditor's Activity in the Blockchain Era. *Audit Financiar*, 18(1/157): 154-181;
23. Francis, J.R., Michas, P.N. and Seavey, S.E. (2013). Does Audit Market Concentration Harm the Quality of Audited Earnings? Evidence from Audit Markets in 42 Countries. *Contemporary Accounting Research*, 30(1): 325-355;
24. Geng, H., Zhang, C., & Zhou, F. (2019). Does Audit Market Competition Matter to Investors? Evidence from Cost of Bank Financing, *SSRN Electronic Journal*;
25. Guo, Q., Koch, C., Zhu, A. (2020). The Value of Auditor Industry Specialization – Evidence from a Structural Model. *SSRN Electronic Journal*;
26. Gunn, J. L., Kawada, B. S., Michas, P. N. (2019). Audit market concentration, audit fees, and audit quality: A cross-country analysis of complex audit clients. *Journal of Accounting and Public Policy*, 38(6);
27. Indyk, M. (2019). Mandatory audit rotation and audit market concentration-evidence from Poland. *Economics and Business Review*, 5(19): 90-111;
28. Kim, H., Lee, H., Lee, J.E. (2015). Mandatory Audit Firm Rotation and Audit Quality. *The Journal of Applied Business Research*, 31(3);
29. Lobo, G. J., Paugam, L., Zhang, D., & Casta, J. F. (2017). The effect of joint auditor pair composition on audit quality: Evidence from impairment tests. *Contemporary Accounting Research*, 34(1): 118-153;
30. London Economics. (2006). Economic Impact of Auditors' Liability Regimes, available at https://londoneconomics.co.uk/blog/publication/study-on-the-economic-impact-of-auditors-liability-regimes/ (accessed: June 14, 2021);
31. Meuwissen, R., Quick, R. (2019). The effects of non-audit services on auditor independence: An experimental investigation of supervisory board members' perceptions. *Journal of International Accounting, Auditing and Taxation,* 36(C);
32. Oncioiu, I., Bunget, O. C., Türkeş, M.C., Căpuşneanu, S., Topor, D.I., Tamaş, A.S., Rakoş, I.-S., Hint, M.Ş. (2019). The Impact of Big Data Analytics on Company Performance in Supply Chain Management. *Sustainability*, 11, 4864;
33. Popa, I.E., Vladu Cuzdriorean, A.B., Şpan, G.A., Simon, A. (2014). Studiu empiric privind modul de stabilire a onorariilor de audit. *Audit Financiar*, 5: 30-36;
34. PwC. (2019). PwC launches solutions supporting audit of cryptocurrency, available at: https://www.pwc.com/gx/en/news-room/press-releases/2019/cryptocurrenc-audit.html, (accessed: June 14, 2021);
35. Ratzinger-Sakel, N.V.S., Schoenberger, M. (2015). Restricting Non-Audit Services in Europe – The Potential (Lack of) Impact of a Blacklist and a Fee Cap on Auditor Independence and Audit Quality. *Accounting in Europe*, a Journal of the European Accounting Association, Forthcoming;
36. Robu, I.B. (2014). Onorariile de audit, între reducerea riscului de audit şi coruperea auditorului financiar. EconomiaOnline.ro, available at: https://economiaonline.ro/onorariile-de-audit-intre-reducerea-riscului-de-audit-si-coruperea-auditorului-financiar-2/(accessed: June 14, 2021);
37. Simunic, D. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, 18(1), 161-190.
38. Scheidt, I. (2020). The Audit Oligopoly in the European Union. Quantitative Analysis on the Client Industry Structure for the Big Four Audit Firms in the European Union. *Bachelor Thesis Business Administration*. Mid Sweden University;
39. Tarca, M. (1998). Tratat de statistică aplicată, *Editura Didactică şi pedagogică*, Bucureşti;
40. Tiron-Tudor, A., Deliu, D., Farcane, N., Dontu, A. (2021). Managing change with and through blockchain in accountancy organizations: A systematic literature

review. *Journal of Organizational Change Management*, 34(2): 477-506;

41. Tiron-Tudor, A., Deliu, D. (2021). Big Data's Disruptive Effect on Job Profiles: Management Accountants' Case Study. *Journal of Risk and Financial Management*, 14(8), 376: 1-26;
42. Willekens, M., Dekeyser, S., Bruynseels, L., Numan, W. (2020). Auditor Market Power and Audit Quality Revisited: Effects of Market Concentration, Market Share Distance, and Leadership. *Journal of Accounting, Auditing & Finance,* 1-21;
43. Xu, H.K. (2017). Differential Effects of Market Concentration on Oligopolistic and Atomistic Segments: Evidence of Audit Fees and Audit Quality. *Journal of Accounting and Finance*, 17(3):121-136;
44. Zhang, M., Xu, H., Tong, L., Ye, T. (2018). International evidence on economic policy uncertainty and asymmetric adjustment of audit pricing: Big 4 versus non-big 4 auditors. *Journal of Business Finance & Accounting*, 45(5-6):728-756;
45. Zhang, P., Ye, M., Simunic, D.A., Chu, L. (2021). An Examination of the Impact of Audit Market Concentration on Audit Fees through the Prism of Auditors' Efficiency. *Canadian Academic Accounting Association (CAAA) Annual Conference*.