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ANALYSIS OF THE AUDIT MARKET IN POLAND FROM 2010 TO 2020

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Purpose: The aim of this article is to provide an overview of the concentration issue on the Polish audit market.

Design/methodology/approach: The theoretical considerations presented in this publication are based on a critical analysis of the literature on the subject. The empirical part presents an analysis conducted on the basis of audit reports of financial statements of companies listed on the Warsaw Stock Exchange in the period 2010-2020. A total of 4281 audit reports concerning 506 listed on the Warsaw Stock Exchange entities were analysed.

Findings: Among the conclusions presented, it can be pointed out that the Polish audit market is less concentrated compared to other European countries. It was noted that, during the period under review, the market share of the Big Four entities is decreasing, while the importance of the other large (usually also global) audit entities is increasing.

Originality/value: The original aspect of this publication is the detailed analysis of the audit market structure in Poland. The author of the paper proposed a significantly more detailed division of audit firms compared to other studies in this field. It should be emphasised that the conducted analysis includes all audits of separate financial statements of public companies in the period under consideration.

Keywords: audit market, audit market concentration, Big Four.

Category of the paper: Research paper.

1. Introduction

This article presents the results of research on the structure of the audit market in Poland in 2010-2020. The analysis of the topic of concentration was carried out on the basis of independent auditors' reports of individual financial statements of business entities listed on the Warsaw Stock Exchange. The research included financial data and auditors' reports of 506 companies, a total of 4281 opinions and auditors' reports were analysed. The importance of the problem of market concentration, and its potential impact on the quality of the services provided, is also evidenced by the following data (PANA, 2024): 53 audit firms in 2023 conducted audit of financial statements of public interest entities, whereas in 2015 there were

97 audit firms. In the analysed years, the total number of audit firms decreased correspondingly from 1612 to 1230¹.

The main objective of the publication is to present the changes occurring in the audit market over the period 2010-2020. In addition, the following research problems are formulated:

- 1. How did the concentration of audit services provided to companies listed on the Warsaw Stock Exchange change between 2010 and 2020?
- 2. Which entities most often provided the services indicated above?
- 3. How often did the analysed entities change auditors over the years under review?

The presented results of the analysis are part of a larger study, carried out by the Author of this publication, concerning the audit market in Poland, covering such issues as: the role of the auditor in making the financial statements credible, addressing the issue of the threat of going concern in auditor's report, or the importance of key audit matters (KAM), i.e. matters that, according to the auditor's professional judgment, were most significant during the audit of the financial statements for the audited period.

2. Concentration of the audit market - a review of past studies

Studies of audit market concentration indicate a high (or very high) concentration of the audit market in the analysed countries and the dominance in this market of the "Big Four" entities. It should be emphasized, that the problem of concentration becomes apparent when this aspect is evaluated using the size of the business entities under study (assessed, for example, through sales revenues, balance sheet total or market value of the companies under consideration).

Some of the publications analysed (Francis, Michas, Seavey, 2013) indicate that the high concentration of the audit market influences the higher quality of the audit performed. Selected studies emphasize that higher audit quality in a situation of increasing market concentration should be linked to increasing audit fees (Ting-Chiao, Hsihui, Jeng-Ren, 2016).

On the other hand, there are studies (Boone, Khurana, Raman, 2012) suggesting that the dominance of the Big Four entities may lead to a reduction in the quality of audit services provided. B. Song (2021) indicates that the decline in audit quality associated with increasing market concentration can be mitigated by the high competence of audit committee members (in finance, law or tax aspects) functioning in the audited business entities.

¹ Similar conclusions can be drawn by analyzing the publication (Cwyl, 2018) referring to the situation in the audit services market in Poland in the period 2009-2017. Compare also: (Wielogórska-Leszczyńska, Zakrzewska, 2020).

At the same time, it is possible to identify publications (Willekens, Dekeyser, Bruynseels, Numan, 2023) indicating that concentration in the audit market does not show a relationship (or shows an ambiguous relationship (Makarenko, Plastun, Makarenko, Kozmenko, Kozmenko, 2021) with the quality of audits performed.

A summary of selected studies of this issue with a brief description and conclusions is presented in the table below.

Table 1. *Selected publications on the structure and concentration of the audit market*

No.	Author/country	Research sample/years of analysis	Description					
1.	J.R. Francis, P.N. Michas, S.E. Seavey (42 countries; US and UK most represented)	Years 1999-2007; 54,734 observations were analysed - data was obtained from the Global Vantage database (including: 18,980 observations from the US and 5277 from the UK)	Studies conducted suggest higher audit quality by both Big Four auditors and other auditors when the audit market is more concentrated.					
2.	V. Beattie, A. Goodacre, S. Fearnley (UK)	Year 2002; 2180 traders listed on the London Stock Exchange	Very high concentration of the audit market (the "Big Four") - especially as measured by audit firm compensation.					
3.	N. Mansor, E.N. Sutan Maruhun, A.M. Ishak (Malaysia)	Year 2003; 520 entities listed on the Kuala Lumpur Stock Exchange	High concentration of the audit market in Malaysia. The analyses conducted showed that there is a lack of specialization among the Big Four auditors.					
4.	J.P. Boone, I.K. Khurana, K.K. Raman (USA)	Years 2003-2009; 4779 observations	Among the conclusions, the authors point out that the dominance of the Big Four companies in the audit services market leads to a reduction in the quality of the services provided.					
5.	M.Z. Groff, A. Salihovic (Slovenia)	Years 2008-2011; 3038 surveys conducted during the analyzed period (an average of 760 per year)	1. High concentration of audit firms of the "Big Four" for listed entities. At the same time, there is a slight trend indicating a decrease in concentration. 2. For non-public companies, concentration is at a much lower level.					
6.	S. Sever Malis, M. Brozovic (Croatia)	Years 2008 and 2013; data of 58 entities were analyzed	The analysis showed a slight decrease in audit market concentration in the years compared. The study found that concentration is least evident referring to the number of entities audited, while based on the total assets of the audited entities or their sales revenue - concentration is at a much higher level.					
7.	J. Gad (Poland)	Years 2011-2016; public companies listed on the Warsaw Stock Exchange; 2652 reports	 The level of concentration in the market for audit services provided to public companies in Poland is lower than the average level of concentration for other EU countries. In the various years under consideration, about one-fifth of public units changed their auditing firm. On the other hand, over 34.8% of the entities did not change their auditing firm at all between 2011 and 2016. 					
8.	M. Willekens, S. Dekeyser, L. Bruynseels, W. Numan (USA)	Years 2009-2017; data on 25,254 subjects from the Compustad database. After the initial selection, 13,819 observations remained in the study.	The analyses conducted showed a very low correlation between audit market concentration and the quality of audits performed. The result of the research suggests that the quality of the audit is influenced by the market leader's dominance over competitors.					

Cont. table 1.

9.	J. Wielogórska- Leszczynska, J.B. Zakrzewska (Poland).	Year 2018; survey conducted among chartered accountants attending mandatory training courses - completed questionnaires were returned by 310 auditors	The research showed a high concentration of the audit services market. A simultaneous survey of the number of auditors practicing in the profession showed a significant decrease in the number of auditors over the 2016-2019 period.
10.	J. Rajabalizadeh (Iran)	Financial statements and audit reports of 1050 entities for 2012-2018	The results indicate a positive relationship between competition in the audit market and the quality of the audit conducted. The research also confirms the positive impact on audit quality caused by the lack of change of audit firm over the years.

Source: own compilation based on: (Beattie, Goodacre, Fearnley, 2003; Boone, Khurana, Raman, 2012; Francis, Michas, Seavey, 2013; Gad, 2018; Groff, Salihovic, 2014; Mansor, Sutan Maruhun, Ishak, 2013; Rajabalizadeh, 2024; Sever Malis, Brozovic, 2015; Wielogórska-Leszczyńska, Zakrzewska, 2020; Willekens, Dekeyser, Bruynseels, Numan, 2023).

Referring to the problem of concentration in the Polish audit market (Gad, 2018), it should be emphasized that it is less pronounced than in many other countries (EU countries, the United Kingdom, the United States).

3. Research sample and methodology of the study

The independent auditor's audit reports and financial statements of the analysed business entities were obtained from the following sources:

- The websites of individual public companies.
- EMIS Intelligence Region database.
- Notoria Online databases.
- Public company announcements from ESPI/EBI systems available to the Economic Service of the Polish Press Agency (www.biznes.pap.pl/pl/reports).
- Warsaw Stock Exchange website.

The analyses carried out were based on the independent auditors' reports on audits of separate financial statements (audit opinions and reports - for audits of financial statements for periods ending before December 31, 2016)² and using separate financial statements of

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² Audits of financial statements prepared for periods ending before December 31, 2016 were conducted in accordance with the requirements of the National Auditing Standards (Krajowe Standardy Rewizji Finansowej, KSRF, adopted by Resolution No. 1608/38/2010 of the National Chamber of Statutory Auditors dated February 16, 2010 on national auditing standards), according to which, on the basis of the audit evidence collected, the auditor prepared an opinion with a report. Audits of the financial statements for periods ending December 31, 2016 and thereafter are conducted in accordance with the National Auditing Standards in the wording of the International Auditing Standards (adopted by Resolution No. 2783/52/2015 of the Polish Chamber of Statutory Auditors dated February 16, 2015 on national auditing standards) and the auditor prepares an independent auditor's report containing the audit opinion.

companies listed on the Warsaw Stock Exchange from 2010 to 2020. The auditors' reports were obtained manually in each case.

As a result of the initial selection, auditors' reports and financial statements of business entities based outside Poland and listed on the Warsaw Stock Exchange were omitted. Such entities were omitted because their financial statements were subject to audit by an auditor in the country where the entity's headquarters are located. For example, the audit did not include the financial statements and audit report of KRKA d.d. Slovenia, based in Novo Mesto, Slovenia, whose financial statements for period ending before December 31, 2020 were audited by Ernst & Young d. o.o., Ljubljana. Another example is AmRest Holdings SE, whose financial data for part of the period under review was included in the audit. However, since 2018, the company's headquarters has been based in Madrid, Spain (thus, the financial statements and audit reports for 2018-2020 were omitted from the study). In addition, it should be pointed out that for several observations during the period under review, auditors' reports (or opinions with report) were not available.

Finally, auditors' reports of 506 entities that were listed on the Warsaw Stock Exchange for at least one year in the mentioned period, i.e. from 2010 to 2020, were analysed. It should be noted that some of the entities were listed on the WSE during the entire analysed period (thus, auditors' reports and financial statements of these entities for 11 years were available)³, some of the entities only in selected years. A total of 4,281 auditors' reports were analysed.

The table below summarizes the number of auditors' reports analysed in each of the years under review.

Table 2. *Number of auditors' reports of listed companies analysed for 2010-2020*

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Number of auditors' reports *	350	373	376	381	398	413	420	408	396	391	375	4281

^{*} for audits of financial statements of public interest entities covering periods ending before December 31, 2016 – opinion with report.

Source: own compilation.

4. The results of the research conducted

As mentioned above, a total of 4281 auditors' reports were analysed in the course of the work conducted. These audits were conducted by 144 audit firms between 2010 and 2020. Over the years analysed, audit firms merged among themselves, joined existing groups and also

³ Among the entities that have been listed on the Warsaw Stock Exchange throughout the period under consideration, i.e. 2010-2020, and thus their financial statements and audit reports (previously opinion and report) are available, for example: Agora SA, Apator SA, CD Projekt SA, Fabryka Mebli Forte SA, Giełda Papierów Wartościowych SA.

changed their names. For example, ECA Seredyński i Wspólnicy joined the UHY International group in 2015 and changed its name to UHY ECA Audyt.

In 2010, the separate financial statements of companies listed on the Warsaw Stock Exchange were audited by 72 auditors, in 2015 (the number of audit firms dropped to 66, while in 2020 such audits were conducted by 51 audit firms. One of the reasons for the decrease in the number of audit firms auditing WSE-listed companies is the high labor intensity and complexity of such audits. The audit of financial statements of entities listed on the WSE, which are public interest entities, is perceived by audit firms as a "higher risk audit" It should be emphasized that the higher reporting requirements for listed companies and the stricter requirements and regulations for auditing public interest entities are primarily related to the fact, that the reliable financial data and information contained in the financial statements as well as the independent auditor's opinion on the audit of the statements can affect the listing of such an entity and reaches a wide range of users. In addition, the limitation of the number of auditors undertaking audits of entities listed on the WSE is probably also influenced by additional requirements imposed by the Polish Audit Supervision Agency.

In the literature, the most common division of audit firms made is between the "Big Four" and other firms. In this study, the Big Four auditors are presented separately, while the other audit firms are divided into three groups according to their market share, which was determined by the number of obligatory audits of separate financial statements of public companies listed on the Warsaw Stock Exchange for the years 2010-2020. During the period under review, the Big Four audit firms audited between 289 and 435 separate financial statements subject to this analysis. Auditors from the second group audited between 233 and 334 separate financial statements. As for the third group, for the purposes of this study, it included auditors who audited between 62 and 116 separate financial statements during the period under review. As a criterion for inclusion in this group, a minimum of one percent participation in all audits conducted by audit firms in the analysed sample was used. The remaining auditors (129 in number) were included in the fourth group. In most cases, this group includes audit firms that have conducted audits of several separate financial statements of public companies listed on the Warsaw Stock Exchange.

The adopted division of audit firms is presented in the table below.

Compare audit market analysis: https://www.parkiet.com/ranking-audytorow/art36138061-pwc-dzierzy-paleczke-lidera-na-gieldzie, 11.04.2023.

Table 3.Categories of auditing firms adopted in this research

Audit firm category adopted in the study	Number of audit firms in the category	Audit firm Name	Number of obligatory audits of separate financial statements conducted in the period 2010-2020	Percentage share
"Big Four"	4	PWC Poland	1 449	33,8%
$(BIG4)^5$		Ernst & Young Audit Poland		
		KPMG Audit		
		Deloitte Audit		
GROUP II	4	Grant Thornton Poland	1 133	26,5%
		BDO		
		UHY ECA Audit		
		PKF Consult		
GROUP III	7	Mazars Audit	674	15,7%
		Misters Auditor Adviser		
		Moore Poland ⁶		
		4Audit		
		NCPF Dr. Piotr Rojek		
		HLB Group		
		WBS Audit		
GROUP IV	129		1 025	23,9%
TOTAL	144		4 281	100%

Source: own elaboration.

Taking into account the presented breakdown of audit firms, the table below shows the numbers of opinions issued by auditors on separate financial statements over the years analysed.

Table 4.Number of auditors' reports of WSE- listed companies analysed for the years 2010-2020 issued by audit firms from each group

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
BIG4	104	120	122	132	145	159	166	155	135	116	95	1 449
GROUP II	88	98	95	93	95	101	105	106	106	118	128	1 133
GROUP III	61	62	72	66	65	59	56	57	58	58	60	674
GROUP IV	97	93	87	90	93	94	93	90	97	99	92	1 025
Total	350	373	376	381	398	413	420	408	396	391	375	4 281

Source: own elaboration.

Table 5.Auditors' reports of WSE-listed companies analysed for 2010-2020 issued by audit firms from each group - percentage structure

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
BIG4	29,7	32,2	32,4	34,6	36,4	38,5	39,5	38,0	34,1	29,7	25,3	33,8
GROUP II	25,1	26,3	25,3	24,4	23,9	24,5	25,0	26,0	26,8	30,2	34,1	26,5
GROUP III	17,4	16,6	19,1	17,3	16,3	14,3	13,3	14,0	14,6	14,8	16,0	15,7
GROUP IV	27,7	24,9	23,1	23,6	23,4	22,8	22,1	22,1	24,5	25,3	24,5	23,9
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: own elaboration.

⁵ In the article, the name "Big Four" and "BIG4" will be used interchangeably.

⁶ In 2021, the merger of the audit firms Moore Finansista and REWIT Accountants and Auditors took place. As a result of the merger, an audit firm named Moore Polska was formed. For the purposes of this analysis, the audits conducted by the aforementioned firms were included as audits conducted by a single auditor.

As can be noticed, during the analysed period there were significant changes in the area of the number of audited separate financial statements by different groups of audit firms. The largest number of audits of separate financial statements of public companies in Poland was carried out by the "Big Four" audit firms. These firms issued 1449 audit opinions over the analysed 11 years, which represents 33.8% of all audits of separate financial statements of entities listed on the Warsaw Stock Exchange. The second distinguished group of audit firms (also represented by four auditors) conducted a total of 1133 audits, representing 26.5% of the total observations. It should be noted that audit firms included in the fourth analysed group have a similar share in the total number of audits of separate financial statements conducted (i.e. 23.9%). It is important to emphasise that 129 audit firms belong to this group, according to the accepted division (which means that, on average, the audit firms in this group carried out less than eight audits in the period analysed, in the vast majority of cases one or two audits).

Attention should also be paid to the concentration of the audit market. In this research, concentration was assessed using the number of audits of separate financial statements conducted. It should be emphasized that the scale of concentration would be higher if other measures (for example: total assets, revenues of the audited entities, market value of the audited entities or auditors' audit fees) were used in its assessment⁷. Nevertheless, such a measurement will not be studied in this paper.

When considering the concentration of the audit market, it should be noted that the largest eight audit firms conducted 60.3% of the considered audits of the separate financial statements of entities listed on the Warsaw Stock Exchange. The remaining 39.7% of the total audits considered were conducted by 136 auditors. It should be noted that the highest level of audit market concentration took place in 2016 and 2017. The number of audits conducted by the eight largest audit firms accounted for 64.5% and 63.9%, respectively. Analysing the entire period under consideration, it should be noted that the total number of audits of separate financial statements of entities listed on the Warsaw Stock Exchange conducted by the "Big Four" and audit firms from the second group accounted for about 60% (the exception was 2010, in which the share was 54.8%).

An example of an analysis of the audit market in Poland taking into account also other criteria for dividing the market is the analysis presented in the 21st Ranking of Auditors in "Rzeczpospolita" for the year 2022 (https://rankingi.rp.pl/rankingaudytorow/2022#ra_full, 11.04.2023). Among the criteria, the authors of the ranking list: revenue from auditing activities forming the basis of the supervision fee for 2021, revenue from the performance of other attestation services not forming the basis of the supervision fee for supervision, revenues from auditing activities in public interest entities in 2021, the number of auditing activities performed in 2021 (both mandatory and optional), the number of auditing activities conducted in 2021 in public interest entities (both mandatory and optional), the average price of auditing activities, the number of auditors with Polish licenses, and the number of people employed in auditing. A separate ranking by Rzeczpospolita concerns Audit Firms auditing companies on the Warsaw Stock Exchange (https://rankingi.rp.pl/rankingaudytorow/2022/audyty_spolek_gpw, 11.04.2023). In addition to the number of audited entities, the ranking criteria include the total value of assets of audited companies and the market value of audited companies. It should be noted that the first eight audit firms in the Rzeczpospolita Auditor's Ranking of audited entities on the WSE are companies included in BIG4 and Group II in this analysis (and appear in the same order). In the next, Group III (distinguished in this study), there are slight shifts from the Rzeczpospolita Auditors' Ranking.

A change occurring in recent years in the audit market in Poland that should be noted is the increase in the number of statutory audits of separate financial statements conducted by audit firms from the second group and the simultaneous decrease in the number of audits conducted by the Big Four firms. In 2016, the Big Four audit firms conducted 166 such audits which accounted for 39.5% of the total cases analysed. In the same year, audit firms from the second group conducted 105 audits which accounted for 25% of the analysed population. In 2020, Big Four audit firms conducted 95 statutory audits of separate financial statements, which accounted for 25.3% of the total, and audit firms from the second group conducted 128 audits, which accounted for 34.1% of the analysed population.

Analysing the above data, it should be taken into account, that the Big Four firms, despite a decline in the number of audits of individual financial statements of companies listed on the Warsaw Stock Exchange, are leaders when it comes to the market value of the audited entities. Thus, for example, the Big Four firms in 2020 audited the largest companies listed on the WSE, among others: PKO BP SA, PGE SA, PKN ORLEN SA, Santander Bank Polska SA, Bank Pekao SA, KGHM Polska Miedź SA, ING Bank Śląski SA, Tauron SA, PZU SA. The exception here is PGNIG SA, which was audited in 2019-2020 by PKF Consult.

It can also be observed a stable share in the number of audits conducted by audit firms from both the third and fourth groups during the period under review. The presented situation in the audit services market in terms of the increasing share of large audit firms (I and II studied group) with a simultaneous market share of between 30% and 40%, of entities performing a small number of audits is explained by J. Cwyl (2018) by two factors, that is: the significant participation of multinational corporations and audit market regulations designed to ensure the independence of auditors.

The previously described changes in the audit market of public company auditors are reflected in its analysis in the sub-periods, that is, from 2010 to 2015 and from 2016 to 2020.

Table 6.Market share of each group of auditors (based on the number of audits of separate financial statements of companies listed on the Warsaw Stock Exchange) for the years 2010-2015 and 2016-2020 (in%)

	2010-2015	2016-2020	Total
BIG4	34,1	33,5	33,8
GROUP II	24,9	28,3	26,5
GROUP III	16,8	14,5	15,7
GROUP IV	24,2	23,7	23,9
Total	100,0	100,0	100,0

Source: own elaboration.

As can be seen, in recent years the share of auditors included in the second group had been increasing, at the same time all other groups had slightly reduced their market share as measured by the number of statutory audits of separate financial statements conducted.

The last issue presented in this article is the problem of the frequency of auditor changes among the business entities analysed in this research. J. Gad (2016), based on his research conducted in the years 2011-2013, indicates that in the analysed period, the entities that made a change of auditor accounted for 19.1% of the surveyed entities in 2012, while in 2013 - 19.3%. At the same time, the cited author indicates that the most frequent mentioned changes took place among business entities representing: trade, finance and heavy industry.

In these studies covering the period 2010-2020, similar results were obtained. On average, 20.7% of the analysed units changed their auditor in individual years. It should be emphasized, however, that in the studied group of companies there are entities where this change in the entire period under consideration did not take place, as well as entities where such rotation was carried out much more frequently. Examples of companies whose financial statements in the entire period under consideration were audited by the same audit firm include: Agora SA, Firma Oponiarska Dębica SA. On the other hand, there are entities where the exchange of auditor took place much more frequently - for example, in Biomed Lublin the financial statements for 2015-2020 were audited by four different audit firms, in Drewex SA the financial statements for 2010 -2018 were verified by five audit firms, or in Lena Lighting SA the financial statements for the period of 11 analysed years were audited by 6 different audit firms.

5. Conclusions

Among the conclusions of the research, attention should be drawn to the annual decline in the number of audit firms auditing separate financial statements of entities listed on the Warsaw Stock Exchange. The Big Four audit firms, despite the fact that their market share is successively decreasing (measured by the number of audits of separate financial statements), still dominate when it comes to the market value of audited public companies. At the same time, it should be emphasized that over the analysed years the largest increases in the number of audits of separate financial statements were recorded by entities included in the second group of audit firms (large entities such as: Grant Thornton Polska, BDO, UHY ECA Audyt, PKF Consult). Another point to note is that the number of audit entities providing their services only to single public companies is definitely decreasing.

It should also be emphasized that throughout the period under consideration, that is, from 2010 to 2020, on average the replacement of an auditor took place approximately every 5 years.

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