

A Financial Analysis of Greek Audit Companies for the Period 2012-2022

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Abstract

In this paper, we focus on the financial position of Greek audit companies for the period 2012-2022, the period of the Greek economic crisis. We examine their financial performance and how it changed during this period. We also compare the Big 4 audit companies to the rest in terms of financial performance. Additionally, we check the ratio of audited to non-audited services for this period. Audit companies' sector is a vital sector for all economies, as audit companies are the guarantors of the reliability of the financial statements and also the protectors of the users of the financial statements. Their role is critical to the proper functioning of financial markets. Economically healthy audit companies have fewer restrictions and conflicts of interest in doing their jobs. Companies in financial distress are more likely to try to avoid losing clients who are more favorable to them. Also, the ratio of audit to non-audit services is a key indicator of the conflict of interests and the independence of the audit firms. In order to check the financial performance of the companies, we retrieved accounting data from the ICAP-Dataprisma database. Based on these data, we calculated financial ratios that describe the financial position of the companies in terms of profitability, leverage, and liquidity. We also retrieved data from companies' transparency reports regarding revenues from audits and non-audit services. We calculated the relevant ratio, and we made comparisons between the companies.

Keywords

Audit Companies, Greek Financial Crisis, Big 4, Audit Services, Assurance

1. Introduction

This article examines the audit industry in Greece. The present study examines the financial performance, a key indicator of independence, of the audit firm over

the time span from 2012 to 2022. The objective of an external audit is to offer a reasonable level of confidence that a company's financial statements adhere to a designated accounting framework and present an accurate and unbiased representation of the company's financial performance.

The regulatory authority has designated the auditor as the sole competent individual responsible for conducting the audit and providing an accurate and unbiased assessment of the client entity's financial statements. This ensures that users of the financial statements can place their trust in the reliability and accuracy of the information presented. Various stakeholders, including investors, creditors, and potential business partners, who may lack sufficient understanding of deceptive financial practices, must make investment decisions based on the financial statements of companies.

Distortion or manipulation of these assertions has the potential to result in erroneous business choices, improper allocation of resources, and substantial financial losses for stakeholders. An external audit effectively addresses the risk in question by engaging auditors with professional expertise. This audit serves to validate and ensure the precision and dependability of the aforementioned assertions.

Furthermore, the cost of financing holds significant importance for companies, irrespective of their scale. The cost of capital encompasses the level of risk that is inherent in an investment. When an investment carries a higher level of risk, the investor is required to demand a higher rate of return in order to justify their investment. The implementation of a robust audit method serves to mitigate a range of risks faced by an organization, such as information risk, fraud risk, and asset theft risk. Furthermore, it reduces the risk of suboptimal managerial performance due to inadequate knowledge of the organization's activities.

Moreover, external audits play a crucial role in bolstering corporate governance and internal controls within a firm. When auditors look closely at all of a company's procedures, transactions, and systems, they can find places where internal controls might be weak or missing, places where fraud or mistakes could happen, and times when rules and regulations are not being followed. The guidelines that follow offer a strategic plan for firms to strengthen their control measures, enhance operational effectiveness, and guarantee compliance with industry norms and regulatory obligations. This practice not only serves to protect the company's assets, but also provides reassurance to stakeholders about its dedication to upholding elevated levels of operational excellence.

In conclusion, within a dynamic and ever-changing company environment, external audits assume a crucial role in fostering transparency and accountability. The emergence of corporate scandals and financial irregularities in recent years has underscored the necessity for enhanced inspection and control. External audits serve as a preventive measure against unethical conduct within businesses and the misrepresentation of financial information. These measures foster an atmosphere in which organizations are more likely to engage in responsible,

ethical, and transparent behavior. Consequently, this phenomenon cultivates a perception of reliance and authenticity among the general populace and interested parties, thereby promoting financial investments, propelling economic advancement, and safeguarding the steadfastness and ethicality of the financial sector.

Based on the above, external audits play a vital role in fostering trust and instilling confidence within the realm of financial markets. The audit profession should be considered more as a function than a profession due to this reason. It is imperative that auditors maintain independence from all parties involved, particularly their clients and the audited organizations, in order to effectively carry out their responsibilities.

Audit firms in Greece are mostly private entities, typically structured as public liability companies (S.A.) or private companies. Numerous corporations function as distinct legal entities within global networks of audit firms. The sector is structured and overseen by the Hellenic Accounting and Auditing Standards Oversight Board (HAASOB), which serves as the national regulatory body for the accounting and audit profession. Its primary objective is to establish and ensure the proper and efficient application of accounting and auditing standards. Currently, the industry has a total of 65 enterprises.

We focus on the financial position of the audit companies, as financial strength is a key indicator of independence. Financially robust companies are more likely to possess a greater degree of autonomy, as they have the capacity to withstand the potential loss of significant clients if they disagree with their audit opinions. On the other hand, audit companies in financial distress are afraid to lose significant clients, so they prefer more favorable audit reports for their clients against the interests of the users of the financial statements.

In 2023, Ideagen Audit Analytics conducted a study that revealed that the total audit fees for the fiscal year 2022 in the United States were around \$16.8 billion (Ideagen Audit Analytics, 2023). This is a slight increase of 0.6% over the previous fiscal year, FY2021. The Big Four companies continued to hold a huge majority of the audit market share in FY2022, accounting for 92% of all audit fees paid by SEC registrants. Compared to the prior fiscal year, the audit fees increased by 11%, and they finally reached a historic peak of \$2.24 million per SEC registrant. **Table 1** shows the audit fee trend in the United States together with the audit company ranking.

Table 1. Current auditor rankings based on FY 2022 total audit fees (in millions).

Rank	Auditor	2018	2019	2020	2021	2022
1	PwC	\$4558.4	\$4656.8	\$4735.6	\$4816.8	\$4664.9
2	EY	\$3724.5	\$3784.7	\$3992.9	\$4202.8	\$4272.2
3	Deloitte	\$3092.9	\$3104.7	\$3316.3	\$3637.1	\$3809.1
4	KPMG	\$2887.2	\$3056.8	\$2890.7	\$2760.7	\$2737.9
5	Grant Thornton	\$272.3	\$256.2	\$274.3	\$300.3	\$309.5

Continued

6	BDOUSA	\$205.3	\$217.1	\$189.5	\$228.0	\$242.4
7	Marcum	\$48.5	\$60.0	\$67.2	\$103.4	\$126.9
8	RSMUS	\$76.1	\$77.8	\$73.3	\$86.2	\$95.4
9	Crowe	\$51.6	\$60.0	\$66.2	\$61.8	\$63.4
10	Moss Adams	\$36.8	\$37.5	\$39.3	\$47.1	\$49.1
11	FORVIS	-	-	\$0.5	\$0.2	\$30.9
12	Baker Tilly US	\$0.04	\$1.6	\$18.9	\$26.6	\$28.0
13	Withum Smith + Brown	\$4.6	\$5.0	\$21.0	\$40.1	\$22.1
14	Eisner Amper	\$20.5	\$18.2	\$14.7	\$15.4	\$14.1
15	Malone Bailey	\$8.3	\$7.9	\$8.0	\$12.3	\$13.4
16	BF Borgers	\$4.4	\$5.7	\$15.3	\$14.9	\$11.9
17	MNP	\$3.3	\$3.6	\$7.7	\$10.7	\$11.3
18	Plante & Moran	\$8.4	\$10.5	\$11.4	\$12.2	\$10.7
19	Armanino	\$5.3	\$3.7	\$6.6	\$10.0	\$9.9
20	BDOLLP (UK)	\$0.6	\$5.0	\$9.4	\$11.2	\$9.2
21	Macias Gini & O'Connell	\$4.2	\$3.5	\$6.5	\$5.5	\$8.7
22	BPM	\$8.3	\$7.6	\$7.5	\$7.3	\$8.1
23	Mazars USA	\$3.3	\$4.4	\$4.7	\$5.0	\$8.0
24	Cohn Reznick	\$10.1	\$8.0	\$8.5	\$8.7	\$8.0
25	Friedman	\$11.0	\$13.9	\$19.4	\$18.4	\$7.9

Source: Ideagen Audit Analytics, 20-year review of audit fee trends 2003-2022.

In addition, we analyze the ratio of non-audit services to audit services. Non-audit fees might provide relevant information to financial statement users. Regulators prioritize the maintenance of auditor independence. Auditors must maintain their independence while performing audits of public firms, ensuring that the provision of non-audit services does not undermine this independence. There has been widespread international discussion on how significant non-audit services affect the independence of external auditors. As a result, the United States and several European countries have introduced various regulations to restrict the extent of non-audit services allowed. In some cases, these regulations also impose limits on the amount of money auditors can be paid for non-audit services that are allowed.

According to a study conducted by *Ideagen Audit Analytics (2022)*, non-audit fees in the United States, excluding costs connected to audits, have decreased in proportion to total fees. More precisely, these charges have declined from around 36% in fiscal year 2002 to a significant minimum of 9% in fiscal year 2021. The decline can be attributed to a global focus on restricting certain non-audit services to safeguard the autonomy of auditors. Since 2005, the non-audit fees, which include tax and other miscellaneous charges, have consistently fluctuated between 10% - 12% of the overall fees, showing a stable pattern.

Table 2 presents the non-audit fees as a percentage of total fees for USA audit companies for the period 2018 to 2021.

Table 2. Other services fees as percentage of total fees for USA audit companies.

Year	Other Services Fees %
2018	10.30%
2019	9.90%
2020	9.20%
2021	8.90%

Source: Ideagen audit analytics, 20-year review of audit & non-audit fee trends.

We focus on the period from 2012 to 2022. This period might be described as a highly challenging phase for the Greek economy. During this particular period, the Greek economy faced challenges related to cash constraints, the risk of insolvency, a significant economic downturn, political instability, and, subsequent to the COVID-19 pandemic, the emergence of a further recession.

The remainder of the study is structured as follows: Section 2 presents relevant studies on audit firms' financial performance. Section 3 presents the data and sources used in this study, as well as the methodology used. Section 4 presents empirical findings about audit firms' financial performance based on the examined data. Finally, Section 5 presents a conclusion to the study's findings.

2. Literature Review

This study specifically examines the financial performance of audit organizations, as their financial soundness might serve as an indicator of auditors' independence and, consequently, the quality of their audits.

There is a substantial body of research in the field of auditing that examines the relationship between audit quality and many criteria, including the specific characteristics of audit firms.

Because they cannot be directly observed, researchers have used proxy variables to test audit quality. These variables include auditor size, auditor litigation, and discretionary accruals.

Numerous studies frequently use accruals as a substitute for assessing the quality of financial reporting. Research has shown a negative correlation between greater non-audit service fees and accrual quality (e.g. Frankel, Johnson, & Nelson, 2002; Srinidhi & Gul, 2007). Additional research indicates a lack of correlation (e.g. Ashbaugh, LaFond, & Mayhew, 2003; Chung & Kallapur, 2003; Mitra, 2007). The final category examines the advantages of offering NAS, which include enhanced predictability of future cash flows and reduced information risk (Nam & Ronen, 2012), decreased time delays in audit reporting (Knechel & Sharma, 2012), and increased accuracy of earnings (Koh, Rajgopal, & Srinivasan, 2013).

In addition to accruals, researchers also employ restatement as a substitute for indicating poor financial reporting accuracy. Kinney Jr., Palmrose, and Scholz (2004) provide empirical support for two findings: firstly, they observe a positive correlation between audit fees, audit-related fees, and nonspecific non-audit fees with restatement; secondly, they find a negative correlation between tax service fees and restatement. Seetharaman, Sun, and Wang (2011) have validated the beneficial impact of auditor-provided Non-Audit Tax Services (NATSs). They have observed a negative correlation between NATS and tax-related restatements. Ferguson, Seow, and Young (2004) employ restatement and the probability of being subjected to regulatory investigations in the United Kingdom as proxies. They discover that NAS results in lower financial reporting quality. Markelevich and Rosner (2013) found evidence showing that there is a positive correlation between NAS fees and the probability of receiving sanctions from the SEC for fraudulent activities.

The size of an audit firm is a characteristic that is associated with the quality of audits. Several studies have investigated the correlation between audit quality and auditor size, such as the works of Colbert and O'Keefe (1995), DeAngelo (1981), Deis Jr. and Giroux (1992), Francis (1984), Francis and Simon (1987), and Palmrose (1986). Evaluating this link is crucial for various reasons. If the size of an auditor can serve as a reliable proxy for the quality of the auditor, then the public has access to a readily observable indicator of quality. This can be quite beneficial since it is challenging to ascertain the inherent quality of audits and other accounting services, even after their completion. Furthermore, the presence of this link could significantly influence discussions surrounding public policy.

According to Reynolds and Francis (2001), Big 5 auditors exhibit a greater degree of caution when dealing with larger clients. Hunt and Lulseged (2007) have found similar results for auditors who are not part of the Big 5. Chi, Douthett Jr., and Lisic (2012) discovered that Big N partners maintain their independence even while dealing with large clients, unlike non-Big N partners. Trompeter (1994) and Carcello, Hermanson, and Huss (2000) have also provided evidence of the detrimental impact of customer priority on partner independence.

Jiang et al. (2019) examined a sample of 331 companies that changed their auditors to Big N businesses as a result of external shocks caused by Big N acquisitions. Their findings suggest that the enhancement in audit quality among treatment firms is primarily attributed to the overall proficiency of Big N auditors rather than their specific knowledge of the industry. Ultimately, our findings reveal that treatment firms do not observe any noteworthy market responses when Big N acquisitions are announced. This suggests that the financial markets may not assign any additional value to the enhanced audit quality associated with Big N auditors.

According to DeAngelo (1981), there is a positive relationship between audi-

tor size and audit quality. Due to their heightened reputational concerns and increased independence, auditors from Big N firms are more inclined to deliver superior audit quality compared to auditors from non-Big N firms (Francis & Wilson, 1988).

Several studies have investigated whether auditors from large accounting firms (referred to as Big N auditors) deliver superior audit quality compared to auditors from smaller firms. However, the impact of Big N auditors on audit quality is still a subject of debate and disagreement among researchers (Lawrence, Minutti-Meza, & Zhang, 2011; DeFond et al., 2017).

DeFond et al. (2017) demonstrate the presence of a Big N effect in most of their matching choices by utilizing 3000 random permutations of three fundamental matching options under the PSM approach.

In their study, Colbert and Murray (1998) examined a group of 422 small CPA firms in the United States. They discovered that for firms that conduct audits, reviews, and compilations (excluding firms that only perform reviews and compilations without audits), the quality of auditors is directly linked to the size of the firm, the number of previous reviews conducted, and the level of supervision provided by state societies.

Auditors' independence is another crucial component that impacts quality. Independence can be defined as the level of freedom the auditor possesses to resist succumbing to the demands of their customers, even if it means losing them. Independence is logically associated with both the size of the audit firm and the financial health of the auditor. An audit firm with substantial revenues and strong financial stability has the capacity to withstand the loss of major clients. Furthermore, many audit firms have the financial capacity to withstand substantial pressure on audit fees.

Investors view economic reliance on the client unfavorably, as evidenced by the cost of equity (Khurana & Raman, 2006) and the earnings response coefficient (Ghosh, Kallapur, & Moon, 2009). Regulatory adjustments could potentially reduce investor worry regarding auditor independence. Hollingsworth and Li (2012) observe a decline in the correlation between client significance and the expense of equity over the period before and after the implementation of the Sarbanes-Oxley Act (SOX).

Studies have observed a rise in the intensity of audit fee pressure, specifically during the global economic downturn (Christensen et al., 2014; Ettredge et al., 2014). Regulators and investors are worried that the pressure to reduce audit fees could have a detrimental impact on the quality of audits (Goelzer, 2010; Kroeker 2010; Whitehouse, 2011). Previous studies have shown that when auditors face pressure to lower audit fees, they struggle to accurately assess and account for risk, resulting in a decrease in audit quality.

The PCAOB has addressed concerns that clients could urge audit companies to decrease audit costs, and this audit fee pressure could weaken audit procedures and harm audit quality (PCAOB, 2010). Houston (1999) states that when

auditors face pressure to decrease audit fees, they become less attentive to risk. [Ettredge et al. \(2014\)](#) discover that during the recession of 2007-2009, there is a greater occurrence of misstatements when audit companies make fee concessions to customers. [Christensen et al. \(2014\)](#) discovered a notable decrease in audit firms' capacity to determine the appropriate price for financial reporting risk between 2006 and 2010.

In their study, [Beardsley et al. \(2019\)](#) examined the response of audit offices to audit fee pressure by assessing whether they intensify their attention towards Non-Audit Services (NASs). Additionally, they analyzed the collective impact of audit fee pressure and an augmented emphasis on NAS on audit quality. A positive correlation was discovered between the pressure on audit fees and changes in Non-Audit Services (NASs) at the level of the audit office. Furthermore, it was discovered that audit offices that prioritize Non-Audit Services (NASs) and under pressure to reduce audit fees have higher instances of client misrepresentation compared to audit firms that do not prioritize NAS. This indicates a combined impact on the quality of audits. This finding aligns with previous research conducted by [Ettredge et al. \(2014\)](#).

Past research has attempted to analyze audit quality by concentrating on audited companies' accruals, auditor changes, auditors' mix of audit and consulting services, and other factors. We do not observe an emphasis on audit companies' financial positions, which might be a good predictor of audit quality. Audit firms that are not in financial trouble may feel more comfortable breaking down with some clients than audit firms that are. This study examines the financial situation of audited Greek enterprises during the last decade.

3. Data and Methodology

Regarding financial analysis, our sample consists of 42 Greek audit firms focusing on the period 2012-2022. We limited our sample including only companies for whom data for at least five years, including 2022, were available.

The companies of our sample are presented in [Table 3](#).

For these companies, using ICAP Data Prisma database we extracted the following accounting variables:

Balance Sheet Variables	Profit-Loss Variables
Cash and cash equivalents	Gross profit
Current assets	Net income
Current liabilities	Net sales
Inventories	Operating income
Shareholder's equity	Total revenue
Total assets	
Total liabilities	

Table 3. Greek audit companies (for which sufficient financial data 2012-2022 obtained).

1	ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	22	KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.
2	ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	23	KRP AUDITORS Α.Ε.
3	ACTION AUDITING Α.Ε.Ο.Ε.Α.	24	KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.
4	ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	25	MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.
5	AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	26	METRON AUDITING Α.Ε.
6	AUDIT OPINION Ι.Κ.Ε.	27	MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.
7	AUDIT PLUS Α.Ε.	28	NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.
8	BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	29	OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.
9	BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	30	PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.
10	CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	31	PRICEWATERHOUSECOOPERS S.A.
11	DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	32	Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.
12	DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	33	RSM GREECE Α.Ε.
13	DFK PD AUDIT Α.Ε.	34	SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.
14	ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	35	TMS AUDITORS Α.Ε.
15	FIVEB AUDITORS Α.Ε.	36	UHY ΑΕΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.
16	FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	37	ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.
17	GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	38	ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.
18	HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	39	ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.
19	HLB ΕΛΛΑΣ Α.Ε.	40	ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.
20	IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	41	ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.
21	KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	42	ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.

To assess the financial performance of audit firms, we rely on financial ratios generated using the accounting variables listed above. We employ profitability, leverage, and liquidity ratios in our analysis. Based on each ratio, we examine the sector's financial performance over time, as well as any discrepancies between the larger six companies, based on income for the year 2022, and the remainder of the companies.

3.1. Liquidity Ratios

Financial analysts utilize liquidity ratios to assess the financial stability and viability of a company. These ratios quantify a firm's capacity to fulfill its financial

obligations for both immediate and extended periods. Liquidity ratios are frequently employed as a means of assessing the level of risk associated with a firm, hence aiding in the decision-making process of whether to grant credit to said firm. We chose to use the following liquidity ratios (names and ratios' explanations have been based on Financial Ratios e-book issued by Corporate Financial Institute):

Quick Ratio: The quick ratio, alternatively referred to as the acid-test ratio, assesses a company's capacity to settle its immediate obligations by possessing assets that may be easily converted into cash. The assets encompassed within this category consist of cash, marketable securities, and accounts receivable. The aforementioned assets are categorized as "quick" assets due to their ability to be readily and expeditiously converted into cash. Its calculation formula is:

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$$

Cash Ratio: The cash ratio, also known as the cash asset ratio, quantifies a corporation's capacity to settle its immediate financial liabilities using cash and cash equivalents. In contrast to the current ratio and the quick ratio, the cash ratio is a more stringent and cautious metric as it solely takes into account cash and cash equivalents, which are the most readily convertible assets of a corporation.

Cash equivalents refer to assets that possess the ability to be readily converted into cash and are associated with modest levels of risk. Cash equivalents encompass many financial instruments that possess high liquidity and are readily convertible into cash. Illustrative examples of such instruments are savings accounts, treasury bills, and money market securities.

Creditors prefer a higher cash ratio as it indicates the company can easily pay off its debt. There is no ideal figure but a ratio between 0.5 to 1 is usually preferred. As with the current and quick ratios, too high of a cash ratio indicates that the company is holding onto too much cash instead of utilizing its excess cash to invest in generating returns or growth. Its calculation formula is:

$$\text{Cash ratio} = \frac{\text{Cash and Cash equivalents}}{\text{Current Liabilities}}$$

We do not use current ratio as audit companies due to the nature of their business has no inventories. These companies offer financial and assurance services where there is no need for inventories to be offered. Any inventories such as stationary are considered immaterial and directly accounted as expense.

3.2. Profitability Ratios

To continue with, profitability ratios are financial indicators utilized by analysts and investors to assess and appraise a company's capacity to generate earnings (profit) in relation to its revenue, balance sheet assets, operating expenses, and shareholders' equity within a certain timeframe. The financial performance metrics demonstrate the extent to which a company effectively employs its resources

to generate financial gains and enhance shareholder value. For our analysis, we choose the following profitability ratios:

Gross Margin Ratio: The term gross margin refers to a profitability measure that looks at a company's gross profit compared to its revenue or sales. Gross profit is determined by calculating gross sales. The higher the gross margin, the more capital a company retains, which it can then use to pay other costs or satisfy debt obligations. Its calculation formula is:

$$\text{Gross margin ratio} = \text{Gross profit}/\text{Net sales}$$

Operating Profit Margin Ratio: Operating margin is the percentage of sales left after accounting for cost of goods sold as well as normal operating expenses (e.g. sales and marketing, general expenses, administrative expenses). It compares operating profit to revenue.

Operating margin can indicate how efficiently a company manages its operations. That can provide insight into how well those in management keep costs down and maximize profitability. Its calculation formula is:

$$\text{Operating margin ratio} = \text{Operating income}/\text{Net sales}$$

Return on Assets Ratio: The return on total assets ratio indicates a company's profitability in relation to its total assets. When a firm's ROA rises over time, it indicates that the company is squeezing more profits out of each dollar it owns in assets. Conversely, a declining ROA suggests a company has made bad investments, is spending too much money and may be headed for trouble. Its calculation formula is:

$$\text{Return on assets ratio} = \text{Net income}/\text{Total assets}$$

Return on Equity Ratio: The return on equity ratio measures how efficiently a company is using its equity to generate profit. ROEs will vary based on the industry or sector in which the company operates. Net Income is calculated before dividends paid to common shareholders and after dividends to preferred shareholders and interest to lenders. Its calculation formula is:

$$\text{Return on equity ratio} = \text{Net income}/\text{Shareholder's equity}$$

Net profit margin Ratio: The net profit margin ratio, sometimes referred to as "profit margin" or "net profit margin ratio", is used to determine how much of a company's total sale represents profit. It calculates how much net profit a business makes for every dollar of revenue.

The net profit margin is equal to net profit (also known as net income) divided by total revenue, expressed as a percentage. Its calculation formula is:

$$\text{Net Profit Margin} = \text{Net Income}/\text{Total Revenue}$$

3.3. Leverage Ratios

Leverage ratios indicate the degree to which a company is employing borrowed funds. Additionally, it assesses the financial stability and funding composition of the company. Employing a significant amount of leverage in a company's capital

structure can be fraught with risk, however it also offers advantages.

Debt to Assets Ratio: The debt ratio measures the relative amount of a company's assets that are provided from debt: The calculation considers all of the company's debt not just loans and bonds payable and considers all assets, including intangibles. Its calculation formula is:

$$\text{Debt ratio} = \text{Total liabilities} / \text{Total assets}$$

Debt to Equity Ratio: The debt-to-equity ratio is a financial metric that measures the relative amount of debt and liabilities compared to shareholders' equity. The ratio assesses whether a company's capital structure relies more on debt or equity funding. The ratio looks at total debt which consists of short-term debt, long-term debt, and other fixed payment obligations (such as capital leases). Its calculation formula is:

$$\text{Debt to equity ratio} = \text{Total liabilities} / \text{Shareholder's equity}$$

The next section focuses on audit and non-audit fees as a percentage of overall income. We investigate the proportion of total revenue generated by each type of service. This information was obtained from the transparency reports of audit firms. We limited our sample to corporations whose transparency reports were publicly available and easily detectable on their websites at least for the year 2018-2021 (We acknowledge the potential that there may have been instances in which we were negligent and were unable to find references that were clearly marked on the website). **Table 4** shows the companies for which transparency reports were obtained.

Table 4. Greek audit companies (for which transparency reports 2018-2022 obtained).

1	ABACUS ΕΛΕΓΚΤΙΚΗ ΑΕ	18	KSI Greece
2	ACES AUDITORS ΑΕ	19	LEVERAGE ΕΛΕΓΚΤΙΚΗ ΑΕ
3	ACTION AUDITING Α.Ε	20	MAZARS Α.Ε.
4	AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ	21	MPI HELLAS S.A
5	AUDIT OPINION I.K.E	22	NEXIA EUROSTATUS ΑΕ
6	AUDIT PLUS Α.Ε	23	OLYMPIA AUDITORS Α.Ε
7	Baker Tilly Greece	24	PKF ΕΛΛΑΣ
8	DELOITTE	25	PwC Α.Ε
9	DELTA PARTNERS ΑΕ	26	RSM GREECE ΑΕ
10	DFK PD AUDIT Α.Ε	27	SMG ΕΛΕΓΚΤΙΚΗ Α.Ε
11	EY HELLAS	28	TMS AUDITORS Α.Ε
12	Grant Thornton	29	ΑΕΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΑΕ
13	HLB HELLAS ΑΕ	30	ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Α.Ε
14	IG AUDIT Α.Ε	31	ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ
15	KMC ΕΛΕΓΤΙΚΗ Α.Ε.	32	ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε
16	KPMG Ορκωτοί Ελεγκτές Α.Ε.	33	ΚΥΠΡΗΣ ΚΑΙ ΣΥΝΕΡΓΑΤΕΣ Α.Ε
17	KRP AUDITORS ΑΕ	34	ΣΟΛ crowe

We analyze the percentages for the full sample and how they changed over time. Furthermore, we look for any differences between the top six companies and the remainder. Finally, we look at whether the proportion of audit (or consulting) fees to total fees varies with the size of the audit firm, expressed as a % of total revenues. This is tested using a panel data regression analysis of the non-audit fees to total fees ratio and total fees.

Table 5 presents the fee amounts and ratios of audit and non-audit (consulting) fees to total fees per company per year.

Table 5. Audit-consulting fees ratio.

COMPANY	YEAR	Total Fees	Audit Fees	Other Services Fees	Audit Fees %	Other Services Fees %	Average for the Period 2018-2021	
							Audit Fees %	Other Services Fees %
<i>ABACUS ΕΛΕΓΚΤΙΚΗ ΑΕ</i>	2018	300267.83	217755.73	82512.10	72.52%	27.48%	71.37%	28.63%
	2019	312265.11	240460.97	71804.14	77.01%	22.99%		
	2020	276676.52	202410.00	74266.52	73.16%	26.84%		
	2021	290675.00	181400.00	109275.00	62.41%	37.59%		
<i>ACES AUDITORS ΑΕ</i>	2018	561788.88	559229.20	2559.68	99.54%	0.46%	96.57%	3.43%
	2019	591352.44	583102.44	8250.00	98.60%	1.40%		
	2020	581329.54	553613.41	27716.13	95.23%	4.77%		
	2021	626320.74	583870.74	42450.00	93.22%	6.78%		
<i>ACTION AUDITING Α.Ε</i>	2018	1190027.60	888126.00	301901.60	74.63%	25.37%	74.09%	25.91%
	2019	1199631.00	896876.00	302755.00	74.76%	25.24%		
	2020	1275153.00	950676.00	324477.00	74.55%	25.45%		
	2021	1230106.00	891176.00	338930.00	72.45%	27.55%		
<i>AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ</i>	2018	160712.90	34400.00	126312.90	21.40%	78.60%	25.06%	74.94%
	2019	202000.00	38700.00	163300.00	19.16%	80.84%		
	2020	222250.00	59800.00	162450.00	26.91%	73.09%		
	2021	226966.95	70607.27	156359.68	31.11%	68.89%		
<i>AUDIT OPINION I.K.E</i>	2018	411843.17	303352.85	108490.32	73.66%	26.34%	70.89%	29.11%
	2019	551721.02	365935.00	185786.02	66.33%	33.67%		
	2020	782190.47	575121.13	207069.34	73.53%	26.47%		
	2021	828592.10	580451.78	248140.32	70.05%	29.95%		
<i>Baker Tilly Greece</i>	2018	752280.00	377740.00	374540.00	50.21%	49.79%	48.93%	51.07%
	2019	742395.00	527775.00	214620.00	71.09%	28.91%		
	2020	1349000.00	525000.00	824000.00	38.92%	61.08%		
	2021	1053000.00	476000.00	577000.00	45.20%	54.80%		

Continued

<i>DELOITTE</i>	2018	25489187.00	18451325.00	7037862.00	72.39%	27.61%	68.83%	31.17%
	2019	28463433.00	21303796.00	7159637.00	74.85%	25.15%		
	2020	6397781.90	21206.45	6376575.45	0.33%	99.67%		
	2021	30775561.00	22949740.00	7825821.00	74.57%	25.43%		
<i>DELTA PARTNERS AE</i>	2018	863000.00	492000.00	371000.00	57.01%	42.99%	68.58%	31.42%
	2019	731000.00	609000.00	122000.00	83.31%	16.69%		
	2020	562000.00	439000.00	123000.00	78.11%	21.89%		
	2021	756000.00	457000.00	299000.00	60.45%	39.55%		
<i>DFK PD AUDIT A.E</i>	2018	619279.00	360791.00	258488.00	58.26%	41.74%	58.33%	41.67%
	2019	653680.00	380892.00	272788.00	58.27%	41.73%		
	2020	655740.00	362340.00	293400.00	55.26%	44.74%		
	2021	658505.00	405035.00	253470.00	61.51%	38.49%		
<i>HLB HELLAS AE</i>	2018	500000.00	280000.00	220000.00	56.00%	44.00%	61.63%	38.37%
	2019	440000.00	307000.00	133000.00	69.77%	30.23%		
	2020	384000.00	251000.00	133000.00	65.36%	34.64%		
	2021	516000.00	296000.00	220000.00	57.36%	42.64%		
<i>KMC EAEITIKH A.E.</i>	2018	1241642.42	1206992.42	34650.00	97.21%	2.79%	74.20%	25.80%
	2019	1073552.91	956602.91	116950.00	89.11%	10.89%		
	2020	1102778.47	571602.27	531176.20	51.83%	48.17%		
	2021	1066758.61	592490.15	474268.46	55.54%	44.46%		
<i>KRP AUDITORS AE</i>	2018	520975.00	484700.00	36275.00	93.04%	6.96%	83.98%	16.02%
	2019	390100.00	341750.00	48350.00	87.61%	12.39%		
	2020	407390.00	340050.00	67340.00	83.47%	16.53%		
	2021	462174.31	328900.00	133274.31	71.16%	28.84%		
<i>KSI Greece</i>	2018	829037.28	576640.98	252396.30	69.56%	30.44%	66.46%	33.54%
	2019	829791.06	603998.55	225792.51	72.79%	27.21%		
	2020	1123281.34	770875.11	352406.23	68.63%	31.37%		
	2021	1367470.57	806347.35	561123.22	58.97%	41.03%		
<i>MAZARS A.E.</i>	2018	5000000.00	2200000.00	2800000.00	44.00%	56.00%	44.88%	55.12%
	2019	4900000.00	2200000.00	2700000.00	44.90%	55.10%		
	2020	5100000.00	2400000.00	2700000.00	47.06%	52.94%		
	2021	5500000.00	2400000.00	3100000.00	43.64%	56.36%		
<i>MPI HELLAS S.A</i>	2018	659404.00	580943.00	78461.00	88.10%	11.90%	82.40%	17.60%
	2019	616127.00	522904.00	93223.00	84.87%	15.13%		
	2020	647892.00	549066.00	98826.00	84.75%	15.25%		
	2021	742015.00	543469.00	198546.00	73.24%	26.76%		

Continued

<i>OLYMPIA AUDITORS A.E</i>	2018	1738912.12	1035206.02	703706.10	59.53%	40.47%	61.30%	38.70%
	2019	1756229.93	1058983.93	697246.00	60.30%	39.70%		
	2020	1614468.08	1041094.57	573373.51	64.49%	35.51%		
	2021	1724823.99	1053926.60	670897.39	61.10%	38.90%		
<i>PKF ΕΛΛΑΣ</i>	2018	4522000.00	4292000.00	230000.00	94.91%	5.09%	84.63%	15.37%
	2019	4681000.00	3913000.00	768000.00	83.59%	16.41%		
	2020	5225000.00	4240000.00	985000.00	81.15%	18.85%		
	2021	5946000.00	4798000.00	1148000.00	80.69%	19.31%		
<i>SMG ΕΛΕΓΚΤΙΚΗ Α.Ε</i>	2018	197885.00	76810.00	121075.00	38.82%	61.18%	49.74%	50.26%
	2019	189035.00	79660.00	109375.00	42.14%	57.86%		
	2020	197066.08	99660.00	97406.08	50.57%	49.43%		
	2021	156640.00	112280.00	44360.00	71.68%	28.32%		
<i>TMS AUDITORS A.E</i>	2018	826371.88	716096.22	110275.66	86.66%	13.34%	76.05%	23.95%
	2019	767121.95	601112.90	166009.05	78.36%	21.64%		
	2020	901362.58	597932.58	303430.00	66.34%	33.66%		
	2021	782923.23	577470.00	205453.23	73.76%	26.24%		
<i>AUDIT PLUS A.E</i>	2018	204590.00	173070.00	31520.00	84.59%	15.41%	77.40%	22.60%
	2019	199920.00	171020.00	28900.00	85.54%	14.46%		
	2020	190800.00	137400.00	53400.00	72.01%	27.99%		
	2021	195575.00	130650.00	64925.00	66.80%	33.20%		
<i>ΑΕΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΑΕ</i>	2018	1020400.00	858100.00	162300.00	84.09%	15.91%	86.39%	13.61%
	2019	948178.81	818178.81	130000.00	86.29%	13.71%		
	2020	959683.00	839683.00	120000.00	87.50%	12.50%		
	2021	1167575.00	1022575.00	145000.00	87.58%	12.42%		
<i>ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ</i>	2018	615484.00	509384.00	106100.00	82.76%	17.24%	75.60%	24.40%
	2019	754448.00	629048.00	125400.00	83.38%	16.62%		
	2020	212200.00	106100.00	106100.00	50.00%	50.00%		
	2021	741266.00	512039.00	229227.00	69.08%	30.92%		
<i>Grant Thornton</i>	2018	31308370.00	14248314.00	17060056.00	45.51%	54.49%	37.41%	62.59%
	2019	34666899.00	13414306.00	21252593.00	38.69%	61.31%		
	2020	39073786.00	13160564.00	25913222.00	33.68%	66.32%		
	2021	43736856.00	14834687.00	28902169.00	33.92%	66.08%		
<i>ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε</i>	2018	2431487.55	2147337.55	284150.00	88.31%	11.69%	90.84%	9.16%
	2019	2289084.00	2081085.00	207999.00	90.91%	9.09%		
	2020	2387405.00	2173040.00	214365.00	91.02%	8.98%		
	2021	2689450.68	2498100.68	191350.00	92.89%	7.11%		

Continued

<i>EY HELLAS</i>	2018	25400000.00	18000000.00	7400000.00	70.87%	29.13%	75.26%	24.74%
	2019	23200000.00	17800000.00	5400000.00	76.72%	23.28%		
	2020	23200000.00	17800000.00	5400000.00	76.72%	23.28%		
	2021	24400000.00	18800000.00	5600000.00	77.05%	22.95%		
<i>ΚΥΠΡΗΣ ΚΑΙ ΣΥΝΕΡΓΑΤΕΣ Α.Ε</i>	2018	402883.00	53900.00	348983.00	13.38%	86.62%	42.94%	57.06%
	2019	411135.00	52400.00	358735.00	12.75%	87.25%		
	2020	452326.00	302984.00	149342.00	66.98%	33.02%		
	2021	565166.00	377166.00	188000.00	66.74%	33.26%		
<i>PwC Α.Ε</i>	2018	36620000.00	31360000.00	5260000.00	85.64%	14.36%	84.00%	16.00%
	2019	35530000.00	30240000.00	5290000.00	85.11%	14.89%		
	2020	35350000.00	30260000.00	5090000.00	85.60%	14.40%		
	2021	35450000.00	28220000.00	7230000.00	79.61%	20.39%		
<i>KPMG Ορκωτοί Ελεγκτές Α.Ε.</i>	2018	36553000.00	12244000.00	24309000.00	33.50%	66.50%	50.20%	49.80%
	2019	35093000.00	13447000.00	21646000.00	38.32%	61.68%		
	2020	13131000.00	12008000.00	1123000.00	91.45%	8.55%		
	2021	13199000.00	11486000.00	1713000.00	87.02%	12.98%		
<i>ΣΟΑ crowe</i>	2018	33281889.59	18854960.01	14426929.58	56.65%	43.35%	57.03%	42.97%
	2019	33140664.91	19087879.31	14052785.60	57.60%	42.40%		
	2020	32097116.66	18706308.23	13390808.43	58.28%	41.72%		
	2021	33056591.26	18391511.30	14665079.96	55.64%	44.36%		
<i>IG AUDIT Α.Ε</i>	2018	161004.03	94072.58	66931.45	58.43%	41.57%	85.89%	14.11%
	2019	475295.49	407245.49	68050.00	85.68%	14.32%		
	2020	707675.57	643425.57	64250.00	90.92%	9.08%		
	2021	803319.19	699619.19	103700.00	87.09%	12.91%		
<i>LEVERAGE ΕΛΕΓΤΙΚΗ ΑΕ</i>	2018	19000.00	-	19000.00	0.00%	100.00%	45.70%	54.30%
	2019	80470.00	25570.00	54900.00	31.78%	68.22%		
	2020	184671.22	116761.25	67909.97	63.23%	36.77%		
	2021	386303.45	164052.49	222250.96	42.47%	57.53%		
<i>RSM GREECE ΑΕ</i>	2018	959188.35	597588.63	361599.72	62.30%	37.70%	66.00%	34.00%
	2019	908091.57	604600.79	303490.78	66.58%	33.42%		
	2020	910279.14	599098.89	311180.25	65.81%	34.19%		
	2021	852017.84	594274.60	257743.24	69.75%	30.25%		
<i>ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Α.Ε</i>	2018	311906.45	153700.00	158206.45	49.28%	50.72%	45.33%	54.67%
	2019	339937.84	135990.32	203947.52	40.00%	60.00%		
	2020	355296.45	162890.00	192406.45	45.85%	54.15%		
	2021	420489.39	194496.45	225992.94	46.25%	53.75%		

Continued

	2018	1212890.12	721456.21	491433.91	59.48%	40.52%		
NEXIA EUROSTATUS AE	2019	1231690.33	706676.07	525014.26	57.37%	42.63%	61.05%	38.95%
	2020	1195161.39	775866.87	419294.52	64.92%	35.08%		
	2021	1046135.48	656623.93	389511.55	62.77%	37.23%		
Average for Total Sample					62.49%	37.51%		
							Max	96.57% 74.94%
							Min	25.06% 3.43%

Source: Author's own calculation.

4. Data and Main Empirical Analysis Results

In this section, we present the results and conclusions of the empirical analysis of our data.

Firstly, we begin the analysis of financial ratios, which present the financial position of the companies. **Tables 6-14** present the financial ratios for our sample for the examined period. Also, **Table 15** presents the descriptive statistics of all the financial ratios.

4.1. Financial Ratios

4.1.1. Liquidity Ratios

1) Quick Ratio

Table 6. Values of quick ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	103.62%	111.67%	105.91%	123.56%	132.16%	120.46%	129.19%	163.71%	164.07%	193.45%	247.37%	145.02%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	240.14%	366.92%	452.74%	531.51%	586.57%	545.65%	514.47%	162.99%	139.40%	163.52%	173.06%	352.45%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	170.77%	182.75%	182.74%	179.14%	176.00%	239.46%	250.61%	242.89%	209.77%	192.14%	197.05%	202.12%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	118.19%	126.20%	161.83%	140.78%	131.46%	127.31%	121.57%	117.49%	114.91%	135.02%	128.64%	129.40%
5). PRICEWATERHOUSECOOPERS S.A.	121.64%	174.77%	163.00%	124.44%	112.74%	127.79%	132.03%	195.13%	193.42%	125.79%	186.57%	150.67%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	122.93%	116.79%	128.41%	125.34%	138.01%	111.42%	120.30%	123.05%	143.05%	165.70%	148.06%	131.19%
Average of Big 6	146.22%	179.85%	199.11%	204.13%	212.82%	212.02%	211.36%	167.54%	160.77%	162.60%	180.12%	185.14%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	171.29%	184.28%	174.97%	173.87%	254.52%	311.03%	261.76%	266.76%	259.68%	256.05%	218.05%	230.21%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	182.79%	215.78%	432.99%	158.93%	131.18%	135.32%	135.83%	138.23%	157.89%	149.16%	183.81%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	110.36%	133.43%	129.18%	164.87%	214.74%	229.56%	347.03%	147.52%	140.48%	N/A	179.68%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	220.36%	241.12%	583.56%	301.56%	299.81%	234.56%	206.35%	202.44%	116.98%	N/A	267.41%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	219.68%	437.74%	489.71%	393.71%	217.08%	190.19%	N/A	324.68%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	115.89%	156.47%	N/A	198.25%	154.98%	183.05%	141.90%	130.53%	N/A	154.44%

Continued

AUDIT PLUS A.E.	N/A	N/A	541.99%	141.79%	120.64%	133.85%	153.03%	320.51%	378.55%	171.70%	N/A	245.26%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	67.67%	37.28%	70.17%	38.30%	48.61%	95.96%	97.26%	N/A	65.04%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	102.29%	151.75%	185.50%	225.93%	124.16%	114.05%	123.70%	122.16%	N/A	143.69%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	134.84%	146.19%	184.05%	179.87%	173.73%	105.03%	22.88%	27.02%	38.25%	30.32%	N/A	104.22%
DFK PD AUDIT A.E.	N/A	75.22%	N/A	60.27%	91.18%	109.48%	111.63%	108.98%	117.40%	123.36%	120.46%	102.00%
FIVEB AUDITORS A.E.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	84.75%	113.36%	333.74%	177.28%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	131.89%	99.38%	125.66%	121.79%	104.90%	135.42%	133.10%	120.42%	98.73%	84.25%	N/A	115.55%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	181.30%	150.75%	175.39%	194.82%	177.45%	188.66%	425.34%	298.61%	N/A	N/A	N/A	224.04%
HLB ΕΛΛΑΣ Α.Ε.	N/A	155.28%	136.09%	150.38%	159.82%	163.86%	152.40%	158.39%	184.94%	129.95%	N/A	154.57%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	86.17%	89.87%	97.55%	110.88%	130.58%	N/A	103.01%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	206.89%	214.34%	393.20%	649.96%	1029.60%	144.01%	572.80%	620.03%	746.07%	508.54%
KRP AUDITORS A.E.	N/A	N/A	N/A	227.74%	218.80%	215.10%	298.84%	431.75%	503.43%	407.44%	N/A	329.01%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ I.K.E.	N/A	N/A	N/A	104.80%	141.90%	159.93%	160.37%	178.11%	188.68%	209.49%	N/A	163.32%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	175.16%	181.01%	189.02%	194.75%	201.10%	234.89%	254.28%	172.08%	204.03%	146.77%	169.11%	192.93%
METRON AUDITING A.E.	264.22%	324.00%	478.38%	485.99%	529.99%	743.84%	833.79%	1225.29%	189.81%	176.95%	N/A	525.23%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	395.74%	146.07%	808.00%	587.08%	1301.82%	1292.83%	2633.37%	2452.93%	263.23%	789.67%	N/A	1067.07%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	149.97%	151.40%	121.08%	123.06%	136.35%	125.64%	131.27%	201.05%	235.11%	293.00%	142.42%	164.58%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	131.97%	141.59%	161.94%	225.20%	287.64%	363.73%	132.05%	142.58%	N/A	198.34%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	132.26%	115.58%	114.94%	118.11%	127.23%	128.40%	144.21%	149.79%	149.80%	149.23%	N/A	132.96%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	157.11%	229.73%	284.31%	431.41%	1184.32%	846.05%	938.07%	1167.58%	1348.91%	401.23%	235.77%	656.77%
RSM GREECE A.E.	129.58%	153.24%	152.31%	153.20%	163.43%	174.44%	180.76%	186.32%	214.44%	187.91%	240.05%	175.97%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	353.48%	133.92%	194.82%	254.58%	220.26%	N/A	231.41%
TMS AUDITORS A.E.	N/A	110.73%	120.49%	122.50%	109.23%	115.01%	86.19%	83.95%	123.55%	174.05%	132.54%	117.82%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	132.28%	109.28%	177.48%	183.07%	209.39%	260.60%	344.26%	426.68%	408.31%	384.72%	N/A	263.61%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	740.97%	N/A	N/A	189.90%	177.56%	165.85%	186.10%	151.04%	N/A	268.57%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	122.86%	339.69%	681.36%	740.74%	580.52%	689.18%	495.05%	453.63%	302.45%	247.68%	465.32%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	136.07%	155.75%	181.71%	189.03%	209.79%	242.11%	269.98%	279.67%	216.98%	197.20%	N/A	207.83%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	178.13%	173.35%	205.21%	165.68%	387.32%	198.58%	249.75%	320.82%	241.15%	270.79%	418.00%	255.34%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	140.19%	140.92%	141.69%	180.59%	144.01%	142.94%	151.33%	163.94%	151.47%	150.23%	N/A	150.73%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	212.19%	108.00%	119.20%	127.50%	146.36%	159.91%	163.44%	182.41%	130.04%	135.70%	N/A	148.47%
Average of Rest	176.39%	154.20%	237.86%	225.04%	279.26%	281.45%	340.41%	337.51%	243.09%	214.45%	262.75%	250.22%
AVERAGE	168.16%	159.50%	231.02%	221.65%	268.48%	271.29%	321.53%	312.63%	231.04%	206.86%	235.21%	238.85%
Difference Big 6—Rest of Sample	-17.11%	16.64%	-16.29%	-9.29%	-23.79%	-24.67%	-37.91%	-50.36%	-33.86%	-24.18%	-31.45%	-22.93%

Source: Author's own calculation.

According to this proportion, Greek audit firms have achieved a significant level of liquidity over the past decade. The majority of companies, across all years, maintained a ratio of at least 100%. The average ratio for the top six companies was approximately 180%, while the remaining companies had an average ratio of 200%.

The quick ratio is a crucial measure used to assess a company's capacity to pay off its immediate debts using assets that can be readily converted into cash. It helps establish an organization's liquidity position.

Between 2012 and 2022, Greek audit firms exhibited fluctuating levels of liquidity. Between 2012 and 2021, the average quick ratio for the six prominent corporations, referred to as the "Big 6", was 185.14%. These include well-known firms such as Deloitte, KPMG, and Ernst & Young, among others. Their average ratio demonstrates a capacity to meet 1.85 times their immediate financial obligations with liquid assets. Although these data provide an indication of a favorable liquidity position, it is worth noting the significant variation observed between different years and companies. As an example, KPMG reached its highest point in 2016 with a ratio of 586.57%, but Grand Thompson had a comparatively lower average of 131.19% during the span of ten years.

In contrast, the remaining companies exhibited a varied liquidity status. ATC and action auditing exhibited significant ratios at specific points, reaching 583.56% and 347.03%, respectively. Nevertheless, several companies also encountered periods in which data was not accessible, maybe indicating the early stages of establishment or deliberate data hiding.

When contrasted side by side, the "Big 6" generally shows a more consistent trend of liquidity compared to other corporations. However, there were instances where certain smaller companies outperformed their larger counterparts in terms of liquidity. This analysis emphasizes the critical importance of consistently upholding liquidity, which is essential for both a corporation's uninterrupted operation and investor trust assurance.

2) Cash Ratio

Table 7. Values of cash ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	6.46%	22.87%	7.51%	30.57%	26.26%	21.29%	21.50%	24.51%	22.34%	57.18%	56.10%	26.96%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΚΤΕΣ Α.Ε.	77.07%	159.62%	226.02%	270.21%	284.52%	282.08%	225.48%	45.29%	58.23%	59.16%	53.25%	158.27%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	33.55%	35.12%	30.15%	29.93%	31.08%	30.41%	46.40%	36.58%	69.79%	85.00%	90.11%	47.10%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A.	8.63%	22.24%	14.49%	11.57%	37.96%	38.34%	45.02%	42.63%	26.30%	45.87%	24.09%	28.83%
5). PRICEWATERHOUSECOOPERS S.A.	21.78%	34.62%	11.46%	29.74%	16.84%	14.39%	19.99%	8.27%	31.22%	13.45%	18.11%	19.99%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	16.35%	8.64%	18.15%	19.32%	21.95%	15.70%	17.46%	19.50%	24.86%	30.97%	34.30%	20.65%
Average of Big 6	27.30%	47.19%	51.30%	65.22%	69.77%	67.03%	62.64%	29.46%	38.79%	48.60%	45.99%	50.30%

Continued

ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	6.18%	17.14%	16.86%	30.18%	82.63%	3.93%	5.67%	13.71%	15.67%	27.02%	30.01%	22.64%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	32.99%	14.82%	41.96%	27.05%	5.30%	1.88%	3.56%	14.01%	23.02%	15.72%	18.03%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	74.28%	58.43%	41.02%	83.54%	139.22%	139.60%	240.16%	87.81%	85.41%	N/A	105.50%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	180.05%	117.05%	305.20%	112.21%	79.24%	47.84%	22.23%	77.40%	35.12%	N/A	108.48%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	204.63%	389.85%	288.14%	332.83%	178.39%	170.79%	N/A	260.77%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	0.00%	0.00%	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	0.00%
AUDIT PLUS Α.Ε.	N/A	N/A	502.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	62.82%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	0.00%	0.00%	0.79%	0.79%	0.38%	0.56%	16.76%	N/A	2.75%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	31.28%	17.09%	14.04%	12.19%	13.23%	13.21%	20.83%	26.90%	N/A	18.60%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	2.78%	7.38%	1.92%	5.17%	0.97%	0.27%	0.23%	0.64%	0.66%	0.59%	N/A	2.06%
DFK PD AUDIT Α.Ε.	N/A	35.41%	N/A	13.08%	24.08%	29.69%	9.90%	9.51%	3.66%	7.50%	1.59%	14.94%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	63.85%	61.29%	39.11%	54.75%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	14.87%	6.66%	6.40%	9.57%	2.13%	51.93%	11.45%	1.04%	4.65%	15.69%	N/A	12.44%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	64.17%	60.46%	36.48%	79.64%	64.69%	64.29%	275.96%	223.98%	N/A	N/A	N/A	108.71%
HLB ΕΛΛΑΣ Α.Ε.	N/A	81.72%	48.64%	12.73%	36.01%	26.96%	4.23%	53.77%	89.45%	48.14%	N/A	44.63%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	0.00%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	113.97%	14.15%	23.01%	65.58%	124.44%	14.47%	136.13%	107.67%	195.48%	88.32%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	93.82%	133.52%	141.76%	172.10%	231.95%	303.95%	276.15%	N/A	193.32%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	13.59%	6.42%	22.84%	11.19%	5.45%	19.26%	24.49%	N/A	14.75%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	12.39%	19.53%	11.48%	16.13%	13.11%	6.80%	14.47%	1.25%	7.12%	6.79%	2.66%	10.16%
METRON AUDITING Α.Ε.	109.23%	162.97%	257.04%	290.94%	301.34%	463.18%	581.45%	843.99%	44.43%	82.43%	N/A	313.70%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	309.34%	113.13%	706.61%	441.86%	968.47%	945.16%	2042.83%	2226.94%	235.20%	687.49%	N/A	867.70%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	10.67%	37.47%	21.82%	20.66%	35.31%	42.92%	57.76%	72.29%	99.15%	141.49%	68.61%	55.29%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	24.06%	35.83%	65.01%	77.19%	109.23%	232.98%	63.34%	86.85%	N/A	86.81%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	29.52%	30.32%	29.35%	28.89%	36.12%	40.80%	46.33%	48.95%	66.61%	63.00%	N/A	41.99%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	48.80%	100.07%	152.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	27.37%
RSM GREECE Α.Ε.	15.36%	52.33%	8.10%	25.73%	5.95%	1.27%	13.60%	6.51%	9.76%	43.23%	69.43%	22.84%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	348.79%	69.06%	66.02%	163.77%	105.61%	N/A	150.65%
TMS AUDITORS Α.Ε.	N/A	2.84%	18.60%	15.48%	14.56%	37.74%	5.76%	14.58%	52.17%	85.31%	79.99%	32.70%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	28.57%	16.53%	40.93%	28.02%	43.25%	26.75%	105.60%	201.66%	183.33%	119.55%	N/A	79.42%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	722.32%	N/A	N/A	0.00%	0.00%	0.00%	85.06%	0.00%	N/A	134.56%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	3.22%	30.06%	69.79%	27.36%	41.99%	62.08%	10.44%	23.04%	48.58%	45.92%	36.25%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	11.96%	29.11%	33.09%	21.09%	29.98%	35.24%	37.25%	72.96%	67.62%	56.06%	N/A	39.44%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	11.84%	12.50%	6.84%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.83%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	11.88%	17.17%	19.69%	29.34%	10.35%	9.79%	8.13%	13.19%	33.38%	33.60%	N/A	18.65%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	46.66%	36.04%	20.81%	27.76%	48.07%	33.87%	42.87%	37.83%	55.71%	52.45%	N/A	40.21%
Average of Rest	45.89%	49.10%	108.98%	55.77%	77.87%	89.87%	122.95%	143.33%	63.03%	72.54%	45.71%	79.55%
AVERAGE of all sample	40.82%	48.71%	98.80%	57.30%	76.55%	86.53%	114.12%	126.67%	59.48%	69.04%	45.80%	74.89%
Difference Big 6—Rest of Sample	-13.52%	-1.52%	-47.50%	7.93%	-6.78%	-19.49%	-51.48%	-97.20%	-20.69%	-20.43%	0.19%	-24.59%

Source: Author's own calculation.

Based on the cash ratio, the strictest measure of liquidity, Greek audit firms have adequate liquidity. Most Greek audit companies appear to be free from liquidity issues. Throughout the entire period, the ratio for the Big 6 audit companies remains consistently at approximately 50%, which is indicative of a highly commendable performance. Furthermore, the remaining corporations appear to have an average cash ratio that is 25% higher than that of the six largest companies.

The average cash ratio of the six leading audit firms in Greece, known as the “Big 6”, fluctuated over the past decade. It began at 27.30% in 2012, reached its highest point at 69.77% in 2016, and then decreased to 45.99% in 2022. Overall, the average cash ratio for the decade was 50.30%. This indicates a strong ability to quickly handle short-term debts, indicating a solid liquidity position.

Conversely, the remaining Greek audit businesses had a less stable liquidity pattern. The cash ratio of ACTION AUDITING A.E.O.E.A. varied significantly, ranging from a high of 305.20% in 2014 to a lower value of 35.12% in 2021. ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε. experienced a gradual increase in its ownership percentage, commencing at 6.18% in 2012 and reaching a substantial 82.63% by 2015. However, it later stabilized at 30.01% in 2022.

When comparing the “Big 6” to other corporations, the former typically maintains a more stable liquidity position, although there may be occasional changes. Although the latter shows moments of increased liquidity, it also exhibits more significant volatility. To summarize, the “Big 6” firms demonstrate consistent financial stability, but the Greek audit industry as a whole exhibits a more fluctuating liquidity situation during the time under examination.

Based on the two ratios provided, it appears that audit organizations have successfully mitigated liquidity risk. According to the International Standard of Auditing, audit businesses are required to maintain complete independence from their customers. This implies that they cannot initiate a new engagement with a client who still owes them money. As a result, enterprises are able to promptly get trade receivables, which provide them with substantial liquidity and working capital. Consequently, corporations can promptly settle their debts while keeping them to a minimum.

4.1.2. Profitability Ratios

1) Gross Margin Ratio

Table 8. Values of gross margin ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	5.90%	7.02%	12.22%	12.82%	12.00%	10.25%	8.48%	15.09%	15.92%	18.58%	16.33%	12.24%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	37.60%	39.55%	38.41%	37.11%	34.34%	29.84%	17.10%	29.05%	26.79%	36.47%	38.73%	33.18%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	14.71%	11.45%	8.75%	8.85%	11.04%	22.74%	28.18%	25.58%	29.92%	26.22%	29.85%	19.75%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	28.58%	29.87%	34.47%	35.91%	29.94%	35.63%	35.04%	34.26%	31.17%	31.63%	30.58%	32.46%

Continued

5). PRICEWATERHOUSECOOPERS S.A.	22.92%	29.37%	25.72%	23.26%	24.53%	20.18%	22.53%	19.32%	20.40%	21.00%	21.02%	22.75%
6). GRANT THORNTON A.E. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	19.43%	15.22%	18.04%	16.58%	19.34%	17.16%	20.64%	22.35%	29.72%	23.42%	25.55%	20.68%
Average of Big 6	21.52%	22.08%	22.94%	22.42%	21.86%	22.63%	21.99%	24.27%	25.66%	26.22%	27.01%	23.51%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	44.62%	42.07%	37.34%	25.07%	29.98%	29.36%	29.51%	25.30%	18.97%	22.15%	21.61%	29.63%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	41.81%	40.39%	10.59%	32.36%	25.97%	19.57%	18.68%	30.03%	36.36%	25.53%	28.13%
ACTION AUDITING A.E.O.E.A.	N/A	16.12%	23.41%	26.56%	36.15%	27.20%	30.00%	29.26%	37.32%	33.56%	N/A	28.84%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	15.12%	48.66%	33.80%	36.84%	39.36%	18.68%	16.73%	20.10%	13.11%	N/A	26.93%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	100.00%	100.00%	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
AUDIT PLUS Α.Ε.	N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	100.00%	100.00%	100.00%	39.92%	30.04%	64.18%	48.57%	N/A	68.96%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	15.23%	41.30%	36.91%	36.82%	32.24%	31.59%	30.58%	32.08%	N/A	32.09%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	24.04%	13.27%	22.05%	19.69%	28.95%	0.74%	31.19%	36.08%	17.85%	-31.52%	N/A	16.23%
DFK PD AUDIT Α.Ε.	N/A	-23.34%	N/A	1.57%	30.34%	34.33%	24.24%	23.58%	22.00%	25.17%	27.88%	18.42%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.77%	52.70%	63.76%	39.41%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	60.87%	34.39%	60.16%	43.18%	40.50%	42.57%	44.31%	36.63%	-12.82%	-75.24%	N/A	27.45%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	26.88%	26.37%	27.26%	24.89%	17.69%	17.21%	32.27%	25.63%	N/A	N/A	N/A	24.78%
HLB ΕΛΛΑΣ Α.Ε.	N/A	38.85%	27.50%	32.01%	26.71%	25.75%	20.57%	24.88%	26.32%	17.51%	N/A	26.68%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	34.76%	40.48%	63.63%	45.92%	63.20%	57.49%	48.64%	51.45%	46.07%	50.18%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	18.16%	16.36%	17.92%	23.13%	18.78%	22.05%	24.17%	N/A	20.08%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	19.97%	24.89%	15.13%	18.29%	18.26%	17.69%	17.48%	N/A	18.82%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	48.15%	44.30%	44.49%	41.10%	40.41%	34.43%	25.50%	28.88%	31.83%	100.00%	100.00%	49.01%
METRON AUDITING Α.Ε.	41.37%	56.64%	51.21%	54.47%	54.23%	43.08%	40.78%	38.43%	43.15%	43.07%	N/A	46.64%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	53.50%	37.44%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	89.09%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	37.13%	32.94%	23.25%	24.80%	27.33%	20.64%	25.69%	28.78%	29.88%	28.22%	30.02%	28.06%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	25.31%	29.67%	25.69%	27.92%	22.19%	28.22%	26.30%	26.83%	N/A	26.52%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	17.77%	8.42%	6.73%	13.15%	20.22%	16.60%	18.97%	19.58%	20.80%	18.76%	N/A	16.10%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	14.74%	40.37%	46.63%	100.00%	100.00%	100.00%	54.30%	49.38%	59.65%	61.35%	64.45%	62.81%
RSM GREECE Α.Ε.	32.50%	29.61%	32.74%	24.36%	28.60%	17.95%	22.21%	23.66%	20.23%	27.76%	38.18%	27.07%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
TMS AUDITORS Α.Ε.	N/A	22.64%	21.44%	20.61%	22.65%	27.51%	31.41%	38.02%	33.15%	35.51%	34.74%	28.77%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	24.99%	30.56%	31.81%	28.30%	30.85%	22.43%	20.82%	18.60%	15.04%	16.97%	N/A	24.04%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	N/A	N/A	N/A	100.00%	100.00%	100.00%	100.00%	100.00%	N/A	100.00%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	57.66%	42.89%	41.51%	42.44%	25.84%	27.76%	24.40%	22.28%	17.29%	24.49%	32.66%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	37.06%	37.17%	37.73%	36.65%	34.82%	32.70%	30.98%	31.27%	32.67%	33.85%	N/A	34.49%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	20.50%	19.31%	27.33%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	78.83%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	12.41%	17.32%	14.76%	19.06%	13.22%	12.78%	14.19%	12.88%	14.81%	13.94%	N/A	14.54%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	25.18%	28.97%	16.18%	17.65%	19.00%	17.42%	19.32%	26.96%	25.19%	26.07%	N/A	22.19%
Average of Rest	32.61%	29.04%	36.89%	41.57%	44.54%	47.36%	45.18%	44.63%	43.42%	43.35%	48.06%	41.51%
AVERAGE	29.58%	27.60%	34.28%	38.46%	40.86%	43.74%	41.79%	41.65%	40.82%	40.84%	41.04%	38.24%
Difference Big 6—Rest of Sample	-8.06%	-5.52%	-11.34%	-16.04%	-19.00%	-21.11%	-19.79%	-17.38%	-15.16%	-14.62%	-14.04%	-14.73%

Source: Author's own calculation.

From 2012 to 2022, the profitability of Greek audit firms, measured by the gross margin ratio, showed diverse trends. Deducting the Cost of Goods Sold (COGS) from the net profit yields valuable information about a company's financial well-being. The average gross margin ratio for the "Big 6" firms between 2012 and 2021 was 23.51%. Although the top companies in the industry have generally maintained a consistent level of profitability, there have been swings in their performance. Notably, DELOITTE's profitability ratio increased from 5.90% in 2012 to 16.33% in 2022, while KPMG experienced a decline from 37.60% to 33.18% during the same period.

In contrast, an overview of the remaining enterprises reveals a broader spectrum of profitability. ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε. began with a strong 44.62% in 2012 but saw a decrease to 29.63% in 2021. Conversely, ACTION AUDITING Α.Ε.Ο.Ε.Α. experienced an increase in performance from 16.12% in 2013 to 28.84% in 2021. It is clear that the larger market includes both companies that have improved profitability and those that are struggling with issues.

In comparison, the "Big 6" has shown a very stable performance, but the remaining market has seen higher levels of volatility. This can be attributed to the natural benefits that larger organizations may have, such as a diversified client base, economies of scale, and larger financial reserves. Over a decade, the Greek audit sector has experienced two distinct profitability trajectories: a stable path for the major players and a more unpredictable journey for the smaller enterprises.

2) Operating Profit Margin Ratio

Table 9. Values of operating profit margin ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	1.60%	1.85%	6.76%	2.79%	4.59%	1.06%	0.74%	8.11%	8.14%	9.08%	5.08%	4.53%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	15.82%	19.58%	18.56%	17.73%	13.61%	6.83%	-10.42%	-1.35%	-2.96%	6.62%	15.00%	9.00%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	2.71%	2.09%	0.69%	1.22%	1.77%	16.56%	21.37%	16.06%	21.58%	18.20%	20.36%	11.15%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A.	3.64%	4.64%	11.84%	11.12%	8.66%	9.63%	10.37%	8.93%	7.94%	5.34%	4.80%	7.90%
5). PRICEWATERHOUSECOOPERS S.A.	11.29%	17.12%	11.77%	4.42%	6.05%	7.91%	9.74%	7.38%	8.67%	7.44%	13.14%	9.54%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	7.60%	6.86%	8.13%	1.34%	7.13%	5.76%	7.07%	2.54%	11.94%	14.25%	4.82%	7.04%
Average of Big 6	7.11%	8.69%	9.62%	6.44%	6.97%	7.96%	6.48%	6.95%	9.22%	10.15%	10.53%	8.19%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	9.59%	5.18%	2.39%	-15.91%	6.09%	4.87%	1.39%	-1.40%	1.45%	0.73%	-5.71%	0.79%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	36.73%	35.35%	5.19%	12.02%	9.80%	7.59%	8.08%	8.97%	12.64%	7.32%	14.37%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	6.19%	17.66%	21.14%	29.36%	19.67%	24.63%	23.00%	32.73%	27.19%	N/A	22.40%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	-0.50%	51.40%	17.39%	19.96%	16.49%	0.61%	1.08%	-0.75%	-21.45%	N/A	9.36%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	74.01%	40.51%	40.49%	41.69%	52.46%	45.64%	N/A	49.14%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	12.43%	18.16%	N/A	11.17%	10.49%	15.61%	28.88%	33.95%	N/A	18.67%
AUDIT PLUS Α.Ε.	N/A	N/A	N/A	-0.46%	2.43%	9.28%	16.33%	40.81%	22.59%	24.44%	N/A	16.49%

Continued

BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	-10.14%	-51.88%	-16.54%	-20.60%	-20.24%	35.52%	3.29%	N/A	-11.51%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	-5.39%	14.09%	13.84%	7.77%	1.99%	0.77%	8.20%	1.50%	N/A	5.35%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	8.69%	2.95%	4.75%	2.12%	0.64%	-119.38%	-209.01%	21.15%	50.08%	-91.86%	N/A	-32.99%
DFK PD AUDIT Α.Ε.	N/A	-33.36%	N/A	-10.38%	21.08%	9.77%	0.51%	1.12%	3.33%	3.45%	3.06%	-0.16%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-64.09%	23.90%	36.64%	-1.18%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	18.44%	-18.74%	9.51%	-6.14%	-2.80%	9.27%	-0.11%	-25.14%	-133.52%	-225.53%	N/A	-37.47%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	10.64%	7.03%	6.89%	6.04%	1.69%	0.77%	6.07%	17.60%	N/A	N/A	N/A	7.09%
HLB ΕΛΛΑΣ Α.Ε.	N/A	0.71%	8.35%	7.01%	-1.19%	-0.51%	-3.99%	-0.94%	-3.58%	0.75%	N/A	0.73%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	2.82%	4.89%	8.66%	10.42%	8.96%	N/A	7.15%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	31.82%	39.13%	61.09%	58.45%	51.92%	54.97%	46.00%	52.01%	44.05%	48.83%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	6.31%	1.51%	7.09%	11.05%	8.52%	17.23%	15.54%	N/A	9.61%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	7.30%	15.29%	2.96%	5.96%	4.45%	4.12%	7.00%	N/A	6.73%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	17.70%	17.12%	23.24%	19.10%	14.77%	10.17%	1.57%	-6.31%	15.01%	8.89%	9.06%	11.85%
METRON AUDITING Α.Ε.	36.14%	53.57%	44.90%	47.19%	43.81%	31.88%	31.98%	22.84%	32.66%	32.70%	N/A	37.77%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	45.46%	30.71%	26.99%	58.93%	44.51%	34.77%	34.34%	18.14%	41.55%	49.97%	N/A	38.54%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	4.51%	11.38%	1.72%	4.27%	3.20%	1.61%	3.78%	9.71%	12.55%	7.48%	5.66%	5.99%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	18.30%	8.21%	8.64%	21.18%	4.89%	14.86%	14.39%	18.12%	N/A	13.57%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	12.74%	2.86%	0.24%	2.45%	8.44%	2.29%	4.06%	3.26%	7.87%	5.20%	N/A	4.94%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	14.78%	40.83%	47.65%	40.43%	34.94%	32.36%	31.03%	18.85%	30.75%	37.68%	45.06%	34.03%
RSM GREECE Α.Ε.	12.35%	11.58%	16.07%	3.49%	11.80%	3.14%	6.92%	8.96%	8.69%	22.50%	26.34%	11.99%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	16.72%	9.20%	0.64%	23.89%	-0.19%	N/A	10.05%
TMS AUDITORS Α.Ε.	N/A	4.47%	2.76%	0.39%	0.77%	3.42%	0.55%	-1.06%	14.13%	10.65%	8.78%	4.49%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	9.14%	10.21%	15.72%	12.25%	14.81%	5.18%	5.49%	1.31%	1.43%	5.71%	N/A	8.12%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	N/A	N/A	N/A	6.47%	4.83%	0.16%	1.09%	7.12%	N/A	3.93%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	0.83%	0.94%	2.02%	0.88%	0.59%	1.09%	1.06%	1.24%	0.77%	8.25%	1.77%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	14.69%	15.28%	7.46%	10.50%	10.64%	9.63%	9.74%	8.37%	9.70%	9.39%	N/A	10.54%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	0.68%	0.20%	17.09%	19.12%	21.25%	10.83%	17.63%	15.16%	11.65%	20.81%	41.81%	16.02%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	-2.03%	2.21%	2.21%	3.74%	1.23%	2.26%	3.13%	-0.07%	-1.96%	-2.56%	N/A	0.82%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	19.40%	23.20%	10.35%	8.09%	8.31%	5.32%	6.30%	15.68%	18.98%	16.63%	N/A	13.23%
Average of Rest	14.56%	10.03%	15.80%	11.00%	13.91%	7.77%	3.62%	9.47%	10.39%	4.94%	19.19%	10.97%
AVERAGE	12.53%	9.75%	14.64%	10.26%	12.78%	7.80%	4.04%	9.10%	10.22%	5.71%	16.31%	10.28%
Difference Big 6—Rest of Sample	-51.15%	-13.35%	-39.08%	-41.50%	-49.89%	2.37%	78.94%	-26.62%	-11.28%	105.42%	-45.12%	-8.30%

Source: Author's own calculation.

Between 2012 and 2022, Greek audit firms showed different degrees of profitability, as indicated by the operating profit margin ratio. This ratio, which gauges the profitability of operations before subtracting taxes and interest expenses, served as a gauge of financial stability. During this time frame, the main six corporations maintained an average profitability of 8.19%, suggesting a consistent and steady performance. By contrast, some companies like ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε. and ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε. had greater fluctuation in their profit margins, with a few even recording negative profitability in specific years. The

Big Six continually exhibited superior profitability compared to other enterprises, on average. This discrepancy implies that the bigger, more well-established enterprises were capable of sustaining more robust financial situations and successfully navigating economic difficulties compared to their smaller counterparts. To summarize, the Greek audit industry had varied financial results over the span of ten years. However, the top six firms consistently surpassed the others in terms of operational profitability.

3) Net Profit Margin

Table 10. Values of net profit margin ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	0.16%	3.18%	4.36%	0.69%	2.18%	0.01%	0.23%	4.51%	4.79%	5.02%	2.11%	2.48%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	12.14%	15.83%	13.17%	12.30%	8.37%	3.67%	-10.42%	-1.35%	-2.96%	6.44%	11.86%	6.28%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	2.71%	2.09%	0.69%	1.22%	1.77%	16.56%	21.37%	16.06%	21.58%	18.20%	20.36%	11.15%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	3.64%	4.64%	11.84%	11.12%	8.66%	9.63%	10.37%	8.93%	7.94%	5.34%	4.80%	7.90%
5). PRICEWATERHOUSECOOPERS S.A.	11.29%	17.12%	11.77%	4.42%	6.05%	7.91%	9.74%	7.38%	8.67%	7.44%	13.14%	9.54%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	3.35%	1.59%	5.50%	0.83%	4.66%	2.82%	5.32%	1.02%	10.36%	14.04%	4.11%	4.87%
Average of Big 6	5.55%	7.41%	7.89%	5.10%	5.28%	6.77%	6.10%	6.09%	8.40%	9.41%	9.40%	7.04%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	12.22%	6.00%	1.34%	-11.48%	4.39%	2.87%	-0.07%	-0.24%	1.00%	-1.89%	-6.91%	0.66%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	26.64%	24.18%	-0.14%	1.96%	1.51%	0.89%	1.19%	1.71%	3.19%	0.49%	6.16%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	4.45%	12.78%	14.76%	20.57%	13.74%	17.19%	17.21%	24.85%	20.92%	N/A	16.28%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	-1.38%	37.53%	12.33%	13.53%	11.79%	0.07%	0.67%	-0.82%	-21.45%	N/A	5.81%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	50.94%	26.42%	23.68%	30.35%	39.67%	35.11%	N/A	34.36%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	-18.87%	13.14%	N/A	7.14%	6.67%	10.91%	20.68%	23.49%	N/A	9.02%
AUDIT PLUS Α.Ε.	N/A	N/A	N/A	-0.65%	1.62%	4.50%	10.49%	27.42%	14.30%	16.66%	N/A	10.62%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	-10.21%	-35.19%	-11.90%	-20.60%	-20.24%	27.94%	0.22%	N/A	-10.00%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	-5.61%	9.31%	8.74%	4.46%	7.18%	0.21%	6.40%	0.50%	N/A	3.90%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	4.37%	0.27%	-1.10%	-0.37%	0.09%	-90.46%	-160.91%	2.98%	22.71%	-68.67%	N/A	-29.11%
DFK PD AUDIT Α.Ε.	N/A	-24.83%	N/A	-13.36%	21.35%	1.65%	0.27%	0.19%	2.16%	2.24%	1.50%	-0.98%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-64.09%	20.33%	29.15%	-4.87%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	14.48%	-17.15%	10.25%	-6.14%	-2.80%	6.38%	-0.51%	-25.14%	-133.52%	-225.53%	N/A	-37.97%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	7.95%	4.72%	5.92%	3.99%	0.91%	0.30%	4.26%	17.60%	N/A	N/A	N/A	5.71%
HLB ΕΛΛΑΣ Α.Ε.	N/A	-1.66%	4.90%	4.75%	-1.30%	-1.42%	-4.19%	-1.79%	-3.97%	0.11%	N/A	-0.51%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	-5.70%	0.95%	5.54%	0.79%	4.10%	N/A	1.13%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	19.11%	26.28%	43.23%	45.93%	36.66%	38.83%	35.14%	41.24%	34.57%	35.66%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	4.41%	0.84%	4.98%	7.30%	6.27%	12.97%	12.02%	N/A	6.97%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	4.93%	10.66%	1.74%	4.09%	3.22%	3.04%	5.30%	N/A	4.71%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	12.69%	11.23%	16.87%	13.16%	9.97%	4.77%	-1.92%	-9.92%	15.24%	1.73%	2.02%	6.89%
METRON AUDITING Α.Ε.	28.38%	39.10%	33.15%	33.41%	30.86%	22.63%	22.65%	17.18%	24.89%	25.44%	N/A	27.77%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	36.24%	22.28%	19.19%	41.17%	30.40%	23.21%	23.72%	12.97%	30.59%	37.65%	N/A	27.74%

Continued

NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	4.24%	11.05%	1.76%	-1.41%	2.23%	1.10%	2.51%	5.44%	9.34%	5.32%	4.25%	4.17%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	13.36%	4.26%	5.29%	15.35%	1.31%	10.04%	10.31%	14.70%	N/A	9.33%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	0.00%	0.05%	0.24%	1.61%	5.39%	0.02%	1.51%	1.05%	5.29%	3.47%	N/A	1.86%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	10.62%	31.75%	35.12%	29.67%	22.81%	21.58%	19.82%	13.22%	22.65%	27.48%	35.60%	24.57%
RSM GREECE Α.Ε.	9.23%	7.77%	7.10%	2.34%	7.68%	1.49%	3.56%	5.66%	5.79%	17.10%	20.55%	8.02%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	11.02%	6.38%	-0.12%	18.96%	-2.60%	N/A	6.73%
TMS AUDITORS Α.Ε.	N/A	3.34%	1.42%	0.22%	0.14%	2.24%	-0.20%	-1.75%	10.96%	7.98%	7.36%	3.17%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	7.07%	6.32%	11.53%	7.94%	10.51%	3.25%	3.74%	0.93%	5.37%	4.41%	N/A	6.11%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	N/A	N/A	N/A	0.33%	1.27%	-0.12%	0.64%	5.49%	N/A	1.52%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	0.33%	-0.11%	1.46%	0.55%	0.19%	0.64%	0.07%	0.23%	0.16%	6.43%	1.00%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	11.39%	8.46%	4.75%	6.97%	7.32%	6.67%	6.76%	5.54%	6.53%	6.67%	N/A	7.11%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	0.23%	0.27%	12.84%	19.04%	14.77%	7.47%	12.09%	10.33%	8.57%	15.69%	32.40%	12.15%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	-2.39%	1.49%	1.05%	2.54%	0.78%	1.60%	2.22%	-0.10%	-2.74%	-2.56%	N/A	0.19%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	14.86%	16.58%	5.65%	5.22%	5.31%	3.17%	3.91%	11.48%	13.98%	12.62%	N/A	9.28%
Average of Rest	10.72%	6.83%	9.78%	7.07%	9.47%	4.29%	1.24%	5.63%	5.64%	1.39%	13.95%	6.91%
AVERAGE	9.31%	6.95%	9.43%	6.75%	8.79%	4.65%	1.95%	5.70%	6.05%	2.56%	12.43%	6.78%
Difference % Big 6—Rest of Sample	-48.25%	8.49%	-19.36%	-27.89%	-44.21%	57.86%	392.38%	8.22%	48.73%	576.85%	-32.65%	83.65%

Source: Author's own calculation.

Between 2012 and 2022, Greek audit companies had a varied range of performance in terms of profitability, as indicated by the net profit margin ratio. The net profit margin ratio offers valuable insights into a company's operational effectiveness, with higher ratios suggesting a larger proportion of profit in relation to revenue. The "Big 6" enterprises, on average, consistently showed a profitability of 7.04% during a period of 10 years. Conversely, when examining smaller companies, there is a greater range of differences in their levels of profitability. For example, ACTION AUDITING Α.Ε.Ο.Ε.Α. exhibited notable ratios, such as 16.28%, in specific years, whereas ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε. experienced negative ratios, indicating the possible risks and instabilities that these tiny organizations may encounter. The "Big 6" corporations, although generally more stable, saw certain variations over the years, indicating that even the most renowned entities are not exempt from the challenges of the industry. In general, the "Big 6" companies consistently showed higher profitability. However, the Greek audit firms as a whole displayed a diverse range of financial outcomes, with many smaller firms surpassing their larger counterparts in certain years.

4) Return on Assets Ratio

Table 11. Values of return on assets ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	0.29%	6.02%	8.59%	1.35%	4.49%	0.01%	0.44%	8.87%	8.88%	9.80%	4.89%	4.87%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	21.62%	30.62%	17.71%	17.52%	10.76%	4.31%	-11.44%	-2.21%	-4.01%	8.97%	17.10%	10.09%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	4.21%	3.23%	0.98%	1.61%	2.28%	21.13%	26.72%	23.49%	26.22%	24.93%	28.35%	14.83%

Continued

4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	5.84%	7.57%	19.23%	19.69%	13.88%	14.28%	14.20%	12.42%	12.30%	7.72%	8.11%	12.29%
5). PRICEWATERHOUSECOOPERS S.A.	19.03%	28.12%	18.97%	5.99%	9.15%	11.19%	13.70%	11.58%	13.25%	12.86%	20.10%	14.90%
6). GRANT THORNTON A.E. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	5.15%	2.65%	8.87%	1.47%	7.70%	4.14%	8.31%	1.45%	14.04%	19.00%	4.62%	7.04%
Average of Big 6	9.36%	13.04%	12.39%	7.94%	8.04%	9.18%	8.65%	9.27%	11.78%	13.88%	13.86%	10.67%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	17.73%	7.73%	1.69%	-12.94%	5.48%	3.59%	-0.08%	-0.26%	0.89%	-1.74%	-7.40%	1.33%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	35.92%	22.98%	-0.13%	1.99%	1.43%	0.84%	1.14%	1.64%	2.62%	0.44%	6.89%
ACTION AUDITING A.E.O.E.A.	N/A	7.41%	16.84%	16.11%	21.27%	17.99%	21.08%	19.43%	25.78%	22.05%	N/A	18.66%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	-2.75%	44.64%	19.07%	16.71%	13.55%	0.07%	0.75%	-0.66%	-19.40%	N/A	8.00%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	55.34%	44.73%	27.75%	26.83%	48.61%	42.18%	N/A	40.91%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	-24.73%	33.11%	N/A	15.12%	11.90%	18.71%	23.40%	22.58%	N/A	14.30%
AUDIT PLUS Α.Ε.	N/A	N/A	-38.00%	-2.23%	2.70%	7.36%	15.19%	35.79%	14.85%	17.46%	N/A	6.64%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	-23.42%	-47.22%	-7.72%	-29.17%	-17.50%	34.82%	0.51%	N/A	-12.81%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	-4.41%	10.23%	10.81%	5.76%	12.47%	0.26%	7.06%	0.70%	N/A	5.36%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	5.13%	0.25%	-0.75%	-0.23%	0.04%	-30.38%	-88.91%	1.65%	7.22%	-16.19%	N/A	-12.22%
DFK PD AUDIT Α.Ε.	N/A	-77.00%	N/A	-10.78%	38.60%	2.58%	0.46%	0.32%	2.89%	2.75%	1.70%	-4.27%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-55.15%	33.61%	51.26%	9.91%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	14.23%	-20.06%	22.60%	-12.94%	-4.04%	12.74%	-0.40%	-7.57%	-10.24%	-15.19%	N/A	-2.09%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	12.05%	5.73%	10.83%	6.31%	1.31%	0.48%	4.64%	18.96%	N/A	N/A	N/A	7.54%
HLB ΕΛΛΑΣ Α.Ε.	N/A	-2.64%	11.00%	10.11%	-2.70%	-3.35%	-8.30%	-3.77%	-11.00%	0.21%	N/A	-1.16%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	-8.51%	3.22%	10.62%	1.62%	8.79%	N/A	3.15%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	23.90%	18.77%	28.09%	31.01%	19.68%	20.59%	33.81%	25.20%	17.97%	24.34%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	8.84%	1.41%	9.96%	13.59%	9.00%	16.09%	15.31%	N/A	10.60%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	10.31%	24.03%	4.00%	9.42%	6.98%	7.94%	13.73%	N/A	10.92%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	18.79%	18.07%	23.56%	18.56%	13.10%	6.02%	-2.00%	-9.70%	12.31%	1.36%	1.90%	9.27%
METRON AUDITING Α.Ε.	45.81%	37.69%	29.68%	22.90%	16.58%	9.57%	9.37%	6.87%	32.06%	26.53%	N/A	23.71%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	28.39%	18.01%	21.93%	32.11%	18.37%	12.16%	10.55%	5.09%	17.47%	24.76%	N/A	18.88%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	9.81%	16.68%	2.51%	-2.33%	3.35%	2.10%	5.57%	11.38%	14.93%	7.47%	6.75%	7.11%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	18.40%	6.24%	7.13%	20.45%	1.84%	13.05%	16.56%	22.84%	N/A	13.31%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	0.00%	0.06%	0.25%	1.63%	5.14%	0.02%	1.80%	1.14%	5.43%	3.85%	N/A	1.93%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	13.12%	32.88%	31.50%	24.54%	16.23%	14.20%	12.58%	7.07%	14.41%	32.05%	48.56%	22.47%
RSM GREECE Α.Ε.	12.21%	10.69%	10.14%	2.34%	7.11%	1.71%	3.39%	4.78%	5.09%	19.82%	21.76%	9.00%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	8.23%	10.86%	-0.25%	27.64%	-3.32%	N/A	8.63%
TMS AUDITORS Α.Ε.	N/A	5.01%	3.11%	0.45%	0.27%	4.81%	-0.28%	-2.23%	18.96%	12.57%	10.83%	5.35%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	20.87%	17.09%	31.72%	22.05%	30.45%	8.37%	9.67%	2.36%	11.29%	12.36%	N/A	16.62%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	0.00%	N/A	0.00%	0.29%	2.84%	-0.29%	1.15%	9.57%	N/A	1.94%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	0.36%	-0.12%	1.69%	0.66%	0.22%	0.77%	0.11%	0.26%	0.21%	8.27%	1.24%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	15.66%	12.24%	7.84%	10.68%	10.26%	8.26%	8.37%	6.28%	6.45%	6.54%	N/A	9.26%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	0.31%	0.36%	21.41%	27.13%	24.27%	11.45%	23.41%	24.05%	18.14%	31.56%	65.34%	22.49%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	-5.75%	3.33%	2.06%	5.34%	1.77%	3.12%	4.39%	-0.22%	-5.91%	-7.16%	N/A	0.10%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	19.73%	19.27%	7.40%	6.65%	6.87%	3.99%	4.27%	11.32%	10.48%	10.86%	N/A	10.08%
Average of Rest	14.26%	6.36%	10.64%	8.07%	9.86%	6.72%	3.45%	6.36%	10.18%	10.49%	18.95%	9.58%
AVERAGE	12.92%	7.74%	10.95%	8.05%	9.57%	7.08%	4.21%	6.79%	10.41%	10.98%	17.25%	9.63%
Difference Big 6—Rest of Sample	-34.36%	104.90%	16.44%	-1.62%	-18.40%	36.54%	150.58%	45.60%	15.71%	32.35%	-26.85%	29.17%

Source: Author's own calculation.

Between 2012 and 2022, Greek audit firms saw fluctuating levels of financial performance, as evidenced by the Return on Assets (ROA) ratio. The Big Six corporations maintained a consistent and favorable utilization of their assets to create profits, as evidenced by an average Return on Assets (ROA) of 10.67% over the course of a decade. Conversely, the remaining corporations displayed greater fluctuation in their Return on Assets (ROA). For example, AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε. had a remarkable average ROA of 40.91%, but ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε. had a more modest 1.33%. When comparing the Big Six firms to the remainder of the firms, the former group consistently performed better, while the latter had a wider range of Return on Assets (ROAs), including negative values, which suggest periods of financial crisis or inefficiencies in asset utilization. To summarize, the Big Six audit firms in Greece have consistently maintained a stable level of profitability over the years. However, the performance of the remaining firms varied, with some surpassing the industry heavyweights and others falling behind.

5) Return on Equity Ratio

Table 12. Values of return on equity ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	1.82%	27.97%	40.02%	4.61%	13.37%	0.05%	2.16%	35.41%	34.08%	26.92%	12.57%	18.09%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	90.75%	58.85%	29.76%	21.38%	12.89%	5.25%	-14.09%	-25.99%	-125.63%	73.31%	83.41%	19.08%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	17.47%	12.84%	3.64%	5.80%	8.33%	47.99%	57.30%	45.80%	53.27%	50.18%	55.78%	32.58%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	42.27%	40.23%	60.79%	87.52%	79.60%	75.25%	82.73%	76.66%	71.58%	42.13%	40.27%	63.55%
5). PRICEWATERHOUSECOOPERS S.A.	75.62%	67.72%	52.70%	28.60%	68.81%	52.52%	59.35%	36.99%	44.40%	75.57%	94.29%	59.69%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	31.76%	18.49%	39.91%	7.29%	28.99%	34.29%	44.35%	7.18%	42.80%	43.15%	14.50%	28.43%
Average of Big 6	43.28%	37.68%	37.80%	25.87%	35.33%	35.89%	38.63%	29.34%	20.08%	51.88%	50.14%	36.90%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	45.66%	16.33%	3.59%	-30.60%	9.62%	6.16%	-0.15%	-0.49%	1.75%	-3.48%	-16.98%	2.85%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	79.16%	42.71%	-0.18%	5.80%	6.52%	3.44%	4.62%	6.16%	10.97%	1.64%	16.08%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	75.69%	66.56%	69.43%	53.61%	33.39%	36.96%	27.17%	78.84%	75.13%	N/A	57.42%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	-4.51%	67.16%	22.24%	23.94%	19.44%	0.12%	1.29%	-1.45%	-106.24%	N/A	2.44%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	96.70%	57.57%	34.77%	35.91%	89.91%	88.95%	N/A	67.30%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	-180.33%	92.24%	N/A	30.16%	28.08%	38.09%	73.59%	90.75%	N/A	24.65%
AUDIT PLUS Α.Ε.	N/A	N/A	-45.21%	-7.13%	16.91%	31.47%	44.20%	53.03%	20.73%	43.90%	N/A	19.74%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	173.69%	89.20%	77.65%	95.27%	45.89%	428.46%	2.71%	N/A	130.41%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	-29.60%	34.22%	26.67%	12.07%	64.80%	1.89%	37.64%	3.55%	N/A	18.90%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	31.19%	1.34%	-3.51%	-1.50%	0.35%	185.52%	77.02%	-1.40%	-8.16%	14.18%	N/A	29.50%
DFK PD AUDIT Α.Ε.	N/A	219.91%	N/A	31.09%	341.22%	22.38%	3.63%	2.64%	23.39%	19.60%	13.18%	75.23%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	306.42%	115.78%	65.94%	162.71%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	58.84%	-241.34%	84.16%	-57.08%	-44.59%	69.63%	-2.38%	-82.12%	224.51%	74.74%	N/A	8.44%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	26.67%	17.14%	45.09%	15.26%	3.58%	1.17%	11.21%	28.90%	N/A	N/A	N/A	18.63%

Continued

HLB ΕΛΛΑΣ Α.Ε.	N/A	-7.26%	40.83%	29.61%	-7.09%	-8.75%	-25.26%	-10.40%	-25.37%	0.97%	N/A	-1.41%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	-39.88%	41.53%	87.83%	8.90%	29.67%	N/A	25.61%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	78.85%	58.10%	50.23%	39.81%	23.72%	90.26%	45.62%	34.12%	22.79%	49.28%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	14.59%	2.43%	17.28%	20.12%	11.45%	19.84%	20.06%	N/A	15.11%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	96.34%	75.08%	10.13%	23.35%	15.53%	16.58%	26.02%	N/A	37.58%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	44.97%	40.42%	48.83%	37.96%	26.23%	10.41%	-3.27%	-21.04%	25.65%	18.43%	12.64%	21.93%
METRON AUDITING Α.Ε.	73.14%	54.35%	37.45%	28.79%	20.41%	11.05%	10.64%	7.48%	65.84%	66.88%	N/A	37.60%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	38.06%	56.73%	25.32%	39.48%	20.42%	13.61%	11.30%	5.46%	29.75%	29.55%	N/A	26.97%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	45.94%	43.76%	9.72%	-8.03%	9.08%	6.13%	13.41%	22.65%	27.30%	33.60%	29.03%	21.14%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	75.11%	21.13%	18.50%	36.68%	2.82%	17.99%	67.69%	76.16%	N/A	39.51%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	0.00%	0.43%	1.98%	11.07%	28.23%	0.11%	7.99%	5.34%	31.84%	27.21%	N/A	11.42%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	40.44%	58.21%	48.59%	31.94%	17.69%	16.08%	14.07%	7.72%	15.52%	42.16%	81.88%	34.03%
RSM GREECE Α.Ε.	46.57%	28.77%	27.33%	6.33%	17.50%	3.85%	7.75%	10.53%	9.75%	44.00%	36.85%	21.75%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	11.47%	42.87%	-0.56%	47.99%	-5.52%	N/A	19.25%
TMS AUDITORS Α.Ε.	N/A	31.59%	13.37%	1.85%	2.04%	30.21%	-3.86%	-46.57%	77.40%	54.93%	53.41%	21.44%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	58.71%	157.00%	75.74%	58.21%	71.29%	16.36%	16.22%	3.63%	20.95%	23.70%	N/A	50.18%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	0.00%	N/A	0.00%	0.61%	6.50%	-0.72%	3.90%	26.85%	N/A	5.31%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	1.77%	-0.90%	12.22%	4.56%	1.57%	5.12%	0.65%	1.84%	1.50%	39.06%	6.74%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	55.99%	32.47%	17.09%	22.66%	19.62%	14.10%	13.36%	9.80%	15.15%	16.38%	N/A	21.66%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	0.93%	0.95%	41.31%	67.31%	37.36%	26.16%	38.59%	34.67%	32.07%	51.33%	86.64%	37.94%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	-18.90%	10.53%	18.34%	46.08%	12.55%	20.17%	22.20%	-0.98%	-34.41%	-53.59%	N/A	2.20%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	39.85%	251.42%	46.41%	31.05%	23.11%	11.48%	11.92%	26.74%	60.49%	63.63%	N/A	56.61%
Average of Rest	36.76%	40.21%	23.43%	30.59%	33.51%	22.91%	19.95%	12.37%	52.75%	30.24%	35.51%	30.75%
AVERAGE	38.54%	39.69%	25.97%	29.83%	33.80%	24.81%	22.68%	14.85%	47.97%	33.41%	40.38%	31.99%
Difference Big 6—Rest of Sample	17.76%	-6.28%	61.34%	-15.45%	5.44%	56.68%	93.70%	137.25%	-61.92%	71.53%	41.21%	36.48%

Source: Author's own calculation.

From 2012 to 2022, Greek audit businesses exhibited diverse levels of profitability, as shown by the Return on Equity (ROE) ratio. The Return on Equity (ROE), which measures the effectiveness of investing in stock, reveals that the average profitability of the six major firms, referred to as the Big 6, is 36.90% for the given period, indicating a reasonably significant level of profitability. Upon further examination, Ernst & Young (Hellas) and PricewaterhouseCoopers S.A. demonstrated robust financial performance, as seen by their impressive average Return on Equity (ROE) figures of 63.55% and 59.69%, respectively. On the other hand, the wider group of companies showed a wider variety of Return on Equity (ROE) figures. For instance, Action Auditing had an average ROE of 57.42%, while Abacus reported a far lower figure of 2.85%. When comparing the performance of the Big 6 firms to the remainder, it is evident that the main six companies exhibit more consistent profitability trends, while the others show higher levels of fluctuation. In general, the Greek audit industry observed variations in profita-

bility over the given time frame, with the Big 6 firms consistently maintaining a larger and more stable average Return on Equity (ROE). Considering the average necessary return on equity for investments in Greece from 2015 to 2023, which ranged from 7.7% in 2021 to 29.3% in 2015, the return on equity of the Greek audit firm can be deemed quite satisfactory. The audit industry is highly lucrative in comparison to other areas.

4.1.3. Leverage Ratios

1) Debt to Assets Ratio

Table 13. Values of debt to assets ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	83.98%	78.49%	78.53%	70.72%	66.42%	81.97%	79.87%	74.96%	73.96%	63.58%	61.12%	73.96%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	76.18%	47.97%	40.48%	18.06%	16.49%	17.81%	18.78%	91.49%	96.81%	87.76%	79.50%	53.76%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	75.91%	74.84%	73.18%	72.21%	72.65%	55.97%	53.37%	48.72%	50.78%	50.32%	49.18%	61.56%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A	86.19%	81.17%	68.37%	77.50%	82.56%	81.02%	82.83%	83.80%	82.82%	81.68%	79.87%	80.71%
5). PRICEWATERHOUSECOOPERS S.A.	74.83%	58.47%	64.00%	79.04%	86.71%	78.69%	76.92%	68.69%	70.16%	82.98%	78.68%	74.47%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	83.77%	85.67%	77.78%	79.86%	73.45%	87.92%	81.27%	79.77%	67.20%	55.98%	68.12%	76.44%
Average of Big 6	80.14%	71.10%	67.06%	66.23%	66.38%	67.23%	65.51%	74.57%	73.62%	70.39%	69.41%	70.15%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	61.18%	52.68%	52.89%	57.71%	43.09%	41.77%	47.28%	47.25%	49.21%	50.11%	56.42%	50.87%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	54.62%	46.19%	27.38%	65.65%	78.09%	75.47%	75.36%	73.31%	76.08%	73.33%	64.55%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	90.21%	74.71%	76.79%	60.33%	46.14%	42.96%	28.49%	67.30%	70.65%	N/A	61.95%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	39.06%	33.53%	14.23%	30.21%	30.30%	37.04%	42.06%	54.28%	81.74%	N/A	40.27%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	42.77%	22.31%	20.18%	25.28%	45.93%	52.58%	N/A	34.84%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	86.29%	64.10%	N/A	49.87%	57.63%	50.88%	68.20%	75.12%	N/A	64.58%
AUDIT PLUS Α.Ε.	N/A	N/A	15.95%	68.66%	84.01%	76.61%	65.62%	32.50%	28.35%	60.21%	N/A	53.99%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	113.48%	152.94%	109.95%	130.62%	138.13%	91.87%	81.17%	N/A	116.88%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	85.10%	70.09%	59.48%	52.32%	80.76%	86.30%	81.25%	80.27%	N/A	74.45%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	83.56%	81.58%	78.60%	85.00%	88.74%	116.38%	215.44%	218.08%	188.54%	214.18%	N/A	137.01%
DFK PD AUDIT Α.Ε.	N/A	135.01%	N/A	134.66%	88.69%	88.46%	87.36%	88.03%	87.63%	85.96%	87.12%	98.10%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	118.00%	70.97%	22.26%	70.41%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	75.82%	91.69%	73.15%	77.32%	90.94%	81.71%	83.40%	90.79%	104.56%	120.32%	N/A	88.97%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	54.82%	66.54%	75.99%	58.65%	63.34%	58.75%	58.60%	34.40%	N/A	N/A	N/A	58.89%
HLB ΕΛΛΑΣ Α.Ε.	N/A	63.56%	73.06%	65.84%	61.87%	61.73%	67.16%	63.76%	56.66%	78.42%	N/A	65.78%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	78.66%	92.26%	87.91%	81.81%	70.39%	N/A	82.21%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	69.69%	67.70%	44.07%	22.11%	17.03%	77.18%	25.90%	26.14%	21.14%	41.22%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	39.36%	42.17%	42.35%	32.48%	21.37%	18.86%	23.69%	N/A	31.47%

Continued

KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	89.30%	67.99%	60.52%	59.68%	55.06%	52.10%	47.24%	N/A	61.70%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	58.21%	55.29%	51.75%	51.12%	50.07%	42.20%	38.89%	53.89%	52.03%	92.60%	84.94%	57.36%
METRON AUDITING Α.Ε.	37.37%	30.65%	20.76%	20.48%	18.80%	13.40%	11.96%	8.14%	51.30%	60.33%	N/A	27.32%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	25.42%	68.25%	13.38%	18.68%	10.04%	10.65%	6.64%	6.77%	41.27%	16.21%	N/A	21.73%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	78.65%	61.89%	74.18%	71.01%	63.08%	65.74%	58.46%	49.75%	45.31%	77.78%	76.76%	65.69%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	75.51%	70.46%	61.48%	44.26%	34.66%	27.43%	75.54%	70.01%	N/A	57.42%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	87.05%	86.60%	87.32%	85.28%	81.80%	81.78%	77.44%	78.60%	82.94%	85.86%	N/A	83.47%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	67.56%	43.51%	35.16%	23.18%	8.22%	11.69%	10.60%	8.41%	7.19%	23.97%	40.70%	25.47%
RSM GREECE Α.Ε.	73.78%	62.83%	62.91%	63.01%	59.37%	55.68%	56.21%	54.61%	47.84%	54.95%	40.95%	57.47%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	28.29%	74.67%	55.52%	42.40%	39.74%	N/A	48.12%
TMS AUDITORS Α.Ε.	N/A	84.13%	76.78%	75.82%	86.54%	84.08%	92.78%	95.21%	75.50%	77.12%	79.73%	82.77%
UHY ΑΕΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	64.45%	89.11%	58.12%	62.12%	57.29%	48.86%	40.39%	34.77%	46.09%	47.83%	N/A	54.90%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	12.14%	N/A	0.00%	52.66%	56.32%	58.97%	70.58%	64.36%	N/A	45.00%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ "AUDIT SERVICES" Α.Ε.	N/A	79.87%	86.28%	86.20%	85.53%	86.08%	85.00%	82.72%	85.94%	86.10%	78.82%	84.25%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	72.03%	62.30%	54.12%	52.86%	47.71%	41.44%	37.36%	35.93%	57.41%	60.07%	N/A	52.12%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	66.72%	62.20%	48.18%	59.69%	35.03%	56.22%	39.33%	30.65%	43.44%	38.51%	24.58%	45.87%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	69.59%	68.41%	88.75%	88.42%	85.93%	84.53%	80.23%	77.40%	82.81%	86.64%	N/A	81.27%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	50.48%	92.34%	84.05%	78.60%	70.25%	65.29%	64.23%	57.67%	82.68%	82.93%	N/A	72.85%
Average of Rest	64.17%	70.54%	60.52%	65.07%	59.61%	56.88%	61.03%	59.41%	65.26%	69.44%	57.23%	62.65%
AVERAGE	68.53%	70.65%	61.67%	65.26%	60.68%	58.40%	61.69%	61.63%	66.48%	69.57%	61.29%	64.17%
Difference Big 6—Rest of Sample	11.62%	0.45%	5.38%	0.97%	5.70%	8.83%	3.82%	12.94%	7.14%	0.81%	8.12%	5.98%

Source: Author's own calculation.

Between 2012 and 2022, Greek audit firms experienced significant variations in their leverage, as evidenced by changes in their debt-to-assets ratio. This ratio, crucial for both creditors and investors, offers valuable information about a company's asset financing and its capacity to fulfill obligations. Upon analysis of the data, it is apparent that the average debt-to-assets ratio for the six leading audit companies had fluctuations. It commenced at 80.14% in 2012 and gradually declined to 69.41% in 2022, resulting in an average of 70.15% throughout the course of the decade. The persistent use of high leverage indicates that these prominent companies have a substantial amount of their assets funded through debt. In comparison to other audit firms, there is a wider range of ratios, suggesting a more diverse financial structure and risk profile among these organizations. Significantly, certain companies experienced intervals during which data was unavailable. In conclusion, the six primary corporations consistently maintained a comparatively greater average leverage than numerous other enterprises throughout the decade. The persistent dependence on debt by these significant businesses may indicate a deliberate decision or a prevailing practice in the industry, but it also highlights the significance of closely monitoring financial stability in the audit sector.

2) Debt-to-Equity Ratio

Table 14. Values of debt to equity ratio.

COMPANY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average 2012-2021
1). DELOITTE ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ Α.Ε.	524.00%	365.00%	366.00%	242.00%	198.00%	455.00%	397.00%	299.00%	284.00%	175.00%	157.00%	314.73%
2). KPMG ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	320.00%	92.00%	68.00%	22.00%	20.00%	22.00%	23.00%	1075.00%	3034.00%	717.00%	388.00%	525.55%
3). CROWE-ASSOCIATED CERTIFIED PUBLIC ACCOUNTANTS S.A.	315.19%	297.52%	272.85%	259.81%	265.62%	127.12%	114.47%	94.99%	103.17%	101.31%	96.77%	186.26%
4). ERNST & YOUNG (HELLAS) CERTIFIED AUDITORS ACCOUNTANTS S.A.	624.02%	431.20%	216.14%	344.41%	473.49%	426.79%	482.55%	517.47%	481.94%	445.93%	396.78%	440.07%
5). PRICEWATERHOUSECOOPERS S.A.	297.35%	140.81%	177.74%	377.20%	652.18%	369.20%	333.23%	219.35%	235.10%	487.65%	369.14%	332.63%
6). GRANT THORNTON Α.Ε. ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ & ΣΥΜΒΟΥΛΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ	516.00%	598.00%	350.00%	397.00%	277.00%	728.00%	434.00%	394.00%	205.00%	127.00%	214.00%	385.45%
Average of Big 6	432.76%	320.76%	241.79%	273.74%	314.38%	354.68%	297.38%	433.30%	723.87%	342.31%	270.28%	364.11%
ABACUS ΕΛΕΓΚΤΙΚΗ Α.Ε.	158.00%	111.00%	112.00%	136.00%	76.00%	72.00%	90.00%	90.00%	97.00%	100.00%	129.00%	106.45%
ACES ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	120.00%	86.00%	38.00%	191.00%	356.00%	308.00%	306.00%	275.00%	318.00%	275.00%	227.30%
ACTION AUDITING Α.Ε.Ο.Ε.Α.	N/A	921.00%	295.00%	331.00%	152.00%	86.00%	75.00%	40.00%	206.00%	241.00%	N/A	260.78%
ATC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ-ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	N/A	64.00%	50.00%	17.00%	43.00%	43.00%	59.00%	73.00%	119.00%	448.00%	N/A	101.78%
AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ι.Κ.Ε.	N/A	N/A	N/A	N/A	75.00%	29.00%	25.00%	34.00%	85.00%	111.00%	N/A	59.83%
AUDIT OPINION Ι.Κ.Ε.	N/A	N/A	629.00%	179.00%	N/A	99.00%	136.00%	104.00%	214.00%	302.00%	N/A	237.57%
AUDIT PLUS Α.Ε.	N/A	N/A	19.00%	219.00%	525.00%	327.00%	191.00%	48.00%	40.00%	151.00%	N/A	190.00%
BAKER TILLY ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	1130.00%	431.00%	N/A	223.00%
BDO ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	N/A	N/A	571.00%	234.00%	147.00%	110.00%	420.00%	630.00%	433.00%	407.00%	N/A	369.00%
DELTA PARTNERS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	508.00%	443.00%	367.00%	567.00%	788.00%	0.00%	0.00%	0.00%	0.00%	0.00%	N/A	267.30%
DFK PD AUDIT Α.Ε.	N/A	0.00%	N/A	0.00%	784.00%	766.00%	691.00%	736.00%	708.00%	612.00%	676.00%	552.56%
FIVEB AUDITORS Α.Ε.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00%	244.00%	29.00%	91.00%
FRS ΠΡΟΤΥΠΟΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	314.00%	1103.00%	272.00%	341.00%	1004.00%	447.00%	502.00%	985.00%	0.00%	0.00%	N/A	496.80%
HBP ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	121.00%	199.00%	316.00%	142.00%	173.00%	142.00%	142.00%	52.00%	N/A	N/A	N/A	160.88%
HLB ΕΛΛΑΣ Α.Ε.	N/A	174.00%	271.00%	193.00%	162.00%	161.00%	204.00%	176.00%	131.00%	363.00%	N/A	203.89%
IG AUDIT ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	N/A	N/A	N/A	369.00%	1192.00%	727.00%	450.00%	238.00%	N/A	595.20%
KMC ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	230.00%	210.00%	79.00%	28.00%	21.00%	338.00%	35.00%	35.00%	27.00%	111.44%
KRP AUDITORS Α.Ε.	N/A	N/A	N/A	65.00%	73.00%	73.00%	48.00%	27.00%	23.00%	31.00%	N/A	48.57%
KSI GREECE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ & ΣΥΜΒΟΥΛΟΙ ΕΠΙΧΕΙΡΗΣΕΩΝ Ι.Κ.Ε.	N/A	N/A	N/A	834.00%	212.00%	153.00%	148.00%	123.00%	109.00%	90.00%	N/A	238.43%
MAZARS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ ΕΠΙΧΕΙΡΗΜΑΤΙΚΟΙ ΣΥΜΒΟΥΛΟΙ Α.Ε.	139.00%	124.00%	107.00%	105.00%	100.00%	73.00%	64.00%	117.00%	108.00%	1251.00%	564.00%	250.18%
METRON AUDITING Α.Ε.	60.00%	44.00%	26.00%	26.00%	23.00%	15.00%	14.00%	9.00%	105.00%	152.00%	N/A	47.40%
MPI ΕΛΛΑΣ ΕΛΕΓΚΤΙΚΗ Α.Ε.	34.00%	215.00%	15.00%	23.00%	11.00%	12.00%	7.00%	7.00%	70.00%	19.00%	N/A	41.30%
NEXIA EUROSTATUS ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	368.00%	162.00%	287.00%	245.00%	171.00%	192.00%	141.00%	99.00%	83.00%	350.00%	330.00%	220.73%
OLYMPIA ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Α.Ε.	N/A	N/A	308.00%	239.00%	160.00%	79.00%	53.00%	38.00%	309.00%	233.00%	N/A	177.38%
PKF ΕΥΡΩΕΛΕΓΚΤΙΚΗ Α.Ε.	672.00%	646.00%	688.00%	579.00%	450.00%	449.00%	343.00%	367.00%	486.00%	607.00%	N/A	528.70%
Q.A.S. ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ Ε.Π.Ε.	208.00%	77.00%	54.00%	30.00%	9.00%	13.00%	12.00%	9.00%	8.00%	32.00%	69.00%	47.36%

Continued

RSM GREECE A.E.	281.00%	169.00%	170.00%	170.00%	146.00%	126.00%	128.00%	120.00%	92.00%	122.00%	69.00%	144.82%
SMG ΕΛΕΓΚΤΙΚΗ Α.Ε.	N/A	N/A	N/A	N/A	N/A	39.00%	295.00%	125.00%	74.00%	66.00%	N/A	119.80%
TMS AUDITORS A.E.	N/A	530.00%	331.00%	313.00%	643.00%	528.00%	1286.00%	1986.00%	308.00%	337.00%	393.00%	665.50%
UHY ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ Α.Ε.	181.00%	819.00%	139.00%	164.00%	134.00%	96.00%	68.00%	53.00%	86.00%	92.00%	N/A	183.20%
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Ε.Π.Ε.	N/A	N/A	14.00%	N/A	0.00%	111.00%	129.00%	144.00%	240.00%	181.00%	N/A	117.00%
ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ “AUDIT SERVICES” Α.Ε.	N/A	397.00%	629.00%	625.00%	591.00%	618.00%	567.00%	479.00%	611.00%	619.00%	372.00%	550.80%
ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε.	257.00%	165.00%	118.00%	112.00%	91.00%	71.00%	60.00%	56.00%	135.00%	150.00%	N/A	121.50%
ΚΥΠΡΗΣ & ΣΥΝΕΡΓΑΤΕΣ Α.Ε.	200.00%	165.00%	93.00%	148.00%	54.00%	128.00%	65.00%	44.00%	77.00%	63.00%	33.00%	97.27%
ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΜΟΥΡ ΣΤΗΒΕΝΣ Α.Ε.	229.00%	217.00%	789.00%	763.00%	611.00%	546.00%	406.00%	343.00%	482.00%	648.00%	N/A	503.40%
ΩΡΙΩΝ Α.Ε.Ο.Ε.Α.	102.00%	1205.00%	527.00%	367.00%	236.00%	188.00%	180.00%	136.00%	477.00%	486.00%	N/A	390.40%
Average of Rest	239.50%	350.87%	268.32%	239.19%	247.31%	187.00%	230.57%	246.31%	223.03%	272.29%	247.17%	250.14%
AVERAGE	292.21%	344.64%	263.64%	244.80%	257.90%	211.54%	240.35%	273.68%	296.32%	282.53%	254.87%	269.32%
Difference Big 6—Rest of Sample	140.55%	-23.88%	-21.85%	28.94%	56.48%	143.15%	57.03%	159.62%	427.55%	59.78%	15.41%	94.80%

Source: Author's own calculation.

Greek audit firms have shown varying degrees of leverage in the last ten years, as indicated by the debt-to-equity ratio. This ratio is an important statistic that reflects the amount of debt compared to equity in their capital structures. From 2012 to 2021, the notable Big Six firms had an average debt-to-equity ratio of 364.11%, indicating a substantial dependence on debt. The average was significantly impacted by the increased ratios of companies such as Deloitte and Ernst & Young (HELLAS), who reported ratios of 314.73% and 440.07%, respectively. In contrast, the examination of a wider range of audit firms revealed varying levels of leverage among different organizations. For instance, action auditing had an average ratio of 260.78%, while ABACUS had a more modest average of 106.45%. Nevertheless, when compared side by side, the average ratio of the Big Six was significantly greater than that of many others in the remaining sample. This suggests that although the dominant corporations favor a more assertive approach to debt financing, there is variation in the use of leverage methods among Greek audit firms over this time period.

Table 15. Descriptive statistics of ratio variables.

STATISTIC	Quick Ratio	Cash Ratio	Gross Margin Ratio	Operating Profit Margin Ratio	Return on Assets Ratio	Return on Equity Ratio	Net profit margin Ratio	Debt to Assets Ratio	Debt to Equity Ratio
Average	2.47	0.79	0.43	0.10	0.08	0.26	0.06	0.63	2.57
Min	0.23	0.00	-0.75	-2.26	-1.70	-12.16	-2.26	0.00	0.00
Max	26.33	22.27	1.00	0.74	0.65	4.28	0.51	2.18	30.34
Standard Deviation	2.6054	1.9588	0.3191	0.256398	0.1927	0.87949	0.2154	0.3003	3.2179
Number of Observations	383	383	379	379	384	384	379	384	384

Source: Author's own calculation.

4.2. Audit Fees vs. Consulting Service Fees

Table 16 shows the audit and consulting fees (other services) for Greek audit firms from 2018 to 2022. As we can see, audit fees are 1.6 times higher than non-audit fees, accounting for 62.5% of overall costs and 37.5% of consultancy fees. **Table 17** also shows the average percentage of audit and non-audit fees for each year from 2018 to 2021.

Table 16. Audit and consulting fees (other services) for Greek audit firms from 2018 to 2022.

COMPANY	YEAR	Total Fees	Audit Fees	Other Services Fees	Audit Fees %	Other Services Fees %	Average for the Period 2018-2021	
							Audit Fees %	Other Services Fees %
<i>ABACUS ΕΛΕΓΚΤΙΚΗ ΑΕ</i>	2018	300267.83	217755.73	82512.10	72.52%	27.48%	71.37%	28.63%
	2019	312265.11	240460.97	71804.14	77.01%	22.99%		
	2020	276676.52	202410.00	74266.52	73.16%	26.84%		
	2021	290675.00	181400.00	109275.00	62.41%	37.59%		
<i>ACES AUDITORS ΑΕ</i>	2018	561788.88	559229.20	2559.68	99.54%	0.46%	96.57%	3.43%
	2019	591352.44	583102.44	8250.00	98.60%	1.40%		
	2020	581329.54	553613.41	27716.13	95.23%	4.77%		
	2021	626320.74	583870.74	42450.00	93.22%	6.78%		
<i>ACTION AUDITING Α.Ε</i>	2018	1190027.60	888126.00	301901.60	74.63%	25.37%	74.09%	25.91%
	2019	1199631.00	896876.00	302755.00	74.76%	25.24%		
	2020	1275153.00	950676.00	324477.00	74.55%	25.45%		
	2021	1230106.00	891176.00	338930.00	72.45%	27.55%		
<i>AUDIRE ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΛΟΓΙΣΤΕΣ</i>	2018	160712.90	34400.00	126312.90	21.40%	78.60%	25.06%	74.94%
	2019	202000.00	38700.00	163300.00	19.16%	80.84%		
	2020	222250.00	59800.00	162450.00	26.91%	73.09%		
	2021	226966.95	70607.27	156359.68	31.11%	68.89%		
<i>AUDIT OPINION I.K.E</i>	2018	411843.17	303352.85	108490.32	73.66%	26.34%	70.89%	29.11%
	2019	551721.02	365935.00	185786.02	66.33%	33.67%		
	2020	782190.47	575121.13	207069.34	73.53%	26.47%		
	2021	828592.10	580451.78	248140.32	70.05%	29.95%		
<i>Baker Tilly Greece</i>	2018	752280.00	377740.00	374540.00	50.21%	49.79%	48.93%	51.07%
	2019	742395.00	527775.00	214620.00	71.09%	28.91%		
	2020	1349000.00	525000.00	824000.00	38.92%	61.08%		
	2021	1053000.00	476000.00	577000.00	45.20%	54.80%		
<i>DELOITTE</i>	2018	25489187.00	18451325.00	7037862.00	72.39%	27.61%	68.83%	31.17%
	2019	28463433.00	21303796.00	7159637.00	74.85%	25.15%		

Continued

	2020	6397781.90	21206.45	6376575.45	0.33%	99.67%		
	2021	30775561.00	22949740.00	7825821.00	74.57%	25.43%		
<i>DELTA PARTNERS AE</i>	2018	863000.00	492000.00	371000.00	57.01%	42.99%		
	2019	731000.00	609000.00	122000.00	83.31%	16.69%	68.58%	31.42%
	2020	562000.00	439000.00	123000.00	78.11%	21.89%		
	2021	756000.00	457000.00	299000.00	60.45%	39.55%		
	2018	619279.00	360791.00	258488.00	58.26%	41.74%		
<i>DFK PD AUDIT A.E</i>	2019	653680.00	380892.00	272788.00	58.27%	41.73%	58.33%	41.67%
	2020	655740.00	362340.00	293400.00	55.26%	44.74%		
	2021	658505.00	405035.00	253470.00	61.51%	38.49%		
	2018	500000.00	280000.00	220000.00	56.00%	44.00%		
<i>HLB HELLAS AE</i>	2019	440000.00	307000.00	133000.00	69.77%	30.23%	61.63%	38.37%
	2020	384000.00	251000.00	133000.00	65.36%	34.64%		
	2021	516000.00	296000.00	220000.00	57.36%	42.64%		
	2018	1241642.42	1206992.42	34650.00	97.21%	2.79%		
<i>KMC EAEFTIKH A.E.</i>	2019	1073552.91	956602.91	116950.00	89.11%	10.89%	74.20%	25.80%
	2020	1102778.47	571602.27	531176.20	51.83%	48.17%		
	2021	1066758.61	592490.15	474268.46	55.54%	44.46%		
	2018	520975.00	484700.00	36275.00	93.04%	6.96%		
<i>KRP AUDITORS AE</i>	2019	390100.00	341750.00	48350.00	87.61%	12.39%	83.98%	16.02%
	2020	407390.00	340050.00	67340.00	83.47%	16.53%		
	2021	462174.31	328900.00	133274.31	71.16%	28.84%		
	2018	829037.28	576640.98	252396.30	69.56%	30.44%		
<i>KSI Greece</i>	2019	829791.06	603998.55	225792.51	72.79%	27.21%	66.46%	33.54%
	2020	1123281.34	770875.11	352406.23	68.63%	31.37%		
	2021	1367470.57	806347.35	561123.22	58.97%	41.03%		
	2018	5000000.00	2200000.00	2800000.00	44.00%	56.00%		
<i>MAZARS A.E.</i>	2019	4900000.00	2200000.00	2700000.00	44.90%	55.10%	44.88%	55.12%
	2020	5100000.00	2400000.00	2700000.00	47.06%	52.94%		
	2021	5500000.00	2400000.00	3100000.00	43.64%	56.36%		
	2018	659404.00	580943.00	78461.00	88.10%	11.90%		
<i>MPI HELLAS S.A</i>	2019	616127.00	522904.00	93223.00	84.87%	15.13%	82.40%	17.60%
	2020	647892.00	549066.00	98826.00	84.75%	15.25%		
	2021	742015.00	543469.00	198546.00	73.24%	26.76%		
	2018	1738912.12	1035206.02	703706.10	59.53%	40.47%	61.30%	38.70%
<i>OLYMPIA AUDITORS A.E</i>	2019	1756229.93	1058983.93	697246.00	60.30%	39.70%		

Continued

	2020	1614468.08	1041094.57	573373.51	64.49%	35.51%		
	2021	1724823.99	1053926.60	670897.39	61.10%	38.90%		
<i>PKF ΕΛΛΑΣ</i>	2018	4522000.00	4292000.00	230000.00	94.91%	5.09%		
	2019	4681000.00	3913000.00	768000.00	83.59%	16.41%	84.63%	15.37%
	2020	5225000.00	4240000.00	985000.00	81.15%	18.85%		
	2021	5946000.00	4798000.00	1148000.00	80.69%	19.31%		
	2018	197885.00	76810.00	121075.00	38.82%	61.18%		
<i>SMG ΕΛΕΓΚΤΙΚΗ Α.Ε</i>	2019	189035.00	79660.00	109375.00	42.14%	57.86%	49.74%	50.26%
	2020	197066.08	99660.00	97406.08	50.57%	49.43%		
	2021	156640.00	112280.00	44360.00	71.68%	28.32%		
	2018	826371.88	716096.22	110275.66	86.66%	13.34%		
<i>TMS AUDITORS Α.Ε</i>	2019	767121.95	601112.90	166009.05	78.36%	21.64%	76.05%	23.95%
	2020	901362.58	597932.58	303430.00	66.34%	33.66%		
	2021	782923.23	577470.00	205453.23	73.76%	26.24%		
	2018	204590.00	173070.00	31520.00	84.59%	15.41%		
<i>AUDIT PLUS Α.Ε</i>	2019	199920.00	171020.00	28900.00	85.54%	14.46%	77.40%	22.60%
	2020	190800.00	137400.00	53400.00	72.01%	27.99%		
	2021	195575.00	130650.00	64925.00	66.80%	33.20%		
	2018	1020400.00	858100.00	162300.00	84.09%	15.91%		
<i>ΑΞΩΝ ΟΡΚΩΤΟΙ ΕΛΕΓΚΤΕΣ ΑΕ</i>	2019	948178.81	818178.81	130000.00	86.29%	13.71%	86.39%	13.61%
	2020	959683.00	839683.00	120000.00	87.50%	12.50%		
	2021	1167575.00	1022575.00	145000.00	87.58%	12.42%		
	2018	615484.00	509384.00	106100.00	82.76%	17.24%		
<i>ΕΛΕΓΚΤΙΚΕΣ ΥΠΗΡΕΣΙΕΣ ΑΝΩΝΥΜΗ ΕΤΑΙΡΕΙΑ ΟΡΚΩΤΩΝ ΕΛΕΓΚΤΩΝ ΛΟΓΙΣΤΩΝ</i>	2019	754448.00	629048.00	125400.00	83.38%	16.62%	75.60%	24.40%
	2020	212200.00	106100.00	106100.00	50.00%	50.00%		
	2021	741266.00	512039.00	229227.00	69.08%	30.92%		
	2018	31308370.00	14248314.00	17060056.00	45.51%	54.49%		
<i>Grant Thornton</i>	2019	34666899.00	13414306.00	21252593.00	38.69%	61.31%	37.41%	62.59%
	2020	39073786.00	13160564.00	25913222.00	33.68%	66.32%		
	2021	43736856.00	14834687.00	28902169.00	33.92%	66.08%		
	2018	2431487.55	2147337.55	284150.00	88.31%	11.69%		
<i>ΕΛΛΗΝΙΚΗ ΕΛΕΓΚΤΙΚΗ Α.Ε</i>	2019	2289084.00	2081085.00	207999.00	90.91%	9.09%	90.84%	9.16%
	2020	2387405.00	2173040.00	214365.00	91.02%	8.98%		
	2021	2689450.68	2498100.68	191350.00	92.89%	7.11%		
	2018	25400000.00	18000000.00	7400000.00	70.87%	29.13%	75.26%	24.74%
<i>EY HELLAS</i>	2019	23200000.00	17800000.00	5400000.00	76.72%	23.28%		

Continued

	2020	23200000.00	17800000.00	5400000.00	76.72%	23.28%		
	2021	24400000.00	18800000.00	5600000.00	77.05%	22.95%		
ΚΥΠΡΗΣ ΚΑΙ ΣΥΝΕΡΓΑΤΕΣ Α.Ε	2018	402883.00	53900.00	348983.00	13.38%	86.62%		
	2019	411135.00	52400.00	358735.00	12.75%	87.25%	42.94%	57.06%
	2020	452326.00	302984.00	149342.00	66.98%	33.02%		
	2021	565166.00	377166.00	188000.00	66.74%	33.26%		
PwC Α.Ε	2018	36620000.00	31360000.00	5260000.00	85.64%	14.36%		
	2019	35530000.00	30240000.00	5290000.00	85.11%	14.89%	84.00%	16.00%
	2020	35350000.00	30260000.00	5090000.00	85.60%	14.40%		
	2021	35450000.00	28220000.00	7230000.00	79.61%	20.39%		
KPMG Ορκωτοί Ελεγκτές Α.Ε.	2018	36553000.00	12244000.00	24309000.00	33.50%	66.50%		
	2019	35093000.00	13447000.00	21646000.00	38.32%	61.68%	50.20%	49.80%
	2020	13131000.00	12008000.00	1123000.00	91.45%	8.55%		
	2021	13199000.00	11486000.00	1713000.00	87.02%	12.98%		
ΣΟΛ crowe	2018	33281889.59	18854960.01	14426929.58	56.65%	43.35%		
	2019	33140664.91	19087879.31	14052785.60	57.60%	42.40%	57.03%	42.97%
	2020	32097116.66	18706308.23	13390808.43	58.28%	41.72%		
	2021	33056591.26	18391511.30	14665079.96	55.64%	44.36%		
IG AUDIT Α.Ε	2018	161004.03	94072.58	66931.45	58.43%	41.57%		
	2019	475295.49	407245.49	68050.00	85.68%	14.32%	85.89%	14.11%
	2020	707675.57	643425.57	64250.00	90.92%	9.08%		
	2021	803319.19	699619.19	103700.00	87.09%	12.91%		
LEVERAGE ΕΛΕΓΤΙΚΗ ΑΕ	2018	19000.00	-	19000.00	0.00%	100.00%		
	2019	80470.00	25570.00	54900.00	31.78%	68.22%	45.70%	54.30%
	2020	184671.22	116761.25	67909.97	63.23%	36.77%		
	2021	386303.45	164052.49	222250.96	42.47%	57.53%		
RSM GREECE ΑΕ	2018	959188.35	597588.63	361599.72	62.30%	37.70%		
	2019	908091.57	604600.79	303490.78	66.58%	33.42%	66.00%	34.00%
	2020	910279.14	599098.89	311180.25	65.81%	34.19%		
	2021	852017.84	594274.60	257743.24	69.75%	30.25%		
ΑΡΤΙΑ ΠΟΡΕΙΑ ΕΛΕΓΚΤΙΚΗ Α.Ε	2018	311906.45	153700.00	158206.45	49.28%	50.72%		
	2019	339937.84	135990.32	203947.52	40.00%	60.00%	45.33%	54.67%
	2020	355296.45	162890.00	192406.45	45.85%	54.15%		
	2021	420489.39	194496.45	225992.94	46.25%	53.75%		
NEXIA EUROSTATUS ΑΕ	2018	1212890.12	721456.21	491433.91	59.48%	40.52%	61.05%	38.95%
	2019	1231690.33	706676.07	525014.26	57.37%	42.63%		

Continued

2020	1195161.39	775866.87	419294.52	64.92%	35.08%
2021	1046135.48	656623.93	389511.55	62.77%	37.23%
Average for Total Sample				62.49%	37.51%
				Max	96.57% 74.94%
				Min	25.06% 3.43%

Source: Author's own calculation.

Table 17. Average percentage of audit and non-audit fees.

Year	Greek Audit Firms		USA Audit Firms
	Audit Fees %	Other Services Fees %	Other Services Fees %
2018	61.39%	38.61%	10.30%
2019	61.89%	38.11%	9.90%
2020	62.69%	37.31%	9.20%
2021	64.05%	35.95%	8.90%

Source: Author's own calculation.

As we can see, there has been no major change in the audit-to-non-audit fee ratio over time. The ratio is nearly steady, with audit fees accounting for approximately 62.5% of total fees, and we have witnessed a modest increase in this percentage over time.

When we compare these ratios to those of US audit firms (see **Table 2** in the introductory section), we notice that in Greek enterprises, the percentage of non-audit fees to total fees is around three times that of US audit firms. Greek firms provide significantly more consulting services as a percentage of total services than American ones. It appears that US regulation, particularly the Sarbanes-Oxley Act, is tighter than Greek legislation prohibiting non-audit services provided by audit firms.

In terms of individual firms, the largest percentage for audit fees is 96.57%, with two companies having audit fees that exceed 90% of total fees. The maximum ratio for non-audit fees, on the other hand, is around 75%; however, this applies to a small audit business. The next highest value comes from Grant Thornton, where non-audit services account for approximately 62.6% of overall costs. Only eight of the companies in our sample have non-audit fees that are higher than audit fees.

Next, we examine whether the size of the audit firm influences the proportion of audit (or consulting) fees, expressed as a percentage of total revenues to total fees. **Table 18** presents the results of our regression study comparing non-audit fees to total fees.

Table 18. Regression analysis results.**Dependent Variable: Consulting to Total Fees (%)**

Method: Panel EGLS (Period random effects)

Period: 2018-2021

Cross-sections included: 34

Total panel (balanced) observations: 136

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Total Fees	-0.01921	0.041943	-0.457935	0.6477
Constant	3.575542	0.594965	6.009665	0
R-squared	0.001586			

For both variables, we used their natural logarithm in order to have normal distributions

Source: Author's own calculation.

Table 18 shows that estimating the percentage of consulting fees cannot take into account the impact of company size, as indicated by total fees.

Furthermore, the correlation coefficient between total fees and consultation fees to total fees is just 8%, indicating that the size of the firm (as reflected by total fees) appears to have no effect on the amount of consulting services that the company delivers when compared to total services.

Table 19 shows the mix of audit and non-audit fees in our subsamples: the “Big 6” and the rest.

Table 19. Audit and consulting fees ratios between big and smaller companies.

Sub-Sample	Total Fees	Audit Fees	Other Services Fees	Audit Fees %	Other Services Fees %
BIG 6 Companies	708614136.32	435089597.30	273524539.02	61.40%	38.60%
REST Companies	119264859.42	82241472.45	37023386.97	68.96%	31.04%
Total	827878995.74	517331069.75	310547925.99		

Source: Author's own calculation.

As shown in the above table, when comparing the large six corporations to the remainder of our sample, there is a 7.5% difference in the ratio of audit fees to total fees. Non-audit services provide a slightly higher percentage of total fees for the Big Six businesses than for smaller companies. At first glance, these results may seem controversial, suggesting that total fees, which reflect size, do not correlate with the consulting fee percentage. However, a closer examination of this data suggests that it is not due to a difference in turnover between the two groups, but to other factors. Larger firms may offer comparatively more consulting ser-

vices than smaller organizations, since big six audit firms with a strong brand name, high reputation, and significantly more resources can compete better with small firms in the consulting fees market. Audit fees appear to be more of a concern for smaller audit companies.

5. Conclusion

This report provides a thorough financial analysis of Greek audit firms from 2012 to 2022. The analysis specifically examines their liquidity, profitability, and leverage, as well as the proportion of their revenues derived from non-audit services. The results of our study show that Greek audit firms have excellent liquidity, as evidenced by the consistent liquidity ratios of the top six firms. This suggests that these larger organizations effectively manage the risk associated with liquidity. Smaller enterprises, on the other hand, display greater diversity in their liquidity ratios, indicating a distinction in financial approach or external circumstances affecting them in distinct ways.

The sector has been highly profitable during the investigated period, with returns on invested equity significantly exceeding the average returns expected by Greek firms. This implies that the audit business is not only a lucrative market, but also provides substantial return on investment, especially for smaller organizations. It is probable that these smaller businesses possess more effective cost management procedures, particularly regarding wage costs. This aspect could be a promising subject for future research.

In terms of leverage, the industry has a preference for financing through liabilities rather than equity, with a ratio of around 3 to 1. Big corporations have greater financial responsibilities, probably because they need more resources to invest in fixed assets like office buildings and technology equipment. The selection of this financial structure may be impacted by strategic decisions that are specifically designed to meet the requirements and size of larger companies.

The data also indicates that larger companies within the “big six” derive a little greater percentage of their overall income from advisory services. This discrepancy is not solely associated with the size of the organization in terms of revenue, but rather with other criteria such as reputation and the availability of resources.

The robust financial position of Greek audit firms not only highlights their capacity to function autonomously without being influenced by clients, but also indicates that these firms are likely to generate audit reports and financial statements of superior quality. The autonomy of the audit process is essential for bolstering the trustworthiness of the audit process, thereby cultivating confidence among investors, regulatory authorities, and the general public.

The findings of this research, although based on Greek audit firms, may have wider ramifications. Audit firms in different areas, particularly in markets with similar economic and regulatory contexts, can take into account factors such as efficient liquidity management, beneficial leverage tactics, and the equilibrium

between audit and non-audit services. Nevertheless, it is important to thoroughly evaluate the local economic realities, corporate governance norms, and regulatory frameworks before applying these conclusions to different situations.

Subsequent studies should investigate the direct influence of these financial tactics on the quality of audits and determine if these patterns remain consistent in other regulatory contexts. This research could inform policy choices targeted at enhancing the financial stability and autonomy of audit companies worldwide.

Declarations

The paper has not been previously published, in English or another language.

The paper is the work of only the listed author.

The work is original and all the work of others is appropriately acknowledged.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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