AUDITOR CHOICE, BOARD OF DIRECTORS' CHARACTERISTICS AND OWNERSHIP STRUCTURE: EVIDENCE FROM GREECE

Marios Fasoulas *, Evangelos Chytis **, Ekaterini Lekarakou ***, Stergios Tasios ****

* Department of Accounting and Finance, University of Ioannina, Preveza, Greece
** Department of Accounting and Finance, University of Ioannina, Preveza, Greece; School of Social Sciences, Hellenic Open University, Patra, Greece
*** Department of Accounting and Finance, University of West Attica, Egaleo, Greece
**** *Corresponding author*, Department of Accounting and Finance, University of Ioannina, Preveza, Greece
Contact details: Department of Accounting and Finance, University of Ioannina, Psathaki, P.O Box 169, PC 48100, Preveza, Greece

How to cite this paper: Fasoulas, M., Chytis, E., Lekarakou, E., & Tasios, S. (2024). Auditor choice, board of directors' characteristics and ownership structure: Evidence from Greece. *Journal of Governance & Regulation, 13*(1), 147–159. https://doi.org/10.22495/jgrv13i1art13

Copyright © 2024 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). https://creativecommons.org/licenses/by/4.0/

ISSN Online: 2306-6784
ISSN Print: 2220-9352

Received: 22.02.2023
Accepted: 23.01.2024

JEL Classification: M14, M41, M42
DOI: 10.22495/jgrv13i1art13

Abstract

Auditing is a key factor of financial reporting quality which reduces information asymmetry, improves regulatory compliance, and enhances internal control effectiveness. The decision to select an audit firm is complex and the reasons for choosing a specific auditor are likely to differ across organizations (Knechel et al., 2008). Several factors drive auditor selection, including ownership structure, governance attributes, the risk of information asymmetry, and country-level determinants (Habib et al., 2019). This study aims to examine whether corporate governance mechanisms affect auditor choice. For this purpose, using a sample of the biggest companies listed on the Athens Stock Exchange (ASE) for the period of 2014 to 2018, a logit regression model was developed to investigate the influence of the board characteristics and ownership structure on the decision to appoint a Big Four or non-Big Four audit firm. Results indicate that corporate governance mechanisms do affect auditor selection in Greece. Firms with larger boards, with more independent members and women on their boards' composition, are more likely to appoint a Big Four audit firm. On the other hand, family-owned firms are less likely to engage a Big Four audit firm. The study's results add new evidence on the factors that affect auditor choice in a European emerging market and could be useful to the regulatory authorities, investors, boards, and all other parties engaged in corporate governance.

Keywords: Auditor Choice, Big Four, Corporate Governance, Ownership, Board of Directors, Women, Greece

Authors' individual contribution: Conceptualization — M.F. and S.T.; Methodology — M.F., E.L., and S.T.; Formal Analysis — M.F. and S.T.; Resources — M.F., E.L., and S.T.; Writing — Original Draft — M.F. and S.T.; Writing — Review & Editing — E.C. and E.L.; Supervision — E.C. and S.T.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

Acknowledgements: The Authors would like to thank the participants of the 2021 International Online Conference "Corporate Governance: Fundamental and Challenging Issues in Scholarly Research" for their constructive and helpful comments on earlier version of this work.

1. INTRODUCTION

Auditing as an independent function strengthens confidence in financial reports and reduces agency costs and information asymmetry between the audited firm and the users of the financial statements (Directive 2014/56/EU of the European Parliament and of the Council; Regulation (EU) No. 537/2014 of the European Parliament and of the Council). The significance of the determinants and implications of auditor choice is reflected in the increasing research studies in this field in the last three decades (Habib et al. 2019). Big Four audit firms are perceived to provide higher audit quality services compared to non-Big Four audit firms (Becker et al., 1998; Chung & Lindsay, 1988; Teoh & Wong, 1993; DeFond & Jiambalxo, 1993; DeFond et al., 2000; Choi & Wong, 2007; DeAngelo, 1981). This is attributed to their industry specialization, resources, greater public exposure, and higher risk of reputation damage. Research indicates that overall audit quality is improved in countries with a higher percentage of audits conducted by Big Four auditors (Francis et al., 2013).

Corporate governance is considered an influential factor in auditor choice decisions (Alfraih, 2017). Literature regarding auditor choice provides evidence of differences at the country level due to differences in the legal and corporate governance framework (Matonti et al., 2016). Although several studies have been conducted in this field, findings on the association between auditor choice and corporate governance from European countries are limited (Quick et al., 2018), and since accounting standards are issued at the national level, cultural differences affect the auditing environment (Knechel et al., 2008).

This study examines the influence of corporate governance on auditor choice in Greece, which is characterized by high ownership concentration, especially by family members, and with corporate governance characteristics that differentiate companies from countries with firms with dispersed ownership.

The case of Greece provides a unique setting of corporate structures that are different from similar Anglo-Saxon companies (Lazarides et al., 2009). Most of the listed companies in Greece are family-owned and controlled (Mavridis, 2002; Nerantzidis, 2015). A high concentration of family members can lead to agency problems because the interests of the dominant shareholder groups may diverge from those of other shareholders on a variety of dimensions (Purkayastha et al., 2022). In addition, family members occupy management positions or control managers that do not belong to the family. Hence, there is no actual distinction between ownership and management (Lazarides et al., 2009). From the above perspective, Greece can offer us important information concerning auditor choice in a business environment different from most Anglo-Saxon states.

Moreover, according to the gender equality index (European Institute for Gender Equality [EIGE], 2022) the proportion of women and men on corporate boards of the largest companies listed on the Athens Stock Exchange (ASE), indicates that women's representation on the boards in Greece (23%) is significantly below the European average rate (36%). Although Greece supports gender equality, the decreased representation of women on the board of directors may also be associated with lower corporate governance quality, as female directors improve the monitoring process, strengthen corporate governance, and enhance the quality of disclosures (Alhababsah & Yekini, 2021). Finally, most external control mechanisms in Greece appear not to be as successful and effective as in Anglo-Saxon countries (Nerantzidis, 2015).

Our study focuses on two key governance dimensions: 1) board of directors and 2) ownership structure. In this context, the features of board size, board independence, family, institutional and government ownership, presence of women on the board of directors and the audit committee were selected. In line with prior research, auditors are classified into Big Four and non-Big Four audit firms, and a logit regression model for panel data with random effects is employed to examine the association of corporate governance and firm characteristics with auditor selection.

In Greece, the corporate governance framework for listed companies is based, on the one hand, on the adoption of mandatory legal provisions and, on the other hand, on the application of corporate governance principles and the adoption of best practices and recommendations through self-regulation. In particular, it includes certain provisions of the Corporate Governance Law (Law 4706/2020) on public companies and public authorities, the decisions of the Hellenic Capital Market Commission (HCMC) issued by delegation of the law, and the best practices and recommendations for self-regulation adopted by the new Corporate Governance Code (Hellenic Corporate Governance Council, 2021).

The Corporate Governance Law replaced the Hellenic Corporate Governance Code for listed companies, issued by the HCMC in 2013. It is, essentially, the incorporation into Greek legislation of Directive (EU) 2017/828 of the European Parliament and of the Council, measures implementing Regulation (EU) 2017/1131 of the European Parliament and of the Council.

Therefore, due to the implementation of the previous Corporate Governance Code from 2013 onwards and the changes made by Regulation (EU) 2017/1131, to ensure uniformity of data and legal status, the period 2014–2018 was chosen. The sample included all non-financial companies of the FTSE/Large Cap and FTSE/Mid Cap Indexes of the ASE which represent the largest companies in the Greek capital market.

Results of the study indicate that firms with larger boards, with more independent members and women on their boards' composition, are more likely to engage a Big Four audit firm. On the other hand, firms with higher family ownership are less likely to appoint a Big Four auditor. As far as the control variables are concerned, auditor choice was found to be positively associated with asset turnover and negatively associated with profitability. The remaining selected corporate governance and firm characteristics (institutional and government ownership, presence of women on the audit committee, firm size, and liquidity) were not found to exert a significant influence on the auditor selection process.

The study contributes and expands prior literature in several aspects, mainly due to the country's unique corporate characteristics (Al-Matari & Alosaimi, 2022; Laurens, 2022; Kostyuk et al., 2016). Firstly, our study supports existing literature on the significant influence that women's representation on the board may exert on the selection of auditors and consequently, on auditing and financial reporting quality. Hence, despite weak Greek corporate governance structures, gender-diverse boards by demanding high-quality audits appear to strengthen the monitoring role of the board of directors and promote an improved corporate governance framework. Secondly, it expands previous studies on the role of the board and especially of independent directors in promoting audit quality. Companies with larger boards and more independent members are more oriented to the alleviation of agency conflicts through the selection of reputable auditors. Moreover, the study provides evidence of the association of family ownership with the process of auditor selection. In this context, auditor choice may provide useful information about a firm's ownership structure. Overall, the findings of the study suggest that strong corporate governance structures warrant audit quality. These findings relating to corporate governance may provide useful insights to regulators and policymakers in their assessment of the effectiveness of the regulatory framework.

The remainder of the paper is organized as follows. Section 2 provides a literature review of prior theories and studies and develops the hypotheses tested in the study. The research methodology and the sample examined in the research are presented in Section 3. The results of the study are analyzed in Section 4 and discussed in Section 5. Finally, Section 6 summarizes the conclusions of the study, discusses the limitations, and provides suggestions for future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

According to Knechel et al. (2008), in general, auditor selection is driven by cost or quality considerations or a mix of them. Auditor choice as a decision process is complicated and combines the client's attributes, the auditor's characteristics, and the dimensions of the institutional setting (Ianniello et al., 2015). In this context, the interplay of auditor recommendation and reputation plays an influential role (Kacanski et al., 2021). In addition, a firm may select the same auditor as its close competitors to benefit from the auditor knowledge accumulated from audits conducted with comparable clients (Bill et al., 2020).

Hsu et al. (2015) in their research on insurance companies, showed that another significant factor for auditor choice relates to industry-specific characteristics of the company. A further factor that may affect the decision to change an auditor can arise from disagreements on accounting standards, as documented by the research of DeAngelo (1982) on the impact of SFAS19 on United States (U.S.) petroleum firms. Managers may decide to switch auditors if their expectations of the implementation of an accounting standard are not met. In this case, auditors can react to the managerial manipulation of accounting standards by qualifying their audit opinion and as an ultimate measure, by withdrawing from the audit engagement (DeAngelo, 1982).

A literature review of country-level institutional factors that affect auditor choice indicates the key factors relating to ownership and governance include management and institutional ownership, family business and block holding, board of directors, and audit committees (Habib et al., 2019). As the factors affecting auditor engagement are multidimensional, literature on the theoretical basis proposes two main theories for the examination of auditor selection: 1) agency and 2) signalling theory (Qomariyah, 2019).

Agency theory may explain the demand of high-quality auditors in the case of severe agency problems (Tsao et al., 2017). Agency theory approaches principal–agent conflict of interest. Drivers of auditor selection which derive from agency theory are linked to agency conflicts (Corten et al., 2021). Stakeholders (principals), try to minimize the divergence of interests through monitoring of managers or by providing the appropriate incentives (Corten et al., 2018). When agency costs are high, managers may choose high-quality auditors, otherwise, their opportunist behaviour may result in the selection of a weak auditor (Behbahaninia, 2022). In this context, auditing functions as a mitigating mechanism of the information risk that derives from information asymmetry between stakeholders (principles) and management (agents) (El-Dyasty & Elamer, 2021). Corten et al. (2018) advocate that agency theory partially interprets the impact of various factors on auditor choice, and hence, signalling theory may complement this effort.

Through the prism of signalling theory firms choose high-quality auditors to "signal" the quality of their financial reports. Investors take into consideration auditor information of initial public offerings and consequently investment firms and audit committees recommend big auditors when raising funds (Bhattacharya & Banerjee, 2020). Bewley et al. (2008) examined a sample of Anderson's auditees and concluded that the management of the companies who dismissed Anderson's auditees Anderson earlier was more likely to initiate restatements on the financial statements to signal that they provide high-quality financial reports and distance them from Andersen. Wei et al. (2015) argue that the signaling effect of selecting high-quality auditors is verified only in the case of a certain percentage of sophisticated investors who can comprehend accounting and auditing terms and issues.

Taking into consideration agency and stakeholder theory the following corporate governance factors were selected for our study: 1) board size, 2) board independence, 3) board gender diversity, 4) audit committee gender diversity, 5) institutional, 6) family, and 7) government ownership.

2.1. Board characteristics and audit committee

The board of directors is the leading decision-making structure of every entity, it is

accountable for corporate issues, and it is considered to exert a significant influence on the auditor choice decision process. All the defying corporate functions are under the board's control, which spans from everyday operations to long-term corporate strategy. The board of directors through the audit committee is assigned with the task to safeguard the reliability of the information disclosed by the corporate financial statements (Fernadez-Mendez & Pathan, 2023). Prior research suggests that several board characteristics affect auditor choice decisions with board size and independence being the most important.

2.1.1. Board size

The relation between board size and its effectiveness is not yet determined, as results are mixed, both on theoretical and empirical bases. On one hand, large boards face difficulties in communication and coordination (Jensen, 1993; Goodstein et al., 1994; Yermack, 1996). The larger the board the more likely conflicts to arise among its members (Quick et al., 2018) and the more difficult the communication and co-ordinations of its members. In this respect, larger boards may prefer Big Four auditors to reduce agency conflicts by delegating the monitoring of the financial reporting process to well-known reputable audit firms (Bhattacharya & Banerjee, 2020). On the other hand, large boards have a greater capacity to scrutinize everyday operations and are capable of recruiting more experts from various fields of expertise (Chaganti et al., 1985) or even be more difficult to succumb to managerial domination (Zahra & Pearce, 1989).

The majority of previous studies conclude on a positive relation between board size and auditor choice. Ben-Hassoun et al. (2018) find that board size is positively related to appointing a Big N auditor in the context of newly privatized entities in the Middle East and North Africa (MENA) region. Similarly, Houqe et al. (2015) determine that the extent of board size enhances the positive relation between corporate ethics and a firm's selection of a Big Four auditor. Alfraih (2017) in his research on listed Kuwaiti firms results in a 1.6-fold increased likelihood of choosing a Big Four auditor for every increase in the members of the board of directors. Bhattacharya and Banerjee (2020) provide evidence that companies with larger boards in India are more likely to choose a Big Four auditor. Considering the above arguments and findings of prior research the following hypothesis on the relation of board size with auditor choice is stated:

H1: The board of directors' size is positively associated with the selection of a Big Four auditor.

2.1.2. Board independence

Independent directors are exposed to significant reputational and legal risks regarding the reliability of disclosed financial information (Bhattacharya & Banerjee, 2020). Theoretical literature suggests that boards with more independent members will exercise more effective monitoring of management and reduce information asymmetry with executive directors (Alfraih, 2017). Moreover, they are more likely to pursue the interests of shareholders, avoid legal liabilities and protect their reputation, than boards with a low percentage of independent members (Carcelo et al. 2002). Research indicates that firms with fraudulent financial statements had fewer independent members than firms with non-fraudulent statements (Beasley, 1996). However, in markets where firms present high concentration in their ownership structure, directors nominated as independent may not be independent in substance and this complicates the prediction of the association between board independence and auditor choice (Ianniello et al., 2015).

In compliance with this view, Guizani and Abdalkrim (2022) find a positive relationship between board independence and the appointment of Big Four audit firms in companies from the Gulf Cooperation Council. Alfraih (2017), in a study of listed companies on the Kuwait Stock Exchange (KSE), concluded a statistically significant positive relation between the independence of the board and the quality of the selected audit firm. In addition, board independence is the strongest predictor of selecting a Big Four audit firm, with a one-unit increase in the proportion of independent board members leading to a six-fold increase in the likelihood of a Big Four auditor selection. Chen and Zhou (2007) concluded that U.S. companies with more independent board members sacked Andersen earlier and had a greater probability of choosing a Big Four auditor in the aftermath of Enron's collapse. In contrast, very few studies report a negative correlation between board independence and Big N auditors' appointments. Ben-Hassoun et al. (2018) is one of the above studies and derives the above result in the context of newly privatized companies in the MENA region. Taking into consideration the above, the hypothesis for the association of independent board members with auditor choice is the following:

H2: The proportion of independent members on the board of directors is positively associated with the selection of a Big Four auditor.

2.2. Ownership

Ownership consists of a significant corporate governance mechanism influencing financial reporting quality (El-Dyasty & Elamer 2021). Many agency problems have their roots in ownership structure and include contractual relations between owners and management (type I agency problem), as well as controlling and non-controlling interests (type II agency problem) (El-Dyasty & Elamer, 2021). In companies with a high concentration in the ownership of the share capital, management can be affected by large shareholders, specifically when they participate in the board of directors (Matonti et al., 2016). In this study three types of ownership are examined: family, institutional, and government ownership.

2.2.1. Family ownership

Family firms are characterized by the unification of ownership and control which raises significant corporate governance weaknesses. Family shareholders constitute a distinctive class of investors as they invest for a long time in the firm

and often have management positions (Guizani & Abdalkrim, 2022). Family firms are less exposed to the entrenchment problem when managerial ownership increases and more to the divergence of interest problem when managerial ownership decreases (Habib et al., 2019). Contrary to firms with dispersed ownership, the boards of family firms may represent the interests of major shareholders, but not those of non-family shareholders (Srinidhi et al., 2014). Therefore, in family firms, agency problems arise between large and small shareholders (El-Dyasty & Elamer, 2021). In addition, audit risk in family firms is considered higher since their internal control system is assumed to be weak and insufficient (Habib et al., 2019). On the other hand, it can be argued that family firms take seriously into consideration reputation and penalties and avoid practices that may harm their "family name" (Chytis et al., 2019).

Srinidhi et al. (2014) document that family firms with strong governance select higher-quality auditors and this strong governance mitigates the conflict of interest between controlling insiders and non-controlling outside investors. Family firms, therefore, have the incentive to engage high-quality auditors to signal their support for a strong governance system (Habib et al., 2019). On the other hand, to serve their private interests, family firms may not want to disclose internal and high-quality accounting information as it may expose them to greater scrutiny and thus, do not select high-quality auditors (Guizani & Abdalkrim, 2022). Results of prior research suggest that firms with high family ownership are less likely to employ a Big Four audit firm (Ianniello et al., 2015; Hsu et al., 2018; El-Dyasty & Elamer, 2021; Guizani & Abdalkrim, 2022). Listed firms in Greece are characterized by a high percentage of family ownership, a weak corporate governance structure, and a low level of voluntary disclosure (Vadasi et al., 2021). Taking into consideration the above, the following hypothesis is stated on the relationship between family ownership and auditor selection:

H3: Family ownership is negatively associated with the selection of a Big Four auditor.

2.2.2. Institutional ownership

Institutional investors are defined as "*organizations that invest, including insurance companies, depository institutions, pension funds, investment companies, mutual funds, and endowment funds*" (Nasdaq, n.d.). Institutional ownership is likely to be associated with higher-quality audits to alleviate information asymmetry and facilitate the monitoring of operations (Kim et al., 2019). Institutional owners consider high-quality audits to enhance corporate governance and reduce monitoring costs (Han et al., 2013). Therefore, they have strong incentives to engage high-quality auditors to protect their investments. However, when institutional investors have a short-term horizon, they may encourage opportunistic behavior if this results in a significant profitable outcome (Guizani & Abdalkrim, 2022).

Prior research indicates that institutional ownership is positively associated with the selection of a Big Four auditor. Several studies show that firms with higher institutional ownership are more likely to engage a Big Four auditor (Kim et al, 2019; Guizani & Abdalkrim, 2022). Chou et al. (2014) in a study of mutual funds in 30 countries provide evidence that Big Four auditor appointments are associated with increased foreign mutual fund shareholdings. On the other hand, Han et al. (2013) argue that firms are more likely to choose a Big Four auditor only for long-term high institutional ownership. In line with the above arguments, the following hypothesis is stated for the effect of institutional ownership on auditor choice:

H4: Institutional ownership is positively associated with the selection of a Big Four auditor.

2.2.3. Government ownership

State-owned or controlled companies differ from entities with solely privatized ownership. Contrary to investors, governments are motivated by political objectives rather than profit maximization (Guizani & Abdalkrim, 2022). Wang et al. (2008) argue that state companies are more likely to appoint low-quality auditors because of the preferential treatment by stock market regulators, based more on political than economic objectives, and protection from economic failure through bail-out programmes. Moreover, politically connected board members are more likely to make decisions in favour of the politicians with whom they are connected and less with business criteria, and thus would not choose high-quality auditors who want to promote corporate transparency.

Cheng et al. (2015) provide evidence that firms with political connections do not require austerity from auditors in their audit engagements. Wang et al. (2008) in a study of Chinese companies document that state-owned companies are more likely to hire small audit firms. In another study, also in the Chinese setting, Cheng et al. (2015) conclude that state-owned companies are less likely to engage a non-top ten auditor. Taking into consideration the above arguments and findings of prior research, the following hypothesis is stated for the relationship between government ownership and auditor selection:

H5: Government ownership is negatively associated with the selection of a Big Four auditor.

2.3. Board and audit committee gender diversity

Board members' diversity relating to age, ethnicity, experience, and gender is considered a core feature of corporate governance that broadens the horizons of board discussions (Lai et al., 2017). Prior research on gender diversity suggests that there are differences in the behaviour between males and females (Oradi & Javadi, 2020). There are many arguments in favour of including women on the board and its committees. Female board members are more likely to look after shareholder interests than male members (Quick et al., 2018). In addition, they are more likely to pursue higher monitoring in the form of audit effort and quality (Gul et al., 2012). Oradi and Javadi (2020) argue that the inclusion of at least one female director on the audit committee reduces the possibility of financial restatements and, therefore, promotes financial reporting quality. In addition, long-tenured female directors and chairwomen exert a significant

beneficial influence on audit efforts and outcomes (Fernadez-Mendez & Pathan, 2023).

Audit committees are responsible for the oversight of the financial reporting process and responsible for the quality of corporate financial reports and disclosures. The core duty of the audit committee is to appoint an external auditor, monitor the audit process, and assure audit quality (Azizkhani et al., 2023). Law No. 4449/2017 introduced to the Greek legislation the European Directive 2014/56/EU which among others radically altered the audit committee's mandatory composition, required member skills and responsibilities. The above legislation is indicative of the growing importance of the audit committee as a corporate governance mechanism.

Beasley (1996) suggests that the presence of an audit committee does not affect the likelihood of financial statement fraud. Carcello and Neal (2000) find no noticeable difference in audit committee size between companies receiving going concern or unmodified audit reports. On the other hand, Lin and Liu (2009) report that Chinese companies with larger supervisory boards[1] are more likely to hire high-quality audit firms. Chen and Zhou (2007) found that entities with larger and more active audit committees were more likely to choose a Big Four auditor successor after Andersen's involvement in the Enron scandal.

Prior research in general supports the argument that the presence of women on the audit committee is related to higher financial reporting quality, increased disclosures, and requests for higher audit quality (Azizkhani et al., 2023). Lai et al. (2017), in a study of U.S. firms, found that firms with gender-diverse boards and audit committees are more likely to appoint a Big Four audit firm compared to exclusively male boards. Gul et al. (2012), in another study also in the U.S., concluded that gender-diverse boards pay higher audit fees and choose industry specialist auditors. Oradi and Javadi (2020) examined the presence of women on the audit committees in Iran and concluded that increases the possibility of selecting higher-quality auditors. On the other hand, Quick et al. (2018) concluded that the proportion of women on the board of directors does not affect auditor choice in the German setting. Considering the above arguments, the following hypotheses are stated for the association of board and audit committee gender diversity with auditor choice:

H6: The presence of women on the board of directors is positively associated with the selection of a Big Four auditor.

H7: The presence of women on the audit committee is positively associated with the selection of a Big Four auditor.

2.4. Control variables

Several studies that examine the factors that affect auditor choice are based on firm characteristics (Matonti et al., 2016). This study is based on 1) prior literature, 2) the firms that comprise the sample, and 3) the time frame of the study, in which several significant events occurred in Greece (capital controls in 2015, exit from bailout program in 2018), the following firm characteristics were examined: 1) firm size, 2) efficiency, 3) profitability, and 4) liquidity.

According to Hsu et al. (2015), assets are included in the internal factors that influence auditor selection. Large firms face significant agency costs, attract more attention, and are more exposed to public scrutiny, therefore, they are more likely to engage high-quality auditors to alleviate agency conflicts and signal the quality of their own reports. In addition, large firms are accustomed to superior services from a plethora of professionals and consequently, it may be difficult for them to be satisfied by the services provided by small audit firms (Matonti et al., 2016).

Financially distressed firms may demand audit fee reduction opting for lower audit quality, less reputed auditors, or even switch auditors (Bhattacharya & Banerjee, 2020). In addition, firms with high leverage are exposed to financial risk which generates incentives for earnings management (Fernadez-Mendez & Pathan, 2023). Prior research provides evidence that financially distressed firms pay less audit fees and, therefore, select non-audit firms (Bhattacharya & Banerjee, 2020). Firm efficiency is proxied by asset turnover, which measures the efficiency with which a firm operates its assets to generate sales. Dechow et al. (1995) argue that factors associated with firm performance may cause earnings management. Poor firm efficiency may motivate earnings management practices and, therefore, less efficient firms may not select a high-quality auditor who would scrutinize their financial statements. Based on the above size, efficiency, profitability, and liquidity were inserted into our model as control variables.

3. RESEARCH METHODOLOGY

3.1. Sample

The sample of the study includes all non-financial companies of the FTSE/Large Cap and FTSE/Mid Cap Indexes of the ASE for the five years from 2014 to 2018[2]. The final sample — after excluding the financial sector companies (i.e., banks, insurance firms, asset management companies, etc.) — amounted to 36 companies with 180 firm-year observations. Financial sector firms were excluded from the sample due to differences in the regulatory framework and industry specialization. Data were extracted from each company's consolidated annual financial statements.

The study applies the econometric approach of the logit model for panel data to assess the probability of a firm engaging or not a Big Four auditor for the audit of the annual financial statements. The approach of the logit regression for panel data though rarely used is also applied by other researchers (Guedhami et al., 2009; De Carvalho Pereira et al., 2023). To control firm-specific effects, the estimation of random effects was used. Considering that the determinants of auditor selection are firm-specific, this approach controls for unobserved heterogeneity (Guedhami

[1] Supervisory boards functions in China, are to some extent similar to those of audit committees in the Anglo-Saxon countries.

[2] FTSE/Large Cap is the large capitalization index capturing on real time the performance of the 25 largest blue-chip companies within the ASE. FTSE/Mid Cap is the middle capitalization index and captures on real time the performance of the next 20 companies of the ASE.

et al., 2009). Other methodological approaches in this field include literature review studies (Habib et al., 2019; Qomariyah, 2019), questionnaire studies (Corten et al., 2018), and interview surveys (Almer et al., 2014).

3.2. Model and variables

The estimated logit regression model for panel data with random effects is depicted in the following equation:

$$audc_{it} = \beta_0 + \beta_1 bsize_{it} + \beta_2 bindep_{it} + \beta_3 wboard_{it} + \beta_4 waudcom_{it} + \beta_5 famown_{it} + \beta_6 instown_{it} + \beta_7 govown_{it} + \beta_8 fsize_{it} + \beta_9 effic_{it} + \beta_{10} prof_{it} + \beta_{11} liq_{it} + \varepsilon_{it} \quad (1)$$

where,

- *audc*: auditor choice, a dummy variable that takes the value 1 if the firm that conducted the annual audit of the financial statements is one of the Big Four audit firms (Ernst & Young [EY], PricewaterhouseCoopers [PwC], Klynveld Peat Marwick Goerdeler [KPMG], and Deloitte) and 0 otherwise;
- *bsize*: board size, measured by the total number of members of the board;
- *bindep*: board independence, measured by the percentage of independent members to the total members of the board of directors;
- *wboard*: the presence of women on the board, measured by the percentage of female directors on the board;
- *waudcom*: the presence of women on the audit committee, measured by the percentage of female members on the audit committee;
- *famown*: family ownership, the percentage of the shares owned by the founding family of the firm;
- *instown*: institutional ownership, the percentage of shares owned by institutional investors;
- *govown*: government ownership, the percentage of shares held by the state;
- *fsize*: firm size, measured by the natural logarithm of total assets;
- *effic*: firm efficiency, measured by asset turnover ratio;
- *prof*: profitability, measured by return on assets ratio (ROA);
- *liq*: liquidity, measured by current assets to current liabilities ratio;
- ε: error term.

4. RESULTS

4.1. Descriptive statistics

Table 1, illustrates the descriptive statistics for the dependent and independent variables of the research model:

Table 1. Descriptive statistics

Variables	*Obs.*	*Mean*	*Std. dev.*	*Min*	*Max*
bsize	180	10.150000	2.529104	5.000000	17.000000
bindep	180	0.293288	0.113035	0.076923	0.636363
wboard	180	0.119608	0.138109	0.000000	0.500000
waudcom	180	0.100000	0.168610	0.000000	0.666666
famown	180	0.278883	0.290008	0.000000	0.820500
instown	180	0.245878	0.235339	0.000000	0.795600
govown	180	0.067838	0.178668	0.000000	0.742700
fsize	180	20.403070	1.607312	16.022410	23.578200
effic	180	0.757048	0.668555	0.000000	3.757710
prof	180	0.028435	0.045928	-0.081126	0.180098
liq	180	1.952037	1.740837	0.329507	10.392430
Dichotomous variables					
audc					
Yes (1)	***No (0)***				
46.11	53.89				

Source: Authors' estimates.

As seen in the above table, for the sample of the study, boards on average comprised 10 members with about one-third of them (29.32%) being independent. Women appear to be underrepresented on the boards of directors and the audit committees as on average, only 11.96% of the board members and 10% of the audit committees were women. With regards to ownership, average family ownership amounted to 27.88%, with the maximum value reaching 82.05%, indicating high family influence. Institutional ownership on average equaled to 24.58%, lower compared to family ownership. Government ownership on average was low, amounting to 6.78%. As far as control variables are concerned for the period under examination, mean asset turnover amounted to 0.75 and mean ROA to 0.02, indicating marginal levels of operational efficiency and profitability. The firms of the sample present adequate liquidity (mean value of liquidity ratio 1.95) and do not appear to be exposed to significant financial risks.

4.2. Correlations

Table A.1 in Appendix, illustrates the correlations between the dependent and the independent variables:

According to the correlation matrix auditor choice (*audc*) is positively associated with board size (*bsize*), with government ownership (*govown*), and with firm size (*fsize*) and efficiency (*effic*) at the 0.01 level of significance and with board independence (*bindep*) at the 0.05 level of significance. On the other hand, a negative correlation of auditor

choice with family ownership (*famown*) is observed at the 0.01 level of significance and with the presence of women on the board (*wboard*) at the 0.05 level of significance. Although the results of correlation analysis indicate that for several of the independent variables, correlation coefficients are significant, the correlation is not high (more than 0.80) to indicate multicollinearity (Gujarati, 2004).

4.3. Regression statistics

The results of logit regression for panel data with random effects are illustrated in Table 2 as follows:

Table 2. Results of logit regression

Variables	*Coef.*	*Std. err.*	*Z*	*P > |z|*	*[95% conf. interval]*	
bsize	1.286984	0.654729	1.97**	0.049	0.003737	2.570230
bindep	25.398740	9.454926	2.69***	0.007	6.867424	43.930050
wboard	25.521800	9.626343	2.65***	0.008	6.654516	44.389090
waudcom	1.449162	6.390054	0.23	0.821	-11.075110	13.973440
famown	-26.91129	4.119335	-6.53***	0.000	-34.985040	-18.837550
instown	3.154020	4.602628	0.69	0.493	-5.866966	12.175010
govown	-5.028224	7.006906	-0.72	0.473	-18.761510	8.705059
fsize	0.832975	1.049141	0.79	0.427	-1.223303	2.889255
effic	15.91726	2.641096	6.03***	0.000	10.740810	21.09372
prof	-47.212200	19.293930	-2.45**	0.014	-85.027610	-9.396794
liq	0.229411	0.657793	0.35	0.727	-1.059840	1.518662
Constant	-45.997290	20.565140	-2.24**	0.025	-86.304220	-5.690362
sigma_u	15.874340	5.313337			8.237357	30.591670
Rho	0.9871129	0.008515			0.953757	0.996496
Likelihood-ratio test of rho = 0: chibar2 (01) = 71.60				Prob >= chibar2 = 0.000		
Number of obs. = 180 Number of groups = 36				Wald chi2 (11) = 87.20 Prob > chi2 = 0.0000		

*Note: *** = significant at 0.01, ** = significant at 0.05, * = significant at 0.10 level of significance.*
Source: Authors' estimates.

Panel logit regression analysis suggests that corporate governance affects auditor choice in Greece. More specifically the selection of a Big Four audit firm is significantly positively associated at the 1% level of significance with board independence. Despite ownership concentration in Greece, which may influence the independence of board members, the results indicate that independent members of the board are more likely to request higher-quality of external audits. Similarly, to previous studies, the presence of women on the board is significantly positively associated at the 1% level with the choice of higher quality audit firms. Verifying our hypotheses, board size is positively and significantly associated at a 5% level with the assignment of a Big Four audit firm. Finally, a negative association is found with family ownership also at the 1% level.

The above results indicate that firms with larger boards, with more independent members and women in their boards' composition, are more likely to appoint a Big Four audit firm. On the other hand, firms with high family ownership are less likely to engage a Big Four audit firm. As far as the control variables are concerned, the decision to appoint a Big Four audit firm is significantly positively associated with firm efficiency (asset turnover) at the 1% level of significance and negatively associated with profitability (ROA) at the 5% level of significance. Contrary to our expectations, institutional ownership, government ownership, firm size, and liquidity are not found to exert a significant influence on the auditor selection process.

5. DISCUSSION

The selection of "external auditors", as a natural person or the audit firm responsible for carrying out the audit of the annual financial statements is one of the most important and complex decisions that a company must make that directly affects the quality of financial reports and corporate credibility. Although many studies have been conducted in this field there are several aspects that have not been adequately researched, especially in family firms (Hsu et al., 2018). This study aimed to provide insights on the factors that affect auditor choice decisions in an emerging European market dominated by family firms and weak corporate governance.

The findings of the study highlight the role that corporate governance plays in auditor selection and meet our expectations that stem from agency theory. The negative relationship of auditor choice with family ownership supports the argument that family firms in the absence of strong external shareholders may be unwilling to appoint high-quality auditors (Khan et al., 2015; Habib et al., 2019). Greek firms with high family ownership, tend to prefer low audit quality firms, which results in high information asymmetry between controlling family ownership and minority shareholders and third parties.

Board independence on the other hand is positively associated with auditor choice suggesting that greater board independence mitigates family influence in family-controlled firms (Matonti et al., 2016). This finding strengthens the argument that independent directors prefer well-known and reputable auditors to reduce legal risk and protect their reputation, enriching the findings of prior research (Bhattacharya & Banerjee, 2020).

Finally, the positive association of the presence of women on the board of directors with auditor choice supports the argument that firms with female directors are more likely to demand higher audit quality and engage industry specialist auditors (Lai et al., 2017). This appears to verify the findings of prior studies that firms with gender-diverse boards are more likely to appoint a Big Four audit (Lai et al.,

2017). Moreover, it supports the argument that female directors are more risk averse than men, making thus, more conservative decisions (Zalata et al., 2019), that expand to financial reporting practices and auditor selection.

6. CONCLUSION

External auditors have a crucial role in ensuring financial reporting quality and protecting the interests of all related to the company parties, providing benefits both to audited firms as well as to their stakeholders. The decisive role of external auditing in the efficient operation of capital markets makes the selection of the type of auditor a complicated issue affected by corporate characteristics, auditor attributes, and the auditing environment. Apart from the above, other factors relating to cost or benefit, or corporate governance, further complicate the decision-making process and attract an increasing research interest. On a theoretical basis agency and signalling theories have been proposed for the interpretation of the auditor selection process.

The empirical findings of the study underline the significance of board characteristics on auditor choice and confirm our expectations that stem from agency and signalling theory. After controlling for firm-specific characteristics, results show that board size, board independence, and the presence of women on the board of directors increase the likelihood for a company to choose a Big Four audit firm. Family ownership is also statistically significant but decreases the possibility to select a Big Four audit firm. Overall, the findings of the study suggest that board characteristics and ownership structure play an important role in auditor choice and consequently in audit quality.

The findings of the study have significant implications for regulators, academics, investors, and in general, for all users of financial statements. The results highlight the significance of laws requiring the presence of independent members on the board of directors and the representation of women in its composition. In addition, it brings to attention the potential risks that may arise from family ownership as family firms appear to prefer lower-quality auditors and highlights their corporate governance weaknesses and the need to protect the interests of minority shareholders. Finally, the study suggests that more efficient firms are more likely to choose Big Four auditors and, therefore, underlines the need for an increased monitoring of less efficient or financially distressed firms.

There are some limitations that must be accounted for when interpreting the results. First, although the study has selected the firms that comprise large and mid-cap indexes of the ASE, conclusions are derived from a relatively small sample. Second, the study is focused on the characteristics of the board of directors and ownership without examining other board attributes that could potentially affect auditor choices like experience, tenure, age, remuneration, or duality of the president and the chief executive officer (CEO). The same applies to ownership as managerial ownership was not taken into consideration.

Future research on auditor choice could expand to the potential association of the auditor selection process with auditor switching patterns. Moreover, the impact of audit fees as well as the opinion issued by the auditor could be examined. Apart from the above, future research could also examine the function and specific characteristics of the audit committee (frequency of meetings, experience of audit committee members, tenure, etc.).

REFERENCES

1. Alfraih, M. M. (2017). Choosing an external auditor: Does the composition of boards of directors matter? *International Journal of Law and Management, 59*(3), 394–412. https://doi.org/10.1108/IJLMA-03-2016-0032
2. Alhababsah, S., & Yekini, S. (2021). Audit committee and audit quality: An empirical analysis considering industry expertise, legal expertise and gender diversity. *Journal of International Accounting, Auditing and Taxation, 42*, Article 100377. https://doi.org/10.1016/j.intaccaudtax.2021.100377
3. Al-Matari, E. M., & Alosaimi, M. H. (2022). The role of women on board of directors and firm performance: Evidence from Saudi Arabia financial market. *Corporate Governance and Organizational Behavior Review, 6*(3), 44–55. https://doi.org/10.22495/cgobrv6i3p4
4. Almer, E. D., Philbrick, D. R., & Ruplei, K. H. (2014). What drives auditor selection? *Current Issues in Auditing, 8*(1), A26–A42. https://doi.org/10.2308/ciia-50779
5. Azizkhani, M., Hossain, S., & Nguen, M. (2023). Effects of audit committee chair characteristics on auditor choice, audit fee and audit quality. *Accounting & Finance, 63*(3), 3675–3707. https://doi.org/10.1111/acfi.13058
6. Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review, 71*(4), 443–465. http://www.jstor.org/stable/248566
7. Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research, 15*(1), 1–24. https://doi.org/10.1111/j.1911-3846.1998.tb00547.x
8. Behbahaninia, P. S. (2022). Agency costs and auditor choice: Moderating role of board's expertise and internal control. *Journal of Financial Reporting and Accounting*. Advance online publication. https://doi.org/10.1108/JFRA-11-2021-0406
9. Ben-Hassoun, A., Aloui, C., & Ben-Nasr, H. (2018). Demand for audit quality in newly privatized firms in MENA region: Role of internal corporate governance mechanisms audit. *Research in International Business and Finance, 45*, 334–348. https://doi.org/10.1016/j.ribaf.2017.07.167
10. Bewley, K., Chung, J., & McCracken, S. (2008). An examination of auditor choice using evidence from Andersen's demise. *International Journal of Auditing, 12*(2), 89–110. https://doi.org/10.1111/j.1099-1123.2008.00373.x
11. Bhattacharya, A., & Banerjee, P. (2020). An empirical analysis of audit pricing and auditor selection: Evidence from India. *Managerial Auditing Journal, 35*(1), 111–151. https://doi.org/10.1108/MAJ-11-2018-2101

12. Bill, K. L., Cobabe, M., Pittman, J., & Stein, S. E. (2020). To share or not to share: The importance of peer firm similarity to auditor choice. *Accounting, Organizations and Society, 83*, Article 101115. https://doi.org/10.1016/j.aos.2020.101115
13. Carcello, J. V., & Neal, T. L. (2000). Audit committee composition and auditor reporting. *The Accounting Review, 75*(4), 453–467. https://doi.org/10.2308/accr.2000.75.4.453
14. Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley, R. A., Jr. (2002). Board characteristics and audit fees. *Contemporary Accounting Research, 19*(3), 365–384. https://doi.org/10.1506/CHWK-GMQ0-MLKE-K03V
15. Chaganti, R. S., Mahajan, V., & Sharma, S. (1985). Corporate board size, composition and corporate failures in retailing industry. *Journal of Management Studies, 22*(4), 400–417. https://doi.org/10.1111/j.1467-6486.1985.tb00005.x
16. Chen, K. Y., & Zhou, J. (2007). Audit committee, board characteristics, and auditor switch decisions by Andersen's clients. *Contemporary Accounting Research, 24*(4), 1085–1117. https://doi.org/10.1506/car.24.4.2
17. Cheng, C.-L., Hsu, C.-S., & Kung, F.-H. (2015). Political connections, managerial incentives and auditor choice: Evidence from China. *Pacific Accounting Review, 27*(4), 441–465. https://doi.org/10.1108/PAR-10-2013-0096
18. Choi, J.-H., & Wong, T. J. (2007). Auditors' governance functions and legal environments: An international investigation. *Contemporary Accounting Research, 24*(1), 13–46. https://doi.org/10.1506/X478-1075-4PW5-1501
19. Chou, J., Zaiats, N., & Zhang, B. (2014). Does auditor choice matter to foreign investors? Evidence from foreign mutual funds worldwide. *Journal of Banking & Finance, 46*, 1–20. https://doi.org/10.1016/j.jbankfin.2014.04.005
20. Chung, D. Y., & Lindsay, W. D. (1988). The pricing of audit services: The Canadian perspective. *Contemporary Accounting Research, 5*(1), 19–46. https://doi.org/10.1111/j.1911-3846.1988.tb00693.x
21. Chytis, E., Tasios, S., Georgopoulos, I., & Hortis, Z. (2019). The relationship between tax avoidance, company characteristics and corporate governance: Evidence from Greece. *Corporate Ownership & Control, 16*(4), 77–86. https://doi.org/10.22495/cocv16i4art7
22. Corten, M., Steijvers, T., & Lybaert, N. (2018). Auditor choice in private firms: A stakeholder's perspective. *Managerial Auditing Journal, 33*(2), 146–170. https://doi.org/10.1108/MAJ-03-2017-1535
23. Corten, M., Steijvers, T., Lybaert, N., & Coeckelbergs, C. (2021). The influence of the CEO on auditor choice in private firms: An interplay of willingness and ability. *Sustainability, 13*(12), Article 6710. https://doi.org/10.3390/su13126710
24. De Carvalho Pereira, V., Pereira, A. G., & de Oliveira, J. S. C. (2023). Influence of ownership structure on choice of Big Four independent auditors. *International Journal of Disclosure and Governance, 20*, 316–326. https://doi.org/10.1057/s41310-023-00175-7
25. DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics, 3*(3), 183–199. https://doi.org/10.1016/0165-4101(81)90002-1
26. DeAngelo, L. E. (1982). Mandated successful efforts and auditor choice. *Journal of Accounting and Economics, 4*(3), 171–203. https://doi.org/10.1016/0165-4101(82)90008-8
27. Dechow, P. M., Sloan, R. G., & Sweeny, A. P. (1995). Detecting earnings management. *The Accounting Review, 70*(2), 193–225. https://www.jstor.org/stable/248303
28. Defond, M. L., & Jiambalvo, J. (1993). Factors related to auditor-client disagreements over income-increasing accounting methods. *Contemporary Accounting Research, 9*(2), 415–431. https://doi.org/10.1111/j.1911-3846.1993.tb00889.x
29. DeFond, M. L., Francis, J. R., & Wong, T. J. (2000). Auditor industry specialization and market segmentation: Evidence from Hong Kong. *AUDITING: A Journal of Practice & Theory, 19*(1), 49–66. https://doi.org/10.2308/aud.2000.19.1.49
30. Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 amending Directive 2007/36/EC as regards the encouragement of long-term shareholder engagement (text with EEA relevance). (2017). *Official Journal of the European Union, L 132*, 1–25. https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=CELEX%3A32017L0828
31. Directive 2014/56/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts (text with EEA relevance). (2014). *Official Journal of the European Union, L 158*, 196–226. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0056
32. El-Dyasty, M. M., & Elamer, A. A. (2021). The effect of ownership structure and board characteristics on auditor choice: Evidence from Egypt. *International Journal of Disclosure & Governance 18*, 362–377. https://doi.org/10.1057/s41310-021-00118-0
33. European Institute for Gender Equality (EIGE). (2022). *Gender equality index.* https://eige.europa.eu/gender-equality-index/2022/domain/power/EL
34. Fernadez-Mendez, G., & Pathan, S. T. (2023). Female directors, audit effort and financial reporting quality. *Spanish Journal of Finance and Accounting, 52*(1), 125–166. https://doi.org/10.1080/02102412.2021.2009298
35. Francis, J. R., Michas, P. N., & Seavey, S. E. (2013). Does audit market concentration harm the quality of audited earnings? Evidence from audit markets in 42 countries. *Contemporary Accounting Research, 30*(1), 325–355. https://doi.org/10.1111/j.1911-3846.2012.01156.x
36. Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal, 15*(3), 241–250. https://doi.org/10.1002/smj.4250150305
37. Guedhami, O., Pittman, J. A., & Saffar, W. (2009). Auditor choice in privatized firms: Empirical evidence on the role of state and foreign owners. *Journal of Accounting and Economics, 48*(2–3), 151–171. https://doi.org/10.1016/j.jacceco.2009.08.003
38. Guizani, M., & Abdalkrim, G. (2022). Ownership structure, independence and auditor choice: Evidence from GCC countries. *Journal of Accounting in Emerging Economies, 12*(1), 127–149. https://doi.org/10.1108/JAEE-06-2020-0145
39. Gujarati, D. N. (2004). *Basic econometrics* (4th ed.). McGraw Hill. http://zalamsyah.staff.unja.ac.id/wp-content/uploads/sites/286/2019/11/7-Basic-Econometrics-4th-Ed.-Gujarati.pdf

40. Gul, F. A., Srinidhi, B., & Tsui, J. S. L. (2012). *Board gender diversity, auditor quality choice and audit fees.* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2041161
41. Habib, A., Wu, J., Bhuiyan, M. B. U., & Sun, X. (2019). Determinants of auditor choice: Review of the empirical literature. *International Journal of Auditing, 23*(2), 308–335. https://doi.org/10.1111/ijau.12163
42. Han, S., Kang, T., & Rees, L. (2013). The association between institutional ownership and audit properties. *Asia-Pacific Journal of Accounting & Economics, 20*(2), 199–222. https://doi.org/10.1080/16081625.2012.748449
43. Hellenic Corporate Governance Council. (2021). *Hellenic Corporate Governance Code 2021.* https://www.esed.org.gr/en/code-listed
44. Houqe, M. N., van Zijl, T., Dunstan, K., & Karim, A. K. M. W. (2015). Corporate ethics and auditor choice — International evidence. *Research in Accounting Regulation, 27*(1), 57–65. https://doi.org/10.1016/j.racreg.2015.03.007
45. Hsu, H.-H., Lin, C.-H., & Tsao, S.-M. (2018). Founding family and auditor choice: Evidence from Taiwan. *Corporate Governance: An International Review, 26*(2), 118–142. https://doi.org/10.1111/corg.12226
46. Hsu, W.-Y., Troy, C., & Huang, Y. (2015). The determinants of auditor choice and audit pricing among property-liability insurers. *Journal of Accounting and Public Policy, 34*(1), 95–124. https://doi.org/10.1016/j.jaccpubpol.2014.09.001
47. Ianniello, G., Mainardi, M., & Rossi, F. (2015). Family control, corporate governance, and auditor choice: Evidence from Italy. *International Journal of Accounting and Finance, 5*(2), 99–116. https://doi.org/10.1504/IJAF.2015.071836
48. Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance, 48*(3), 831–880. https://doi.org/10.1111/j.1540-6261.1993.tb04022.x
49. Kacanski, S., Lusher, D., & Wang, P. (2021), Auditor selection process: An interplay of demand mechanisms — A multilevel framework. *European Accounting Review, 30*(1), 115–142. https://doi.org/10.1080/09638180.2020.1740755
50. Khan, A., Muttakin, M. B., & Siddiqui, J. (2015). Audit fees, auditor choice and stakeholder influence: Evidence from a family-firm dominated economy. *The British Accounting Review, 47*(3), 304–320. https://doi.org/10.1016/j.bar.2015.03.002
51. Kim, J.-B., Pevzner, M., & Xin, X. (2019). Foreign institutional ownership and auditor choice: Evidence from worldwide institutional ownership. *Journal of International Business Studies, 50*, 83–110. https://doi.org/10.1057/s41267-018-0160-x
52. Knechel, W. R., Niemi, L., & Sundgren, S. (2008). Determinants of auditor choice: Evidence from a small client market. *International Journal of Auditing, 12*(1), 65–88. https://doi.org/10.1111/j.1099-1123.2008.00370.x
53. Kostyuk, A., Kostyuk, H., & Shcherbak, A. (2016). Board of directors and corporate sustainability — Outlining the effective profile of the board. *Risk Governance and Control: Financial Markets & Institutions, 6*(3), 80–88. https://doi.org/10.22495/rcgv6i3art12
54. Lai, K. M. Y., Srinidhi, B., Gul, F. A., & Tsui, J. S. L. (2017). Board gender diversity, auditor fees, and auditor choice. *Contemporary Accounting Research, 34*(3), 1681–1714. https://doi.org/10.1111/1911-3846.12313
55. Laurens, S. (2022). Gender diversity and the stock price [Special issue]. *Corporate & Business Strategy Review, 3*(2), 273–280. https://doi.org/10.22495/cbsrv3i2siart8
56. Lazarides, T. G., Drimpetas, E., & Koufopoulos, D. N. (2009). *Ownership structure in Greece: Determinants and implications on corporate governance.* https://doi.org/10.2139/ssrn.1348508
57. Lin, Z. J., & Liu, M. (2009). The impact of corporate governance on auditor choice: Evidence from China. *Journal of International Accounting, Auditing and Taxation, 18*(1), 44–59. https://doi.org/10.1016/j.intaccaudtax.2008.12.005
58. Matonti, G., Tucker, J., & Tommasetti, A. (2016). Auditor choice in Italian non-listed firms. *Managerial Auditing Journal, 31*(4–5), 458–491. https://doi.org/10.1108/MAJ-07-2015-1215
59. Mavridis, D. G. (2002). Marital status aspects disclosed in Greek interim reports. *Equal Opportunities International, 21*(8), 1–17. https://doi.org/10.1108/02610150210787235
60. Nasdaq. (n.d.). *Institutional investors.* https://www.nasdaq.com/glossary/i/institutional-investors
61. Nerantzidis, M. (2015). Measuring the quality of the "comply or explain" approach: Evidence from the implementation of the Greek corporate governance code. *Managerial Auditing Journal, 30*(4–5), 373–412. https://doi.org/10.1108/MAJ-08-2014-1060
62. Oradi, J., & Izadi, J. (2020). Audit committee gender diversity and financial reporting: Evidence from restatements. *Managerial Auditing Journal, 35*(1), 67–92. https://doi.org/10.1108/MAJ-10-2018-2048
63. Purkayastha, S., Veliyath, R., & Rejie, G. (2022). Type I and type II agency conflicts in family firms: An empirical investigation. *Journal of Business Research, 153*, 285–299. https://doi.org/10.1016/j.jbusres.2022.07.054
64. Qomariyah, A. (2019). The influences of internal and external factors in auditor choice: A literature study. *Asia-Pacific Journal of Accounting & Economics, 26*(1–2), 124–130. https://doi.org/10.1080/16081625.2019.1546562
65. Quick, R., Schenk, N., Schmidt, F., & Towara, T. (2018). The impact of corporate governance on auditor choice: Evidence from Germany. *Journal of Management and Governance, 22*, 251–283. https://doi.org/10.1007/s10997-017-9386-4
66. Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds (text with EEA relevance). (2017). *Official Journal of the European Union, L 169*, 8–45. https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32017R1131
67. Regulation (EU) No. 537/2014 of the European Parliament and of the Council of 16 April 2014 on specific requirements regarding statutory audit of public-interest entities and repealing Commission Decision 2005/909/EC (text with EEA relevance). (2014). *Official Journal of the European Union*, *L 158*, 77–112. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014R0537
68. Srinidhi, B. N., He, S., & Firth, M. (2014). The effect of governance on specialist auditor choice and audit fees in U.S. family firms. *The Accounting Review, 89*(6), 2297–2329. https://doi.org/10.2308/accr-50840
69. Teoh, S. H., & Wong, T. J. (1993). Perceived auditor quality and the earnings response coefficient. *The Accounting Review, 68*(2), 346-366. https://www.jstor.org/stable/248405

70. Tsao, S.-M., Lu, H.-T., & Keung, E. C. (2017). Internationalization and auditor choice. *Journal of International Financial Management & Accounting, 28*(3), 235–273. https://doi.org/10.1111/jifm.12056
71. Vadasi, C., Tasios, S., & Bekiaris, M. (2021). Corporate governance and voluntary disclosure: The case of listed firms on the Athens Stock Exchange. *Journal of Accounting and Taxation, 13*(4), 270–282. https://doi.org/10.5897/JAT2021.0495
72. Wang, Q., Wong, T. J., & Xia, L. (2008). State ownership, institutional environment and auditor choice: Evidence from China. *Journal of Accounting and Economics, 46*(1), 112–134. https://doi.org/10.1016/j.jacceco.2008.04.001
73. Wei, X., Xiao, X., & Zhou, Y. (2015). Investor heterogeneity, auditor choice, and information signaling. *AUDITING: A Journal of Practice & Theory, 34*(3), 113–138. https://doi.org/10.2308/ajpt-50933
74. Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics, 40*(2), 185–211. https://doi.org/10.1016/0304-405X(95)00844-5
75. Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management, 15*(2), 291–334. https://doi.org/10.1177/014920638901500208
76. Zalata, A. M., Ntim, C., Aboud, A., & Gyapong, E. (2019). Female CEOs and core earnings quality: New evidence on the ethics versus risk-aversion puzzle. *Journal of Business Ethics, 160*, 515–534. https://doi.org/10.1007/s10551-018-3918-y

APPENDIX

Table A.1. Pearson correlation matrix

Variables	*audc*	*bsize*	*bindep*	*wboard*	*waudcom*	*famown*	*instown*	*govown*	*fsize*	*effic*	*prof*	*liq*
audc	1.000											
bsize	0.4885***	1.000										
bindep	0.1625**	-0.2313***	1.000									
wboard	-0.1879**	-0.2643***	0.1542**	1.000								
waudcom	-0.0622	-0.0472	0.1045	0.5439***	1.000							
famown	-0.2803***	-0.4615***	0.2434***	0.4218***	0.1449*	1.000						
instown	0.0531	0.0865	-0.1973***	-0.1689*	-0.0623	-0.4384***	1.000					
govown	0.1962***	0.2419***	-0.1099	-0.2306***	-0.1840**	-0.3672***	-0.1013	1.000				
fsize	0.3491***	0.6006***	-0.0929	-0.2212***	0.0272	-0.4253***	0.0729	0.1615**	1.000			
effic	0.2463***	-0.0392	-0.0205	-0.1088	0.1951***	0.1476**	-0.0715	-0.1924***	0.0884	1.000		
prof	0.1056	-0.0789	0.0664	0.0024	0.1456*	0.0550	-0.1065	0.0686	-0.0727	0.4094***	1.000	
liq	-0.0148	-0.0491	-0.0867	-0.1133	0.0137	-0.2292**	-0.1017	0.5761***	-0.1552**	-0.1409*	0.2992***	1.000

*Note: ***, **, * statistically significant at the 0.01, 0.05 and 0.10 level respectively (two-tailed).*
Source: Authors' estimates.