THE COMPETENCE OF AUDIT COMMITTEE MEMBERS CONCERNING THE EXTERNAL AUDIT ETHICS

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Abstract

This study investigates the impact of audit committee members' competence on the ethical aspects of external audits and its influence on the audit quality of Public Interest Entities (PIEs). Using a mixed-method approach, including surveys with respondents at audit firms and PIEs in Europe and semi-structured interviews with participants at PIEs in Europe, the findings highlight the importance of pre-appointment training for audit committee members concerning external audit ethics. This pre-appointment training would enable audit committee members of PIEs to evaluate whether external auditors and audit firms have implemented appropriate safeguards and mitigations to ensure the ethical audit practices of PIEs. The study recommends stringent global regulatory provisions mandating specific guidelines for PIE audit committees for assessing external auditor independence and minimizing potential conflicts of interest to preserve the audit quality of PIEs.

Implications for Central European audience: For the Central European audience, the study advocates for mandatory pre-appointment training of prospective audit committee members and restrictive regulatory mechanisms to enhance audit committee members' competence concerning the evaluation of external auditor's independence and minimizing potential conflicts of interest for ensuring ethical audit practices and preserving audit quality of PIEs.

Keywords: audit committee; external auditor's independence; conflicts of interest; PIEs; threats to the external auditor's independence **JEL Classification**: M42. M48

Introduction

In the past decade, the focus of the professional community has increasingly turned toward the business activities of PIEs, mainly due to their significant impact on macroeconomic stability (Fontaine et al., 2013). Their financial statements, which reflect the economic and financial activities of the general public, have undergone extensive scrutiny and analysis (Gibson, 2008; Iliev, 2018). Historical experience has shown that financial reporting scandals involving PIEs have had a profound global impact on the audit profession, leading to substantial changes in legislation governing audit services (Leidner & Lenz, 2017; Centre for Financial Reporting Reform, 2015; Tara, 2011; Zeman & Lentner, 2018). Consequently, numerous financial reporting reforms have been implemented to restore public trust in the financial statements of PIEs. At the European Parliament and of the Council (European Parliament, 2006), Directive 2014/56/EU of the European Parliament and of the Council (European Parliament, 2014a), and Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b), collectively forming the EU Acquis Communautaire for Statutory Audit.

According to the EU Acquis Communautaire for Statutory Audit, PIEs encompass listed entities, credit institutions, and insurance and reinsurance undertakings. However, national authorities in the EU states may consider other entities to be of "public interest" under national regulations. In this context, Lubenchenko et al. (2020) assert that public interest is directly related to the economic benefits derived from PIEs' financial statements. Additionally, in the EU, the reporting requirements of PIEs' auditors are regulated by Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b).

In an effort to enhance the auditor's independence and improve the financial reporting quality of PIEs, the EU introduced the audit committee as an integral part of PIEs' internal organization. The audit committee is expected to act independently from the management and those responsible for the governance of the PIE while playing a crucial role in the financial reporting system of the organization.

This study aims to investigate whether the audit committee can effectively uphold audit quality to ensure the financial reporting veracity of PIEs. The study examines the audit committee's mandate to nominate the audit firm to the shareholders' assembly for selection. Auditors and audit firms, on one hand, must assure the audit committee that potential threats to the auditor's independence and conflicts of interest are minimized to maintain audit quality. On the other hand, audit committee members should assess the auditor's independence and potential conflicts of interest, evaluating whether auditors and audit firms have implemented appropriate safeguards and mitigations to reduce these threats to an acceptably low level. Furthermore, audit committee members should continuously monitor the audit process to safeguard audit quality and preserve the financial reporting veracity of PIEs.

To achieve its objectives, this study adopts a mixed-methods research approach, utilizing survey data from respondents in audit firms and PIEs, as well as conducting semi-structured interviews with participants at purposively selected PIEs in Europe. The study's structure is detailed below. The ultimate study conclusions are drawn based on conducted trangulation of gathered insights from the extent literature and obtained empirical results from conducted surveys and semi-structured interviews. This paper strives to connect the audit committee's

mandate concerning the external auditor's independence with the competencies of its members regarding audit ethics. Additionally, the study explores the regulations of the EU and professional audit standards regarding the qualifications of audit committee members to effectively fulfill their mandate, ensuring the external auditor's independence and preserving the financial reporting quality of PIEs.

One notable and unique contribution of this study is its emphasis on the audit committee's role in maintaining audit quality of PIEs through its mandate related to the external audit ethics.

The study concludes that national authorities should establish regulations to deter PIEs and their governance from engaging in activities that could compromise the external auditor's independence and create conflicts of interest. Furthermore, audit committee members should receive training on external audit ethics before their appointment to identify potential threats to the external auditor's independence and conflicts of interest. They should be competent to assess whether external auditors and audit firms have implemented appropriate safeguards and mitigations to maintain audit quality. This responsibility of the audit committee should be carried out both prior to submitting the selection nomination of the audit firm to the shareholder's assembly and continuously throughout the audit process to preserve audit quality.

The study is organized into six headings, systematically presenting the research process and drawing conclusions based on the study results. The introduction provides essential information on this study, including the study's background, contributions, research methodology, and key findings. The literature review heading presents relevant findings from previous studies, with secondary sources listed in the references at the end of the article. The methodological heading explains the research approach employed, while the empirical results are presented in the third heading. The study's limitations and delineations are explained in its fourth heading. The fifth heading provides the areas for further studies and the study ultimately concludes with its last heading, summarizing its findings.

1 Literature review

Harber (2018) has emphasized that audit committees play a crucial role in monitoring auditors and must review all audit procedures to ensure compliance with ethical and independence requirements. Furthermore, Harber's research underscores the importance of audit committee members being well-versed in accounting and auditing standards. They should also periodically review the financial records of PIEs.

Cohen and Wright (2010) contend that effective audit committees can significantly enhance the quality of financial reporting by the PIE. Marx (2009a) supports this notion, highlighting that for audit committees to bring value, they must be properly constituted, operate effectively, and ensure their role is clearly understood by all stakeholders.

Al-Baidhani (2014) has found that well-functioning audit committees offer numerous advantages in the financial reporting system of entities. These advantages include improving the quality of financial reporting, establishing an atmosphere of discipline and control to reduce the risk of fraud, assisting those charged with governance and managers in making

independent decisions, aiding finance directors in resolving significant financial reporting issues, serving as a communication channel with the audit firm, providing a framework to strengthen the external auditor's independence, enhancing the role of internal audit, and increasing confidence in PIEs' financial statements. Notably, this study posits that audit committees provide the initial independent point for audit engagements of PIEs.

However, it is essential to acknowledge potential drawbacks. Mohd Kharuddin (2016) argues that audit committees can increase the costs for PIEs. Other disadvantages include difficulties in appointing independent members and the possibility that formalized reporting procedures may influence the auditor's professional judgments (Al-Baidhani, 2014).

It is critical to recognize that, despite their advantages and disadvantages, audit committees do not have executive authority (Mohd Kharuddin, 2016; Al-Baidhani, 2014). Fan (2016) asserts that audit committees primarily act in advisory roles, with their decisions not directly impacting the day-to-day operations of PIEs. Responsibility for the preparation of financial statements remains with the PIE's management or those charged with governance.

Importantly, neither the EU Acquis Communautaire for Statutory Audit nor the International Standards on Auditing (ISAs) offer a concise definition of the audit committee. The EU directives mandate that all PIEs establish an audit committee or a functionally equivalent body responsible for tasks performed by an audit committee. This body can be independent or part of the entity's administrative or supervisory structure. According to Article 39 of the EU Acquis Communautaire for Statutory Audit, Its members should possess sector-relevant competence, i.e. banking, insurance, and capital market sector (European Parliament, 2006; European Parliament, 2014a).

ISA 260 addresses communication between external auditors and audit committees, with specific requirements for reporting. Auditors must communicate their responsibilities in the financial audit, the planned scope and timing of the audit, significant audit findings (including qualitative aspects of accounting policies and significant difficulties encountered), and their independence and ethical compliance during the audit. Additionally, auditors must report any significant internal control deficiencies, actual or suspected non-compliance with regulations, valuation methods, the scope of consolidation, and other relevant information (ISA 260).

The audit committee is a subset of the PIE's board, responsible for overseeing internal and external auditors (Accounting Tools, 2022). Prasad (2017) emphasizes that audit committees should be constituted as part of a specified entity's board, such as a PIE.

The International Standards of Supreme Audit Institutions (ISSAI) broadly address the functions of audit committees. In accordance with ISSAI 9100 that, audit committees should focus on financial reporting, risk management, and compliance with legal, ethical, and regulatory requirements. ISSAI 9100 further elaborates that the audit committee assists the board in overseeing the entity's financial statements, the qualifications and independence of external auditors, internal and external audit performance, and executive compensation (in the absence of a remuneration committee).

The Institute of Internal Auditors (IIA) provides a more detailed framework for audit committees' functions, allowing them to conduct or authorize investigations on various matters, including external auditors appointment, dispute resolution between auditors and

management, pre-approval of auditing and non-auditing services, ensuring the external auditor's independence, and investigating financial reporting issues (IIA, 2022).

Article 39, Paragraph 6 of the EU Acquis Communautaire for Statutory Audit (European Parliemant, 2006; European Parliament, 2014a) outlines specific functions of the audit committee, including informing management of internal and external audit outcomes, monitoring the financial reporting process, evaluating the effectiveness of the internal control system, supervising external audits, reviewing and ensuring the independence of external auditors, and proposing external auditors to the supervisory board, shareholders, or owners.

In conclusion, audit committees play a pivotal role in the financial reporting system of PIEs. They help ensure the quality of financial reporting of PIEs and maintain the independence of external auditors. The reporting requirements of external auditors towards the audit committee are essential in this context. Understanding these functions and responsibilities is critical for stakeholders in the auditing process and for the overall transparency and reliability of financial reporting of PIEs.

The external auditor's independence is widely regarded as the most critical factor in ensuring audit quality (Marx, 2009c; Tepalagul & Lin, 2015). Extent researches suggest that the greater the independence of auditors, the higher the quality of the audit (Fiolleau et al., 2013; Marx, 2009c; Bedard & Johnstone, 2010). Threats to the auditor's independence can emerge from various factors related to why auditees choose particular auditors or audit firms. The literature highlights numerous reasons behind an auditee's selection of auditors or audit firms, encompassing factors such as audit fees, auditee size, and auditor/audit firm attributes (Ouertani & Ayadi, 2012; Fontaine et al., 2013; Oddy, 2017).

During the initial audit phase, auditors and audit firms are required to conduct appropriate audit procedures to mitigate independence threats and potential conflicts of interest to an acceptably low level before accepting or re-accepting a specific audit engagement (Marx, 2009a; Marx, 2009b; Ghafran & O'Sullivan, 2013; Chen & Zhou, 2007). Maintaining the external auditor's independence remains an ongoing requirement during the audit itself (Corbella et al., 2015).

For PIEs, it is imperative to continually assess and monitor the independence of external auditors to ensure audit quality during the audit process (Hay, 2015). As per Article 22 of the EU Acquis Communautaire for Statutory Audit (European Parliament, 2006; European Parliament, 2014a), this responsibility primarily falls on the audit committee. The audit committee is mandated to evaluate the external auditor's independence before proposing their nomination to the shareholder's assembly of the PIE. Furthermore, according to Article 22 of the EU Acquis Communautaire for Statutory Audit (European Parliament, 2006; European Parliament, 2014a), the audit committee holds the authority to assess potential conflicts of interest involving auditors and audit firms, taking necessary measures to minimize the risk of conflicts of interest to an acceptably low level before the nomination process. However, in cases where auditees select their auditors or audit firms through public procurement, the initial assessment of the external auditor's independence is the responsibility of non-executive governance members (Al-Nawaiseh, 2015).

The International Federation of Accountants (IFAC) in its Code of Ethics outlines various situations that could pose threats to the external auditor's independence, categorized into five groups: self-interest, self-review, advocacy, family and close relationships, and intimidation. To mitigate these threats, auditors are required to apply appropriate safeguards, which can be professional, working, or personal in nature, based on the specific threat (IFAC's Code of Ethics, 2018).

Before accepting or re-accepting an audit engagement, auditors must diligently identify and address all potential conflicts of interest and implement appropriate mitigations (Marx, 2009a; Marx, 2009b; Ghafran & O'Sullivan, 2013; Chen & Zhou, 2007). IFAC, in its Code of Ethics, recognizes two types of conflicts of interest: conflicts between auditors and auditees and conflicts between auditees. The EU Acquis Communautaire for Statutory Audit introduces provisions to regulate the external audit conduct when conflicts of interest exist between auditors, audit firms, and auditees. However, the reviewed literature indicates that this regulatory framework lacks provisions to govern the external audit conduct in cases where potential conflicts of interest arise among auditees. Additionally, the EU Acquis Communautaire for Statutory Audit and the ISAs do not provide specific guidance to audit committees on how to address and resolve identified conflicts of interest.

In accordance with Article 22 of the EU Acquis Communautaire for Statutory Audit (European Parliament, 2006; European Parliament, 2014a), any situation that could give rise to a possible conflict of interest must be addressed by external auditors in consultation with the audit committee of the PIE. It is incumbent upon the audit committee to detect such situations and resolve them in coordination with external auditors and the audit firm before submitting the nomination for election to the shareholder's assembly of the PIE (AI-Baidhani, 2014). Furthermore, Harber (2018) posits that the audit committee is tasked with ongoing monitoring of the audit process to identify potential situations that might lead to conflicts of interest and take necessary actions to resolve them.

In 2014, IFAC released an article titled "Making Financial Reporting Better: Strengthening the Financial Reporting Supply Chain", where Choudhury (2014) posed a fundamental question: "Is it sufficient to wait until the next crisis hits and ask only: where were the auditors?" Leka (2019) emphasizes the importance of assessing the competence of audit committee members, particularly their expertise in financial reporting, governance arrangements, and adherence to ethical codes.

To determine whether audit committees should be considered an integral part of PIEs' governance, this study focuses on external auditors' reporting requirements for financial audits of PIEs. This emphasis is driven by Article 16 of the Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b), which empowers audit committees in the selection of external auditors. The aim is to create greater "distance" between external auditors and the management or those charged with governance of PIEs. Consequently, audit committees are entrusted with the responsibility for nominating external auditors and audit firms based on their compliance with relevant ethical requirements, ensuring the external auditor's independence, and safeguarding audit quality of PIEs.

ISA 260 requires auditors to view their reporting requirements to audit committees as an integral aspect of their interactions with those charged with governance. Specifically, ISA

260 mandates that communications between external auditors and audit committees encompass various aspects, including:

- The external auditor's responsibilities regarding the financial audit, including the audit opinion and the management's responsibilities for the presented financial statements;
- Information regarding the planned scope and timing of the audit;
- Disclosure of significant findings from the audit, such as qualitative aspects of accounting policies, practices, estimations, significant challenges encountered during the audit, significant matters discussed with the management, written representations, circumstances affecting the form and content of the independent auditor's report, and applied professional judgments; and
- A declaration of the external auditor's independence, confirming compliance with relevant ethical and independence requirements. This should include an explanation of the safeguards and mitigations applied to meet these ethical and independence requirements.

Additionally, ISA 260 dictates that all this information and data should be conveyed in the management letter.

Table 1 below presents a comparison of the reporting requirements of external auditors towards the audit committee, contrasting ISA 260 with the EU Acquis Communautaire for Statutory Audit.

ISA 260	EU Acquis Communautaire for Statutory Audit		
	 Declaration of independence requirements for conducting the audit and applied measures to meet these requirements; 		
	2. Revealing the audit partner;		
External auditor's responsibilities in relation to the financial audit:	 In the case of a joint audit – clear identification of the separate professional tasks and duties conducted during the audit; 		
Responsibility of external auditors for the audit opinion; and	4. Notification of the frequency and dates of meetings with the audit committee during the audit;		
Responsibility of the management for the presented financial statements.	 Description of the applied audit methodology; 		
presenteu financial statements.	 Disclosure of the determined materiality level; 		
	 Explaining the applied professional judgments; 		
	 Reporting on the detected significant internal control deficiencies; 		

Table 1 | Reporting Requirements of External Auditors towards the Audit Committee - ISA 260 vs EU Acquis Communautaire for Statutory Audit

Table 1 (continued) | Reporting Requirements of External Auditors towards the Audit Committee - ISA 260 vs EU Acquis Communautaire for Statutory Audit

ISA 260	EU Acquis Communautaire for Statutory Audit
	9. Reporting on the actual or suspected non- compliance with the applicable regulations of the PIE;
	10. Reporting on the applied valuation methods;
The external auditor's independence and ethical requirements:	11. In the case of an audit on consolidated financial statements, reporting on the scope of consolidation and the exclusion criteria that was
independence requirements were met during the audit; and	applied; 12. Reporting on whether a non-EU-member-
2. The applied safeguards and mitigations for meeting all ethical and independence	state auditor was involved in the audit, and to what extent;
requirements.	13. Indicating whether all requested data and information were obtained during the audit; and
	14. Reporting on any significant difficulties encountered during the audit, any significant matters that were discussed with the management, and any significant matters regarding the applied professional judgments.

Source: adapted based on ISA 260; Directive 2006/43/EC of the European Parliament and of the Council; Directive 2014/56/EU of the European Parliament and of the Council; Regulation (EU) No. 537 of the European Parliament and of the Council (2014)

Table 1 above effectively highlights the distinctions between ISA 260 and the EU Acquis Communautaire for Statutory Audit regarding the roles and responsibilities of audit committees. While ISA 260 views audit committees as an integral part of those charged with governance, responsible for the financial reporting quality of PIEs, the EU Acquis Communautaire for Statutory Audit considers them as separate and independent bodies of PIEs. These bodies are entrusted with the nomination of external auditors and audit firms to ensure the external auditor's independence. Furthermore, Article 11 of Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b) requires external auditors to submit an additional report to the audit committee, encompassing detailed information similar to the components outlined in Table 1 above. Given the pivotal role of the external auditor's independence in impacting audit guality (Marx, 2009c; Tepalagul & Lin, 2015), it is essential to explore the extent to which the proper application of the audit committee's function concerning the external audit ethics influences audit quality in the context of PIEs. The audit committee effectively serves as the bridge between the management of PIEs and external auditors and audit firms, with the goal of improving audit market conditions.

2 Methodology

This study endeavors to comprehend the influence of the competence of audit committee members on external audit ethics and its subsequent impact on the audit quality of PIEs. The objective is to scrutinize whether the competence of audit committee members is instrumental in ensuring ethical practices within audits, thereby safeguarding the quality of audits conducted on PIEs. Ultimately, the study seeks to address the conundrum of whether national

and international audit regulatory authorities should institute compulsory training for audit committee members in external audit ethics before their appointment, with the purpose of reinforcing the audit quality of PIEs.

The study posits that national authorities should adopt guiding procedures for audit committees to undertake an initial assessment and continuous monitoring of the conduct of audits on PIEs to ensure the practice of ethical auditing. These guidelines should serve as a deterrent to the governance of PIEs, discouraging engagement in activities that may compromise the independence of external auditors. This includes refraining from involvement in activities that could be perceived as potential threats to the external auditor's independence, and that may give rise to conflicts of interest.

The thesis posited in this paper asserts that the greater the competence of audit committee members within PIEs concerning external audit ethics, the higher the audit quality of PIEs. This proposition stems from the recognition that the external auditor's independence stands as the most influential factor impacting audit quality (Marx, 2009c; Tepalagul & Lin, 2015), and an enhanced independence of external auditors correlates with an elevated delivery of audit quality. In this context, audit committees are entrusted with the responsibility to conduct an initial assessment of the external auditor's independence, address any situations that may compromise said independence, and recommend suitable nominations of external auditors and audit firms to the shareholder's assembly of the PIEs.

Consequently, audit committee members of PIEs are tasked with evaluating whether external auditors and audit firms have implemented appropriate safeguards and mitigations to counteract threats to the external auditor's independence and potential conflicts of interest. Moreover, this function of audit committee members should be consistently applied throughout the external audit process to ensure ethical audit practices within PIEs and further fortify audit quality. To achieve the objectives and aim of this study, a mixed-methods study approach was employed. Therefore, the competence of audit committee members within PIEs concerning the external audit ethics represents the variable tested in this research against the audit quality of PIEs.

In employing a mixed-methods approach, this study draws upon both primary and secondary sources of data and information. Secondary sources encompass extant literature, while primary sources consist of a blend of quantitative data derived from surveys conducted with respondents at audit firms and PIEs in Europe, along with qualitative data obtained through semi-structured interviews with participants at PIEs in Europe.

Extant literature, comprising scholarly resources and professional audit literature, is utilized to elucidate the mandate of audit committees regarding the external audit ethics. Specifically, the literature explains their role in initially assessing and continuously monitoring the external auditor's independence. Additionally, the study explores the relevant professional and ethical requirements of external auditors and audit firms to ensure audit quality in the context of PIEs. Insights from the literature are leveraged to explore the authority of audit committees in securing the financial reporting quality of PIEs and ensuring ethical audit practices within PIEs.

The quantitative component of the study further involves surveys conducted with respondents at audit firms and PIEs in Europe. To ensure the representativeness of the quantitative sample, the study follows the statistical sampling formula proposed by Taherdoost (2016). According to Taherdoost, a sufficient sample size is crucial to generalize findings from a simple random sample and mitigate sampling errors or biases. The recommended formula for calculating the sample size is as follows:

$$n = \frac{N \cdot p \cdot (100 - p) \cdot \frac{z^2}{e^2}}{p \cdot (100 - p) \cdot \frac{z^2}{e^2} + N - 1}$$
(1)

where,

'n' is the required sample size;

'*N* is the total population size;

'p' is the proportion of the population;

'e' is the margin of error; and

'z' is the confidence interval.

For meeting the representativeness of the sample, the research applied 90% confidence level (1.645 confidence interval), 5% margin of error, and 50% proportion of the population. Table 2 below illustrates the structure of conducted surveys.

Respondent group	Total population	Sample size	Received responses	Percentage of received responses
Audit companies	10,000	264	80	30%
PIEs	19,074	267	75	28%

Table 2 | Structure of conducted surveys

Source: authors' own theorizing

While larger samples tend to decrease the likelihood of biased findings, it is essential to acknowledge the principle of diminishing returns when samples become excessively large (Gill et al., 2010). In simpler terms, larger sample sizes may reduce sampling error, but this reduction occurs at a decreasing rate (Taherdoost, 2016).

To address this concern, a total of 264 audit firms in Europe were randomly selected from a population of approximately 10,000 audit firms in Europe. Of these, 80 audit firms agreed to participate in the survey, resulting in a response rate of 30%. Survey respondents from the selected audit firms included audit partners and audit managers. Inclusion criteria required that audit firms/respondents be officially registered as providers of audit services based on the EU Acquis Communautaire for Statutory Audit. This registration had to be publicly available in the registers of audit audit firms maintained by national audit institutes and professional audit associations in European countries.

For PIEs in Europe, 267 of them were randomly selected from a total population of 19,074 PIEs in Europe. Seventy-five PIEs agreed to participate in the survey, yielding a response rate of 28%. Survey respondents from these selected PIEs included chief finance officers,

chief executive officers, audit committee members, and other senior officials. Inclusion criteria stipulated that PIEs/respondents must be registered in the official registers of their respective European countries as "entities of public interest," such as banks, insurance/reinsurance companies, and/or other listed entities.

Surveys were conducted between June 2021 and July 2022. Tailored survey questions were developed for the two respondent groups, disclosed in Appendix 1 and Appendix 2. The surveys were administered online, with all randomly selected respondents receiving an email invitation containing a link to the survey questions. Respondents required approximately five to ten minutes to complete their responses. The results obtained from the surveys underwent analysis using descriptive statistics. Pearson's ratio for simple linear correlation was applied to identify relationships between research variables, impacting factors, and affecting determinants, as outlined by Taraldsen (2021):

$$r = \frac{n\Sigma xy - \Sigma x\Sigma y}{\sqrt{n\Sigma x^2 - (\Sigma x)^2} \sqrt{n\Sigma y^2 - (\Sigma y)^2}}$$
(2)

where,

'r' is the Pearson's ratio;

'n' is the number of series; and

'x' and 'y' are the research variables.

The model presented above illustrates the simple linear correlation between the research variables (Taraldsen, 2021), where the minimum value may be negative, and the maximum value may be positive (Taraldsen, 2021). However, to test the significance of the obtained ratio, the study applied the Student's T-distribution with two degrees of freedom, as presented below (Taraldsen, 2021):

$$t = \frac{r}{s_r} \text{ , and } \operatorname{Sr}=\sqrt{\frac{1-r^2}{n-2}}$$
(3)

where,

'r' is the Pearson's ratio;

'Sr' is the standard deviation ratio;

'n' is the number of series; and

't is the significance test.

Whereas a Pearson's ratio of zero means that no simple linear correlation exists, a positive value reflects a simple linear correlation, while a negative value reveals a simple linear regression (Taraldsen, 2021). However, since the value of the Pearson's ratio does not represent the strength of the simple linear correlation (Taraldsen, 2021), the study applied the significance test and considered the Student's T-distribution with two degrees of freedom, based on the obtained significance test value. This resulted in two hypotheses being developed for the quantitative analysis (Taraldsen, 2021):

- H₀, which means that no simple linear correlation exists; and
- H₁, which means that a simple linear correlation exists.

If t(Sr/2; n-2) > t, then H₀ applies, and if t(Sr/2; n-2) < t, then H₁ applies (Taraldsen, 2021). Gradual scaling of the x variable is calculated as presented in Table 3 below with five series.

Variable	Grade
Strongly agree	100%
Agree	75%
Uncertain	50%
Disagree	25%
Strongly disagree	0%

Table 3 | Gradual scaling of x variable

Source: authors' own theorizing.

The critical values of the Student's T-distribution are presented in Appendix 4.

The semi-structured interviews conducted with participants at PIEs in Europe serve as a valuable supplement to the insights garnered from the survey results. Fifteen PIEs in Europe were purposefully selected for these semi-structured interviews, encompassing five banks, five insurance or reinsurance companies, and five publicly listed entities. Of these, eleven PIEs agreed to participate, resulting in a commendable response rate of 73%. Notably, the selected PIEs were multinational companies with subsidiaries and branches in multiple European countries. The interview participants comprised chief executive officers, chief finance officers, audit committee members, and other pertinent senior representatives. All invited participants were required to be registered with the official authorities of their respective European countries in the "registers of PIEs", including banks, insurance/reinsurance companies, and other listed entities. The semi-structured interview results underwent thematic analysis, focusing on two themes: the competence of audit committee members concerning the external audit ethics; and the procedures of audit committee members for assessing the external auditor's independence and securing audit quality of PIEs. All semi-structured interviews were transcribed, conducted in September/October 2022, and utilized the Zoom digital platform. Participants typically spent between ten to fifteen minutes participating in the semi-structured interviews, and the guiding questions are provided in Appendix 3.

To validate the research results, a triangulation approach was employed, integrating data and information obtained from various sources. This process linked the results from both qualitative and quantitative methods to identify regulatory gaps related to the mandate of audit committee members in ensuring ethical audit practices of PIEs and further securing the audit quality of PIEs.

The study unfolded in four distinct phases. The first phase involved a comprehensive review of secondary sources, including relevant regulatory and professional audit literature. The second phase comprised surveys to inform the observations from the first phase, and the

third phase incorporated semi-structured interviews to provide crucial insights into the study's observations. The study concluded by triangulating the data and information from all sources.

3 Discussion and analysis of results

This heading analyses the obtained empirical results. Justification for obtained empirical results is provided based on extant literature. Refinement of research findings is carried out by incorporating insights gathered from a comprehensive review of the literature, thereby triangulating the study results.

Based on the reviewed literature, the expectation is that PIEs, including their audit committees, assess the external auditor's independence both before the nomination process and continuously during the audit. However, for those PIEs selecting auditors through public procurement, the external auditor's independence is assessed solely before the nomination decision. In such cases, the assessment of the external auditor's independence is conducted by non-executive governance members who propose the nomination to the shareholder's assembly of the PIE. Ultimately, the decision to select auditors or audit firms is made by the shareholder's assembly of the PIE, based on the nomination presented by the audit committee or non-executive governance members, depending on the selection process.

To facilitate the assessment of the external auditor's independence by PIEs, this study relies on the data obtained from the first survey question posed to PIEs in Europe. The responses to this question are detailed in Table 4 below.

The information provided in Table 4 suggests that a significant portion of PIEs in Europe assess the external auditor's independence before the ultimate election decision, with 75% of the PIEs indicating that the audit committee is responsible for this initial assessment. However, the literature highlights the importance of not only assessing the external auditor's independence before the election but also continually monitoring it throughout the audit process to ensure audit quality of PIEs.

The external auditor's independence is:	Frequency of received responses	Total received responses	Percentage of received responses
Initially assessed by the audit committee of the PIE before the election nomination to the shareholder's assembly	56	75	75%
Constantly monitored and assessed by the audit committee of the PIE throughout the audit	56	75	75%
Assessed by the non-executive governance members of the PIE, based on the conducted public procurement of audit services, before the election nomination to the shareholder's assembly	13	75	17%
Not assessed by any internal body of the PIE	6	75	8%

Table 4 | Assessing the external auditor's independence by the PIEs in Europe

Source: authors' own theorizing

In Table 4 above, it is encouraging to see that 75% of the PIEs (56 out of 75 responses) also reported that their audit committees constantly monitor and assess the external auditor's independence during the audit. This suggests that the audit committee plays a critical role in

ensuring the ongoing independence of external auditors. However, there is a small percentage (8%) of PIEs (6 out of 75 responses) that do not assess the external auditor's independence at all, which may raise concerns about their commitment to maintaining audit quality.

Additionally, the results from the first semi-structured interview question with the PIEs in Europe provide valuable insights. Based on the obtained results, it appears that many participants do not have predefined criteria or procedures for assessing the independence of their external auditors. Instead, their assessment is based on various factors, such as the documents requested by auditors during the audit, audit procedures conducted, and the process leading to the audit opinion. Only one participant from the insurance sector mentioned publicly announcing the assessed level of the external auditor's independence in the annual management report. Overall, the results reflect the diversity of approaches in assessing and monitoring the external auditor's independence among PIEs in Europe, with some following best practices while others may need to improve their procedures. Table 5, which illustrates the results from the second survey question to the PIEs in Europe, is likely to provide additional information on the selection of external auditors by PIEs in Europe.

External auditors and audit firms of PIEs in Europe are:	Frequency of received responses	Total received responses	Percentage of received responses
Elected by the shareholder's assembly upon a nomination received by the audit committee or the non-executive governance members	69	75	92%
Independently elected by the shareholder's assembly	6	75	8%

Source: authors' own theorizing

Table 5 provides insight into the selection of external auditors by PIEs in Europe. The data indicates that the process of selecting external auditors varies among these entities.

In 92% of the PIEs (69 out of 75 responses), the external auditors and audit firms are elected by the shareholder's assembly upon the nomination of the audit committee or non-executive governance. This process suggests that there is an intermediate step where the audit committee or non-executive governance recommends external auditors for approval by the shareholders.

In contrast, 8% of the PIEs (6 out of 75 responses) reported that the external auditors and audit firms are independently elected by the shareholder's assembly. This approach implies that the shareholder's assembly directly makes the selection without prior recommendations from the audit committee or non-executive governance members.

The results from the second semi-structured interview question with the PIEs in Europe further reveal that there is not a standardized selection procedure for external auditors and audit firms among these entities. Instead, the process varies based on regulatory requirements and internal governance structures. For example, banks mentioned that their selection process is legally prescribed in their specific regulations. It involves several steps, starting with the audit committee, followed by the supervisory board, and culminating in the final decision made by the shareholder's assembly. In cases where audit services are obtained through public procurement (state-owned listed entities), the process is initiated by

the management board, and audit firms are invited to submit audit offers. These offers are then evaluated based on predefined selection criteria, and the final decision is made by the shareholder's assembly.

The varying approaches to the selection of external auditors highlight the importance of adhering to regulatory requirements and ensuring transparency in the process to maintain the quality and independence of the external financial audit. Auditors provide a wide range of professional services to their clients, encompassing attesting services (such as audits, reviews, and agreed-upon procedures), advisory services (including internal audits), and non-attesting services (like compilations, accounting, bookkeeping, taxation, etc.). These services are typically offered through the audit firm or audit network (whether international or local) to which external auditors belong.

Article 5 of the Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b) lists particular non-audit services (professional services which refer to any part of the decision-making process by the management; book-keeping; designing and implementing internal controls or risk management; valuations; tax services; legal services; and human resources) whereby external auditors are not allowed to accept an audit engagement if they have provided certain services to the same auditee, as outlined in this list. Conversely, there has been a persistent increase in the demand for non-audit services, especially since the global economic recovery in 2012.

Table 6 (illustrating the results form the first survey question to the auditors and audit firms in Europe) and Table 7 (illustrating the results form the second survey question to the auditors and audit firms in Europe) provide insights into the services provided by external auditors and audit firms in Europe, particularly the demand for non-audit services.

Table 6 shows that auditors and audit firms in Europe offer both audit and non-audit services. This is in line with common industry practices, where audit firms often provide a range of professional services to their clients beyond traditional financial statement audits.

Auditors and audit firms provide audit and non-audit services	Total received responses	Percentage of received responses
Yes	65	81%
No	15	19%
Total	80	100%

Source: authors' own theorizing

In Table 7 below, the demand for non-audit services represents the tested variable against the recovery from the global financial crisis in 2012. The significance test of the tested variable in this table appears to be higher than the critical value of the t-distribution. This implies that auditees demand that auditors and audit firms provide non-audit services in a scope that has constantly increased since the recovery from the global financial crisis in 2012. In this view, the data highlights the importance for external auditors to manage potential conflicts of interest and independence threats that may arise from providing non-audit

services to their clients (auditees), especially in the context of PIEs where the need for strong audit quality and independence is paramount.

Table 7 further examines the demand for non-audit services and its correlation with the recovery from the global financial crisis in 2012. The data indicates that the demand for non-audit services has consistently increased since the recovery from the global financial crisis in 2012.

These results suggest that auditees, including PIEs, have been increasingly seeking nonaudit services from auditors and audit firms in the post-financial crisis period. This could be due to the evolving needs of clients and the desire for audit firms to provide a broader range of services to meet these demands. For example, clients need due-diligence services to expand their businesses.

Table 7 The trend of non-audit s	services since the recovery	from the global financial crisis in
2012		

The demand for non-audit services has constantly increased since the recovery from the global financial crisis in 2012	Total received responses	Percentage of received responses
Strongly agree	27	34%
Agree	42	53%
Neutral	4	5%
Disagree	7	8%
Total	80	100%
Pearson's ratio		0.72
Standard deviation ratio		0.40
Significance test		1.78
Critical value of t-distribution	(0.20;3)	0.98

Source: authors' own theorizing

Table 8 and Table 9 below, respectively, illustrate the results from the third and fourth survey question to the audit firms in Europe.

In Table 8 below, the competence of audit committee members represents the tested variable against the external audit ethics. The significance test of the tested variable in this table appears to be higher than the critical value of the t-distribution. This implies that audit committee members should be trained to evaluate whether external auditors and audit firms applied appropriate safeguards and mitigations regarding possible threats to the external auditor's independence and potential conflicts of interest. In this view, it appears that the more competent the audit committee members are concerning the external audit ethics, the better the audit quality of PIEs. This assertion is further refined based on the results from the fourth survey question to the audit firms in Europe, which are illustrated in Table 9 below. In this table, the competence of audit committee members concerning the external audit ethics represents the tested variable against the audit quality of PIEs. The significance test of the tested variable in this table appears to be higher than the critical value of the t-distribution.

This implies the existence of a simple linear correlation between the competence of audit committee members concerning the external audit ethics and audit quality of PIEs. In this view, it appears that audit committee members should be trained to secure the external auditor's independence and preserve audit quality of PIEs.

Audit committee members should be trained concerning the external audit ethics to preserve audit quality of PIEs	Total received responses	Percentage of received responses
Strongly agree	48	60%
Agree	24	30%
Neutral	6	8%
Disagree	2	2%
Total	80	100%
Pearson's ratio		0.78
Standard deviation ratio		0.36
Significance test		2.16
Critical value of t-distribution	(0.20;3)	0.98

Table 8 The con	npetence of audit committee	e members concerning th	e external audit ethics

Source: authors' own theorizing

Table 9 | The competence of audit committee members concerning the audit quality of PIEs

The more competent the audit committee members are concerning the external audit ethics, the better audit quality to PIEs will be achieved	Total received responses	Percentage of received responses
Strongly agree	44	55%
Agree	20	25%
Neutral	13	16%
Disagree	3	4%
Total	80	100%
Pearson's ratio		0.80
Standard deviation ratio		0.35
Significance test		2.30
Critical value of t-distribution	(0.20;3)	0.98

Source: authors' own theorizing

Article 22 of the EU Acquis Communautaire for Statutory Audit (European Parliament, 2006; European Parliament, 2014a) stipulates a fundamental responsibility for audit committees, emphasizing their role in the identification, assessment, and mitigation of potential conflicts

of interest with external auditors and audit firms. The primary objective is to ensure that any such conflicts are maintained at an acceptably low level, thereby upholding the quality of audit processes within the context of PIEs. This mandate also grants audit committees the authority to conduct ongoing monitoring of audit activities, reinforcing the overall quality of audits of PIEs. This continuous monitoring allows audit committees to promptly identify and address any situations that might give rise to conflicts of interest, thus preserving the integrity of the external audit process.

As previously discussed, according to Article 5 of the Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b), audit committees may rely on a list of prohibited services as a regulatory framework when identifying and evaluating situations that could lead to conflicts of interest and compromise the external auditor's independence. This list provides clear and concrete guidelines regarding the types of services that auditors and audit firms should avoid to maintain their independence and objectivity throughout the audit process in the context of PIEs.

Furthermore, IFAC's Code of Ethics introduces rotation rules for key audit partners, specifying that these partners are permitted to conduct audits for specific PIEs (listed entities) for a maximum of seven consecutive years, after which a mandatory two-year cooling-off period is enforced. These rules are intended to mitigate the risks associated with extended audit tenure. While these professional and regulatory frameworks offer crucial foundations for the work of audit committees, it is important to acknowledge that neither the Directive 2006/43/EC of the European Parliament and of the Council nor the Directive 2014/56/EU of the European Parliament and of the Council and the Regulation (EU) No. 537 of the European Parliament and of the Council guidance for them on how to resolve identified conflicts of interest with external auditors and audit firms.

Acknowledging this gap in guidance, the research considers IFAC's Code of Ethics as a valuable resource. Section 220 of IFAC's Code of Ethics presents a comprehensive approach to addressing and dissolving conflicts of interest. It offers a range of strategies and mitigation measures that auditors can employ to either eliminate or reduce such conflicts of interest to an acceptably low level. These guidelines cover various conflict scenarios, including conflicts of interest between auditors and auditees, such as those arising when auditees are engaged in mutual legal disputes. IFAC's Code of Ethics recommends specific solutions, such as the use of separate engagement teams in cases where such conflicts emerge.

The research examined the functions of audit committees through the third survey question and third semi-structured interview question with the PIEs in Europe. The results from these inquiries shed light on the roles and responsibilities of audit committees.

Survey responses to the third survey question with the PIEs in Europe revealed that audit committees play a multifaceted role in the financial oversight of PIEs. They are tasked with monitoring the entire financial reporting process, which includes evaluating the independence of external auditors before their nomination for selection by the shareholder's meeting. Importantly, the independence of external auditors is a continuous concern, and the audit committee ensures that it is continually assessed throughout the audit process.

In the responses to the third semi-structured interview question with the PIEs in Europe, it was noted that, primarily due to strict regulatory requirements, banks have instituted audit

committees with defined procedures for appointing and removing the committee members. In contrast, insurance and reinsurance companies can choose between establishing an audit committee or delegating its functions to the supervisory board. Nevertheless, for those PIEs that have established an audit committee (banks), their functions encompass ongoing oversight of the financial reporting process, internal controls, evaluation of the external auditor's independence, nomination of audit firms for appointment by the shareholder's assembly, and comprehensive evaluation of the external audit, among other responsibilities. In addition, for PIEs that are not multinational, audit committees have been established, particularly in the case of banks, driven by regulatory demands. Insurance and reinsurance companies and listed entities that are not multinational have similarly formed audit committees or delegated their functions to the supervisory board. In these instances, there are no significant distinctions in the composition and responsibilities of audit committee members concerning their functions. However, for multinational PIEs, a two-tiered approach is observed. At the parent level, an audit committee is established, while subsidiary or branch levels may designate the supervisory board or internal audit department/division to fulfill the audit committee's functions. This variation is illustrated by a listed entity participant in the metallurgy sector who described its entity's approach. The participant explained that on the subsidiary level, an audit committee had not been established, but on the parent level, the audit committee directed tasks to the internal audit division within all subsidiaries. The selection of members for the parent-level audit committee is based on their experience and competence in financial reporting, audit and financial control, and their knowledge of the industry. It is essential to note that internal auditors in this setup hold professional certifications, and they support the audit committee's functions. This approach is designed to maintain a high level of integrity within the internal audit department and the financial reporting process.

Based on the above analysis, it appears that audit committee members play a crucial role in the audit process, as stipulated by the Regulation (EU) No. 537 of the European Parliament and of the Council (European Parliament, 2014b). They are required to have a strong understanding of accounting and auditing standards, as emphasized by Harber (2018). Moreover, audit committee members are responsible for assessing the independence of external auditors and identifying any potential conflicts of interest with audit firms and/or external auditors. It is the audit committee's duty to take appropriate measures to resolve these issues before presenting nominations to the shareholder's assembly and constantly throughout the audit. Constant vigilance in monitoring the conduct of the external audit is necessary to ensure audit quality of PIEs.

The EU Acquis Communautaire for Statutory Audit sets forth specific requirements for the skills and competence of audit committee members. These requirements include familiarity with the financial reporting regulations relevant to the PIE, a comprehensive understanding of key audit concepts, and knowledge of ethical requirements related to external audits. Additionally, they should be well-versed in the industry in which the PIE operates.

These demands regarding the qualifications and competence of audit committee members are fundamental, and individuals appointed to these roles should undergo training to meet these requirements before taking on their responsibilities. It is through their knowledge and expertise that they contribute to the effective oversight of the audit process and the maintenance of audit quality of PIEs.

Table 10 below trangulates the study results. This table underscores the critical role played by audit committees in ensuring the reliability of financial reporting within PIEs. The members of these committees must possess a deep understanding of key audit concepts to effectively fulfill their responsibilities, which encompass monitoring the audit process, safeguarding audit quality, and maintaining trust in the financial reporting of PIEs. This role is emphasized by various scholarly sources, including Al-Baidhani (2014), Hay (2015), Fallatah (2017), and Mohd Kharuddin (2016), which stress the importance of audit committees in upholding the integrity and quality of financial reporting in the context of PIEs.

Table 10 | Triangulation of study results

The extern	nal auditor's independence is regarded as the highest co	ntributing factor on audit quality.
	₽	
the externation the constantly more	the external auditor's independence, audit committees s al auditor's independence and potential conflicts of intere to the shareholder's assembly of the PIE. To ensure aud pontor the external auditor's independence throughout the ed possible threat to the external auditor's independence external auditors and audit firms should resolve with th	est before submitting the election it quality, audit committees should e audit. Every situation which might e and potential conflict of interest,
	₽.	
External a service	auditors and audit firms provide audit and non-audit serves has constantly increased since the recovery from the g	ices. The demand for non-audit global financial crisis in 2012.
	₽.	
and mitigati	tors and audit firms must ensure the audit committee me ons were applied to secure the external auditor's indepe hether external auditors and audit firms applied appropri- ensure the external auditor's independence and secure	ndence. Audit committees should ate safeguards and mitigations to
	Ŷ	
possible thr	ace of audit committee members concerning the external eats to the external auditor's independence and potentia external auditors and audit firms have applied appropria	I conflicts of interest and evaluate
	1	
	etence of audit committee members concerning the exte ng factor on audit quality since it secures further the exte	
	Ŷ	
Conclusion of preserve the	 Mandatory training of audit committee members concernation in competence regarding the assessment of the external audit quality of PIEs. 	erning the external audit ethics may auditor's independence to ensure
	•	
Audit comr when assessi	nittees do not have standardized procedures and sufficie ng the external auditor's independence. Instead, audit or while assessing the external auditor's indep	ommittees apply their best practices
	₽	
Conclusion 2 must ma	2: National authorities should adopt guiding regulatory mandatory follow when assessing the external auditor's inc	echanisms which audit committees dependence. These regulatory
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mechanisms should further deter the governance of PIEs from engaging with activities which might be considered possible threats to the external auditor's independence and potential conflicts of interest. On one hand, these regulatory guidelines may further strengthen the mandate of the audit committees to ensure the veracity of PIEs' financial reporting, while on the other, bigger independence of external auditors and audit firms will be achieved, ensuring quality audits of PIEs.

Source: authors' own theorizing

4 Delineations of limitations

This study has two limitations.

The first limitation of the study is related to the geographical location of the samples-focused on Europe/EU. Consequently, the results obtained from both the quantitative and qualitative components of the study may be applicable primarily in Europe and the common market of the EU.

To address this limitation, the study acknowledges that the IFAC's Code of Ethics serves as the foundational methodological framework that auditors should adhere to in order to safeguard the external auditor's independence. From this perspective, the study extrapolated its findings using the IFAC's Code of Ethics, linking professional requirements of external auditors and audit firms to ensure ethical audit practices in the context of PIEs. This approach enables the study to draw general conclusions regarding the phenomena that is under investigation.

The second limitation of this study is associated with its specific aim, which is to investigate the competence of audit committee members in relation to the ethical aspects of external audits and their impact on the audit quality of PIEs. Consequently, the findings of this study can be directly applied to the audits conducted on PIEs.

To delineate the second limitation, the study recommends that PIEs' audit committee members receive comprehensive training on external audit ethics, with a specific emphasis on the guidelines outlined in the IFAC's Code of Ethics. This would enhance their understanding and proficiency in ensuring ethical audit practices and secure further audit quality of PIEs.

5 Areas for further research

It is important to recognize that the primary limitation of this study is that its overall conclusions are derived solely from observations made during external audits of PIEs within the EU. The study suggests national authorities around the world adopt restrictive regulatory mechanisms which PIEs' audit committees should mandatory follow to ensure ethical audit practices and audit quality of PIEs. These regulatory mechanisms should deter the governance of PIEs from engaging in activities which might be considered possible threats to the external auditor's independence and/or potential conflicts of interest to secure further the audit quality of PIEs. However, these regulatory mechanisms need practical feasibility assessment concerning the divergent legal systems among the countries. Therefore, future studies should address further this limitation for a more comprehensive understanding of external audit ethics, especially in the East European context.

Conclusion

Based on the study results, it appears that audit committee members should receive training concerning the external audit ethics before their appointment to ensure ethical audit practices of PIEs and secure audit quality. In addition, national authorities should adopt regulations per which audit committee members should evaluate whether external auditors and audit firms applied appropriate safeguards and mitigations against possible threats to the external auditor's independence and potential conflicts of interest. Ultimately, these regulations should deter the governance of the PIEs from engaging with activities which may compromise the external auditor's independence.

Acknowledgement

Funding: There was no special funding towards this study.

Conflict of interest: The authors hereby declare that this article was not submitted or published elsewhere. Authors do not have any conflict of interest.

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Appendix 1: Survey questions for PIEs in Europe

1. How do you assess the independence of your audit firms and/or auditors? You may tick more than one response.

..... Our public interest entity doesn't assess the independence of our auditors and/or audit firms

..... The independence of our external auditors and/or audit firms is constantly assessed throughout the conduct of the audit by the non-executive board members, after they had been selected

..... The independence of our external auditors and/or audit firms is assessed by the non-executive board members, before had been selected

..... The independence of our external auditors and/or audit firms is constantly assessed throughout the conduct of the audit by the audit committee, after they had been selected

..... The independence of our external auditors and/or audit firms is assessed by the audit committee, before had been selected

2. What is the procedure under which your public interest entity selects its external auditors and/or audit firms?

..... Our external auditors and/or audit firms are selected by the shareholders' assembly if they are nominated by the audit committee

..... Our external auditors and/or audit firms are selected by the shareholders' assembly if they are nominated by the supervisory body

..... Our external auditors and/or audit firms are selected based on conducted public procurement

..... The managing body of our public interest entity independently selects our external auditors and/or audit firms

..... The shareholders' assembly of our public interest entity independently selects our external auditors and/or audit firms

3. Have you established an audit committee, and if you have what are the criteria for appointing its members, and its functions?

.....

Appendix 2: Survey questions for audit firms/auditors in Europe

1. Does your audit firm or the international/local audit network to which it belongs, offer non-audit services to the clients, such as accounting, valuations, advisory services, and/or consultancy services?

..... Yes

..... No

2. The demand for non-audit services has constantly increased since the recovery from the global economic recession in 2012.

..... Strongly agree

..... Agree

..... Uncertain

..... Disagree

- Strongly disagree
- 3. Concerning the audits to PIEs, do you agree that audit committee memebers should be trained regarding the external audit ethics, to preserve audit quality?
 - Strongly agree
 - Agree

..... Uncertain

..... Disagree

..... Strongly disagree

- 4. Concerning the audits to PIEs, do you agree that the more competent the audit committee memebers are regarding the external audit ethics, the better audit quality to PIEs will be achieved?
 - Strongly agree

..... Agree

..... Uncertain

..... Disagree

..... Strongly disagree

Appendix 3: Semi-structured interview questions for PIEs in Europe

1. How do you assess the independence of your audit firm and/or auditors?

.....

2. What is the procedure under which your public interest entity selects its external auditors and/or audit firms?

.....

3. Have you established an audit committee, and if you have what are the criteria for appointing its members, and its functions?

.....

Volume **13** | Issue **5** | 2024 https://doi.org/10.18267/j.cebr.370

Appendix 4: Critical value of Student's t-distribution with two degrees of freedom

t Table

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	(Table											
two-tails 1.00 0.50 0.40 0.30 0.20 0.10 0.05 0.02 0.01 0.002 0.001 df 1 0.000 1.376 1.963 3.078 6.314 12.71 31.82 63.66 318.31 63.66 22.327 31.599 3 0.000 0.765 0.978 1.250 1.638 2.353 3.182 4.541 5.841 1.2224 4 0.000 0.718 0.920 1.156 1.476 2.152 2.571 3.365 4.032 5.893 6.869 6 0.000 0.718 0.906 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.959 7 0.000 0.718 0.889 1.100 1.383 1.833 2.202 2.812 3.250 4.297 4.781 9 0.000 0.700 0.879 1.093 1.372 1.812 2.228 2.764 3.169 4.144 4.587	cum. prob	t.50	t.75	t.80	t.85	t.90	t .95	t .975	t .99	t_995	t .999	t .9995
df 0.000 1.000 1.376 1.963 3.078 6.314 12.71 31.82 63.66 318.31 636.62 2 0.000 0.816 1.061 1.386 1.886 2.920 4.303 6.965 9.925 2.2327 31.599 3 0.000 0.741 0.941 1.190 1.533 2.132 2.776 3.747 4.604 7.173 8.610 5 0.000 0.711 0.906 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.999 6 0.000 0.711 0.896 1.119 1.415 1.895 2.365 2.996 3.355 4.501 5.041 9 0.000 0.700 0.889 1.008 1.383 1.833 2.262 2.896 3.355 4.501 5.041 9 0.000 0.700 0.873 1.083 1.356 1.772 2.811 3.250 4.297 4.781 10 </th <th>one-tail</th> <th>0.50</th> <th>0.25</th> <th>0.20</th> <th>0.15</th> <th>0.10</th> <th>0.05</th> <th>0.025</th> <th>0.01</th> <th>0.005</th> <th>0.001</th> <th>0.0005</th>	one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
df 0.000 1.000 1.376 1.963 3.078 6.314 12.71 31.82 63.66 318.31 636.62 2 0.000 0.816 1.061 1.386 1.886 2.920 4.303 6.965 9.925 2.2327 31.599 3 0.000 0.741 0.941 1.190 1.533 2.132 2.776 3.747 4.604 7.173 8.610 5 0.000 0.711 0.906 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.999 6 0.000 0.711 0.896 1.119 1.415 1.895 2.365 2.996 3.355 4.501 5.041 9 0.000 0.700 0.889 1.008 1.383 1.833 2.262 2.896 3.355 4.501 5.041 9 0.000 0.700 0.873 1.083 1.356 1.772 2.811 3.250 4.297 4.781 10 </th <th>two-tails</th> <th>1.00</th> <th>0.50</th> <th>0.40</th> <th>0.30</th> <th>0.20</th> <th>0.10</th> <th>0.05</th> <th>0.02</th> <th>0.01</th> <th>0.002</th> <th>0.001</th>	two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
2 0.000 0.816 1.061 1.386 1.886 2.920 4.303 6.965 9.925 22.327 31.599 3 0.000 0.765 0.978 1.250 1.638 2.353 3.182 4.541 5.841 10.215 12.976 5 0.000 0.727 0.920 1.166 1.476 2.015 2.571 3.365 4.032 5.893 6.899 6 0.000 0.711 0.996 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.498 8 0.000 0.706 0.889 1.108 1.387 1.860 2.306 2.896 3.355 4.501 5.408 9 0.000 0.703 0.883 1.100 1.383 1.383 2.262 2.821 3.250 4.297 4.781 10 0.000 0.697 0.876 1.083 1.366 1.771 2.179 2.681 3.055 3.930 4.318												
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4 0.000 0.741 0.941 1.190 1.533 2.132 2.776 3.747 4.604 7.173 8.610 5 0.000 0.727 0.920 1.156 1.476 2.015 2.571 3.365 4.032 5.893 6.869 7 0.000 0.711 0.896 1.119 1.415 1.805 2.365 2.998 3.499 4.785 5.041 9 0.000 0.706 0.889 1.001 1.383 1.833 2.262 2.821 3.250 4.297 4.781 10 0.000 0.700 0.873 1.083 1.356 1.796 2.081 3.055 3.930 4.313 12 0.000 0.694 0.870 1.079 1.350 1.771 2.160 2.650 3.012 3.852 4.221 14 0.000 0.694 0.870 1.074 1.341 1.753 2.131 2.602 2.947 3.733 4.100 15 <th>2</th> <th>0.000</th> <th>0.816</th> <th>1.061</th> <th>1.386</th> <th>1.886</th> <th>2.920</th> <th>4.303</th> <th>6.965</th> <th>9.925</th> <th>22.327</th> <th>31.599</th>	2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
5 0.000 0.727 0.920 1.156 1.476 2.015 2.571 3.365 4.032 5.893 6.869 6 0.000 0.718 0.906 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.598 7 0.000 0.716 0.886 1.119 1.415 1.895 2.365 2.998 3.499 4.785 5.408 8 0.000 0.703 0.883 1.100 1.383 1.833 2.236 2.998 3.499 4.785 5.408 9 0.000 0.703 0.883 1.100 1.383 1.333 2.622 2.821 3.256 4.297 4.781 10 0.000 0.695 0.873 1.083 1.356 1.771 2.160 2.601 3.012 3.852 4.221 14 0.000 0.692 0.865 1.071 1.345 1.761 2.162 2.947 3.733 4.073 15	3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
6 0.000 0.718 0.906 1.134 1.440 1.943 2.447 3.143 3.707 5.208 5.959 7 0.000 0.711 0.896 1.119 1.415 1.895 2.365 2.998 3.499 4.785 5.408 9 0.000 0.703 0.883 1.100 1.383 1.833 2.262 2.861 3.355 4.511 5.408 10 0.000 0.700 0.879 1.093 1.372 1.812 2.228 2.764 3.169 4.144 4.587 11 0.000 0.695 0.873 1.083 1.356 1.776 2.160 2.651 3.015 3.930 4.318 13 0.000 0.695 0.873 1.083 1.356 1.782 2.179 2.681 3.055 3.930 4.318 14 0.000 0.696 0.074 1.341 1.753 2.131 2.602 2.947 3.733 4.073 10 <th>4</th> <th>0.000</th> <th>0.741</th> <th>0.941</th> <th>1.190</th> <th>1.533</th> <th>2.132</th> <th>2.776</th> <th>3.747</th> <th>4.604</th> <th>7.173</th> <th>8.610</th>	4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
7 0.000 0.711 0.896 1.119 1.415 1.895 2.365 2.998 3.499 4.785 5.408 8 0.000 0.776 0.889 1.108 1.397 1.860 2.306 2.896 3.355 4.501 5.041 9 0.000 0.703 0.887 1.100 1.383 1.833 2.222 2.213 2.325 4.297 4.781 10 0.000 0.697 0.876 1.088 1.353 1.766 2.211 2.718 3.106 4.025 4.437 12 0.000 0.695 0.873 1.003 1.356 1.771 2.160 2.503 3.012 3.852 4.221 14 0.000 0.691 0.866 1.074 1.341 1.753 2.131 2.602 2.947 3.734 4.073 15 0.000 0.868 0.861 1.067 1.333 1.740 2.110 2.567 2.888 3.661 3.922		0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
8 0.000 0.706 0.889 1.108 1.397 1.860 2.306 2.896 3.355 4.501 5.041 9 0.000 0.703 0.883 1.100 1.383 1.833 2.282 2.821 3.250 4.297 4.781 10 0.000 0.670 0.876 1.093 1.372 1.812 2.282 2.841 3.166 4.025 4.437 11 0.000 0.697 0.876 1.088 1.363 1.776 2.201 2.718 3.106 4.025 4.437 12 0.000 0.699 0.861 1.077 1.350 1.771 2.160 2.650 3.012 3.852 4.211 4 0.000 0.699 0.866 1.074 1.341 1.753 2.131 2.602 2.947 3.733 4.073 16 0.000 0.689 0.863 1.069 1.333 1.746 2.101 2.557 2.898 3.646 3.955		0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
9 0.000 0.703 0.883 1.100 1.383 1.833 2.262 2.821 3.250 4.297 4.781 10 0.000 0.700 0.879 1.093 1.372 1.812 2.282 2.764 3.169 4.144 4.587 11 0.000 0.695 0.873 1.083 1.356 1.771 2.160 2.650 3.012 3.852 4.221 14 0.000 0.692 0.868 1.076 1.345 1.761 2.145 2.624 2.977 3.787 4.140 15 0.000 0.690 0.865 1.071 1.337 1.746 2.102 2.583 2.921 3.866 4.015 16 0.000 0.689 0.863 1.069 1.333 1.740 2.102 2.583 2.921 3.866 4.015 17 0.000 0.688 0.861 1.066 1.328 1.729 2.093 2.539 2.861 3.552 3.850												
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	z		0.674								3.090	3.291
Confidence Level		0%	50%	60%	70%				98%	99%	99.8%	99.9%
						Confid	dence Lo	evel				

Source: adjusted based on Beyer (1968)

The research article has been peer-reviewed. | Received: 13 November 2023; Revised: 18 February 2024; Accepted: 17 March 2024; Available online: 3 May 2024; Scheduled release in the regular issue: 5/2024 (December)