

## Introduction

Profession-independent supervision is seen as essential instrument to restore public confidence in auditing in the aftermath of past accounting scandals. The establishment of the Public Company Accounting Oversight Board (PCAOB) in the U.S. set in motion a powerful process of coercive and mimetic isomorphism, in which course, formally independent audit oversight systems mushroomed around the globe. This study provides first insights into the question as to how independent “independent” audit oversight boards are.

The role of independent audit regulation is a recurring theme in accounting research (Humphrey et al., 2009, 2011; Suddaby et al., 2007). However, a systematic and encompassing comparison of the intertwining of audit regulators and the accounting profession has not yet been provided. So far, research on audit regulation is characterised by comparative studies incorporating a rather small and highly selective number of countries (Baker et al., 2001; Eldaly, 2012; Evans and Nobes, 1998; Puxty et al., 1987), and by qualitative case studies focusing on single countries (Baker et al., 2006; Canning and O’Dwyer, 2013; Caramanis et al., 2015; Jonnergard, 2012; Malsch and Gendron, 2011; Öhman and Wallerstedt, 2012). Hence, there is a lack of comparative data on the configuration of oversight systems and the diverse understanding of “independent oversight” across different jurisdictions. As a result, there is a paradoxical gap between the high relevance attributed to independent regulation and the empirical findings on the way in which this new regulatory paradigm has been translated into regulatory outcomes.

This study fills the research gap by offering a methodological operationalisation for measuring the level of independence of audit oversight structures by using an analytical framework for the first time. By comparing 28 different oversight systems, this paper at the same time responds to calls for more cross-country audit research to advance the knowledge about various forms of public oversight systems (Humphrey and Moizer, 2008; Maijoor and Vanstraelen, 2012). On this way, the study provides a point of reference when referring to the “independent regulator”; an anchor, needed for current debates on further regulatory reforms and audit research on the relationship between the regulator’s action and its formal institutional design.

Comparative analysis requires comparable data. To guarantee the study’s validity, data was collected in two ways. First, an email questionnaire was sent to all 28 European oversight authorities in November 2013. The questionnaire focused on the

legal provisions of the independence dimensions used for this study. By March 2014, answers were received from 22 oversight authorities.<sup>1</sup> Second, all national provisions on the compositions and responsibilities of the audit oversight systems were collected and analysed. Other sources of information were data from the website of the International Forum of Independent Audit Regulators (IFIAR) ([www.ifiar.org](http://www.ifiar.org)), along with the official websites of the oversight boards and their annual reports. The list of regulators is presented in the Appendix 1. The findings of the various sources were compared with each other and directly translated to the coding scheme.<sup>2</sup> The validity of the final results was cross-checked by other auditing scholars and by various oversight authorities to which the results have been provided.

The PCAOB is added to the European sample given its pivotal role in shaping audit regulation on the global landscape. Its establishment triggered various rounds of regulatory reforms in the European Union, starting in 2006, when an EU Directive (2006/43/EC) required European member states to implement independent oversight systems. In addition, the PCAOB set other countries directly under pressure by pointing out that only the establishment of “equivalent” oversight bodies would avoid extraterritorial PCAOB inspections. Complete independence is thereby seen by the PCAOB as the essential criteria for determining whether the PCAOB can rely on a non-U.S. oversight system, to conduct inspections of PCAOB-registered non-U.S. audit firms (e.g. PCAOB Chief of Staff Ross, 2004)

The rest of the paper is structured as follows. The next section presents the methodology used for the analysis of oversight independence. Based on the developed coding system, the third section illustrates and compares the independence values of all oversight systems. Conclusions and suggestions for future research follow.

## **Methodology**

### *Regulatory independence*

Following Majone (1997), independence can be conceptualised as an entity’s autonomy in decision-making (Majone, 1997). Autonomy, in turn, is the ability to translate one’s own preferences into authoritative actions without external constraints (Busuioac, 2009; Maggetti, 2007). Independence is therefore defined as the autonomy of the oversight entity to self-determine its preferences and to make use of its regulatory competences, without constraints from the accounting profession, during

the activity of regulation. Moreover, it is important to distinguish between formal independence and de-facto independence. Formal independence describes the status of an agency according to the legal acts that constitute and govern the agency. It is the key factor when investigating delegation to regulatory agencies as it corresponds to the intentions of the decision-makers with regard to providing credibility to regulatory policies (Maggetti, 2007). De-facto (e.g. actual) independence refers to the degree to which the oversight authority operates independently from the audit profession in practice (Hanretty and Koop, 2012, 2013; Maggetti, 2007). This study assesses the formal independence of the audit oversight systems. The country's politico-administrative tradition or other non-legal determinants (i.e. policy style or administrative culture) of de-facto independence are therefore outside the scope of this paper. Acknowledging the possible interferences of other factors does not mean that formal independence is immaterial. On the contrary, various scholars trace actual independence back to formal independence (Furlong, 1998; Hanretty and Koop, 2013; Hayo and Voigt, 2007; Verhoest et al., 2010).

This paper's index of formal independence is based on the construction of two profiles for each oversight system. While the *Organisational Profile* takes into account the organisational structures, the *Functional Profile* relates to the regulatory competences of the oversight authorities. With the results of these profiles, it is then possible to create one index of independence that considers both the organisational and the functional independence equally. For each country the arithmetic mean of the organisational and functional profile is calculated in order to set up a ranking regarding the degree of material independence of the oversight systems. Each profile is based on several variables and each variable is associated with several indicators, which are numerically coded on a scale of 0 (lowest level of independence) to 3 (highest level of independence).<sup>3</sup> It could reasonably be argued that various variables could be weighted differently, for instance, by performing a qualitative assessment of their relative importance a priori. At this point in the study, each variable has been attributed with the same weight, thus, implicitly, the same relevance.<sup>4</sup>

The identification of the variables is based on two pillars. First, it takes into account prior studies on independence of regulatory entities. A measurement tool for independence has been developed for investigating the independence from political interferences of banks (Cukierman et al., 1992; Cukierman and Webb, 1995), the telecommunications market (Edwards and Waverman, 2006; Tenbücken and Schneider, 2004) and courts (Hayo and Voigt, 2007; Smithey and Ishiyama, 2000).

Other scholars have analysed the level of independence of regulatory agencies of various sectors within one country (Elgie and McMenemy, 2005) or among several countries (Gibaldi, 2002, 2005; Hanretty and Koop, 2013). To link public policy research to the specific field of audit regulation, the definition of the International Forum of Independent Audit Regulators (IFIAR) and the European Commission about the core principles of an “independent” audit oversight system has been taken into account as a second pillar for the identification for the relevant independence variables. The IFIAR consists of audit regulators from a total of 50 jurisdictions. The organisation seeks to promote effective independent audit oversight through 11 core principles, which provide guidance to governments to establish effective and independent audit oversight systems.<sup>5</sup> By matching public policy research and the definition of audit oversight independence of the IFIAR and the European Union, the study’s measurement validity can be secured.

### *Organisational Profiles*

The analysis of the Organisational Profiles of the public oversight systems is based on a total of ten variables (Table 1). Seven out of the ten variables are mentioned in the IFIAR principles on independent audit oversight. Three have been additionally added based on prior literature on independence. The ten variables measure the essential organisational features of the oversight boards and represent control relations between the accounting profession and the oversight board, such as the procedures foreseen for the appointment of the oversight board members and the oversight head, the existence or not of special cooling-off provisions, the employment status of the board members, and provisions on the terms of office. The latter is based on literature which argues that non-renewable and fixed-term mandates promote independence by eliminating the possibility that members exercise regulatory power strategically (Edwards and Waverman, 2006; Tenbücken and Schneider, 2004). They also measure the extent of influence of professional bodies on the nomination procedure and whether practitioners are involved in the governance of the board. Finally, it is analysed whether the oversight system is organised as a single-sector or a multi-sector jurisdiction. Scholars suggest that a multi-sector agency provides better protection from industry capture as interest groups compete against each other, and as the agency has facilitated access to pooled resources, improving its information-processing abilities (Edwards and Waverman, 2006; Maggetti, 2007; Tenbücken and Schneider, 2004). The coding

values for the Organisational Profiles of each oversight system are stated in Appendix 4.

*Please insert Table 1 here*

### *Functional Profiles*

The Functional Profiles measure the extent to which the audit oversight regulators depend on the audit profession for conducting the vital elements of the oversight system (Table 2). Due to the high technical understanding that is needed in auditing, regulators have to balance between the need to cooperate with the audit profession and the necessary detachment, which is needed for an effective oversight system. The analysis of functional profiles of the public oversight systems is based on a total of five variables. The first variable focuses on the registration of audit firms. The second and third variables relate to the mode of external quality assurance, which particularly affects the degree to which oversight systems achieve their goal of protecting the interests of investors and the public. This relates to common criticism that professions are unwilling or unable to discipline their members (Bedard, 2001; Suddaby et al., 2007). The fourth variable relates to the authority for disciplinary measures in case errors or material weaknesses were identified in the inspections and the publication of the report, which is the fifth variable. The coding values for the Functional Profiles of each oversight system are stated in Appendix 5.

Literature does not offer a fixed number of variables for the reliability of the scale. With regard to the POSAC analysis, optimal solutions are obtained with five to ten variables (Shye, 2009, p. 299). This is in line with the number of variables chosen in this study.

*Please insert Table 2 here*

### *Analytical approach*

The results are analysed and visualised with a Partial Order Scalogram Analysis with Coordinates (POSAC).<sup>6</sup> The method is used because it does not only create an independence ranking, but also illustrates the large degree of variation, existing between the various oversight arrangements.

POSAC is a specific form of multidimensional scalogram analysis that reduces the data of the objects from an N-dimensional space to a two dimensional space (in the

plot DIM (1) and DIM (2))<sup>7</sup>. It can therefore be compared with a Principal Component Analysis. However, while the latter tries to preserve distances, POSAC tries to preserve ordering. Thus, the underlying assumption of POSAC is that the geometric representation of order relations among objects, rather than the mathematical expression of items' loadings on factors, may highlight patterns in the data that are not so apparent in factor analytic solutions.

A partial order analysis begins with a number of criteria for differentiating an observed population basis; this is the so-called "facet theory". Recently, the method has gained attention in the field of comparative politics, where it has been used as a powerful method of structural and comparative analysis (DeRosa et al., 2005; Schneider et al., 2005; Taylor, 2002). The basic idea behind facet theory is that every analytical object can be decomposed into a certain number of dimensions (facets) and each dimension can be decomposed into ordered values (Tenbücken and Schneider, 2004). A combination of different facets is a "structuple"; in this case, the profile of one oversight system. Each oversight system can thus be defined by its specific profile based on scores for each variable. Hence, an audit oversight profile is a row of the data matrix, which, in the current coding scheme, can range from {1111111111} through to {3333333333} (ten dimensions of the organizational profile which can take values from 1 to 3), with all combinations among these two extremes empirically possible. The method's advantage is that it allows to distinguish between objects that have different values on different facets and thus show different institutional configurations, which enables the comparison of various objects and enables to structure a previously disorganised universe.

POSAC adopts these principles and depicts all profiles in a two-dimensional space through a regioning process in which profiles with the same score on a struct are positioned closer together than profiles with different scores on that struct. In other words, similar audit oversight systems are close and dissimilar systems are distant from each other. At the same time, the two-dimensional space illustrates the degree of independence of the various systems. Profiles with the highest rank occupy the upper right-hand corner, those with the lowest rank, the left-hand corner (Guttman and Greenbaum, 1998). In this way it is possible to measure the independence of oversight boards in both a quantitative and comparative way.

## **Results**

### *Organisational Independence*

Comparing all 28 profiles along a multidimensional scale, the analysis generates the topography illustrated in Figure 1.

*Please insert Figure 1 here*

The analysis of the various interrelations between the accounting profession and the regulatory authority reveals a mixed picture of how independence has been interpreted: although all of the European audit oversight bodies are formally independent from the accounting profession, there is not one single model to which all countries adhere. Countries lying closer to the upper right-hand corner show high levels of independence. Hence, Latvia, Luxembourg, Italy, and Hungary are identified as possessing the most independent oversight systems in terms of organisational independence from the accounting profession. The close positioning of the oversight systems of Luxembourg and Italy indicate similar institutional structures: they organise their audit oversight systems in the form of traditional regulatory agencies. Two indicators express the high organisational values of these countries in particular. First, one way of ensuring independence from the regulated industry is to maximise relational distance from the profession by excluding former employees of the accounting profession from being appointed as regulators, which is the case in these countries. Second, Italy and Luxembourg have multi-sector rather than single-sector agencies which offer greater independence than single-sector agencies. Hungary and Latvia have set up the oversight boards within the government, as a permanent internal structure of the Ministry of Finance (Latvia) and the Ministry for National Economy (Hungary). Hence, members of the oversight board are civil servants and employed directly by the ministries.

Interestingly, Sweden shows that the organisation of the audit oversight system as a government authority does not necessarily result in high independence values. The Swedish Supervisory Board is a governmental authority under the Ministry of Justice and is governed by its director, who is appointed by the government. However, a closer look reveals that within its organisation the Supervisory Board has a separate decision-making body, the Oversight Board, which has decision authority in the field of disciplinary actions against audit firms, and which shows relatively low independence values, based on the lack of cooling-off requirements for the members of the Board and the involvement of practising auditors. This is in line with Jonnergard (2012), who draws attention to the country's opaque regulatory system,

characterised by a strong regulatory intertwining between the state and the profession.

Denmark presents a similar case. The official audit oversight authority is the Danish Business Authority (DBA), which is a regulatory agency under the Ministry of Business and Growth. However, the main responsible actor for quality assurance is the Danish Supervisory Authority on Auditing (DSAA). Although, the DSAA is an organisational entity within the DBA, its board consists of honorary members. The low independence value can furthermore be explained by the absence of cooling-off provisions and by the high number of accountants on the board: four out of nine members have to be approved auditors.

The low independence value of the PCAOB is another striking finding. This is primarily due to the specific SOX provisions regarding the composition of the Board. First, two out of five members involved in the governance of the Board have to be certified public accountants. Second, only the chairman has to meet the cooling-off provisions stated in the SOX. The SOX restriction of the number of Certified Public Accountants on the Board to two members is perceived as an appropriate safeguard to avoid the Board being dominated by the regulated parties (Palmrose, 2013, p. 778). Nevertheless this ratio is among the highest in terms of the involvement of accounting professionals, compared to the European provisions. Given that the Board is central to the way the PCAOB implements SOX provisions, one could, at least partially, question the role of the PCAOB as the globally accepted benchmark of an entirely independent regulator.

The British Financial Reporting Council (FRC) became responsible for audit regulation in 2004. The FRC Board was a direct response to the developments in the U.S. (Eldaly, 2012), which is evidenced in relatively similar organisational structures, illustrated in the close positioning of the U.K. and the PCAOB in Figure 1. In contrast to other oversight authorities, only a majority of the overall 16 members of the Board must not be individuals who in the five years prior to appointment have been practising auditors. The average ranking in terms of organisational independence is mainly due to the fact that the profession funds half of the auditing and accounting costs of the FRC. This is in line with Eldaly (2012) who identified the dependence of the FRC's funding system on professional bodies as independence risk (Eldaly, 2012, p. 130), and with the FRC's perception that "the independence of the FRC as



oversight regulator for the audit profession is still governed by agreements with the profession that sometimes inappropriately limit its independence” (FRC, 2012, p. 11).

Finland and Ireland are the countries with the lowest values. By the mid-1990s, in Ireland the regulatory reforms altered the institutional arrangements of the country’s self-regulatory system and established the Irish Auditing and Accounting Supervisory Authority (IAASA). While at the time of establishment the institutional arrangements were more extensive than those of the majority of European countries, the analysis indicates that the Irish system has not kept pace with international and European regulatory developments (see also Canning and O’Dwyer, 2014, p. 25). Finland, already in 1924, decided that the supervision of the profession should be carried out by an external actor and transferred the task of supervising the profession to the Central Chamber of Commerce, a private organization with companies as members (Niemi and Sundgren, 2008, pp. 80, 96). Although critical voices have called for the removal of the oversight from the Chamber to a pure governmental body, the Chamber has remained the primary responsible entity to this day.

#### *Functional Independence*

Comparing all 28 profiles along the multidimensional scale, the analysis shows the topography illustrated in Figure 2.

*Please insert Figure 2 here*

Figure 2 shows less variation than the figure of the organisational profiles, thus indicating that the European audit oversight systems differ less significantly in terms of regulatory competences. Moreover, it reveals a fundamental difference between organisational and functional independence. While no single oversight system reaches the highest possible value concerning institutional independence, there are various countries with extremely high functional independence values (e.g. the FRC, the Commissione Nazionale per le Società e la Borsa (CONSOB) in Italy, the Commission de Surveillance du Secteur Financier (CSSF) in Luxembourg and the Authority for the Financial Markets (AFM) in the Netherlands).

The two extreme outliers here are Belgium and again Ireland. In both countries, the primary responsibility for all quality assurance of statutory auditors resides with the accountancy bodies that organise the inspections and issue penalties in the case of deficiency reports. As in Ireland, Belgium integrated external organizations, such as

the High Council for Economic Professions and other disciplinary bodies, into its oversight system before European law required the establishment of independent regulation. Observers therefore argued that the “Belgian profession was at the leading edge” with respect to external quality assurance (Vanstraelen and Willekens, 2008, p. 36). However, the analysis illustrates a very low degree of functional independence of the Belgian regulator, which supports prior research that claimed that the Belgian oversight system was made under strong influence of the profession (Vanstraelen and Willekens, 2008).

The Dutch system represents the counterexample, as the regulatory development took a very different course. Until 2006, no independent external oversight existed in the Dutch regulatory environment (Meuwissen and Wallage, 2008, p. 176). When, in 2006, the Authority for the Financial Markets (AFM) was declared as oversight body, the Dutch oversight system was transformed and regulatory power was transferred from the professional bodies to a purely regulatory agency.

#### *Material Independence*

With these results, it is possible to create one index of independence. For each country, the arithmetic mean is calculated from the POSAC values of the Organizational and Functional profiles in order to set up a rank order regarding the degree of material independence of the oversight systems (Appendix 3). For a graphical representation, the combined values are used to determine the positions of the systems on the y- and the x-axis of the diagram. The y-axis shows the combined values for the POSAC concerning the competences of the systems, the x-axis reveals the combined values for the organisational structure. In this diagram, the oversight systems with the highest level of independence are located in the upper right-hand corner.

*Please insert Figure 3 here*

The high variation—on both the y- and the x-axis—indicates that the oversight systems still differ significantly in terms of material independence. Countries with high independence values set up their oversight systems as administrative agencies (Hungary, Sweden) or as regulatory agencies (Luxembourg, Italy, the Netherlands).

The latter approach was put into practice by either adding audit oversight as an additional task to an already existing financial market supervisory authority, or by

establishing a new authority—which was the case of the PCAOB in the U.S. The essential feature of regulatory agencies is that the prime and final responsibilities are combined as they are responsible for all immediate operating tasks of public oversight. Hence, these agencies combine legislative, executive, and judicial functions, i.e. they define rules, supervise them, and introduce sanctions if necessary. In addition, these agencies have their own powers and responsibilities given under public law, are organisationally separated from ministries, and are neither directly elected nor managed by elected officials.

Apart from Hungary and Sweden, the audit oversight systems in Denmark, Latvia, and Malta are also organised in the form of a regulatory authority equipped with its own resources and staff. These entities are organised as “governmental authorities” under the Ministry of Justice (Sweden), Ministry of Economic and Business Affairs (Denmark), and the Ministry for National Economy (Hungary), or belong to the internal structure of a ministry, as is the case in Latvia. Hence, this approach involves highly politicised bodies. However, as can be seen in Denmark, this does not necessarily result in regulatory structures without interference of the profession.

Low material independence values can be found in particular for oversight systems that are either institutionalised as a monitored peer-review system or are situated within a chamber system (as is the case, for example, in Belgium, Croatia, Czech Republic, Finland, France, Lithuania, and Poland). A professional chamber is a corporation under public law that exercises some degree of regulatory authority over the accounting profession. However, chambers also function as traditional interest groups, and the close interrelation with, and dependence on the accounting profession might jeopardise the regulators’ service for public interest.

## **Conclusion**

Within the last decade, the audit regulation has changed significantly. By analysing the statutory provisions that describe the composition and the competences of audit oversight boards, this paper contributes empirically and methodologically to the ongoing debate on audit regulation.

The methodological aim was to develop a framework to measure the degree of independence of the PCAOB and recently established oversight bodies in the European Union. To this end, this paper offers a detailed operationalisation of audit oversight independence, leading eventually to a single index of material

independence. The empirical and methodological contribution is necessary as legal arrangements represent the “starting point” (Busuioc, 2009, p. 603) for further comparative audit oversight research that aims at investigating how these formal rules have been evolved in regulatory practice.

The empirical aim of this study was to shed light on the independence from the accounting profession of the various audit oversight authorities. In 2005, PCAOB member Daniel Goelzer said that “other countries have established (...) PCAOB-like inspection bodies. The days of unfettered self-regulation are coming to an end” (PCAOB founding member Daniel Goelzer, 2005). This study challenges this perception. Whereas all countries claim to possess formal independent oversight bodies, there is a visible gap between countries with comparatively strong independent oversight authorities, such as Italy and Luxembourg, and systems in which accounting bodies still maintain far-reaching regulatory influence, such as Ireland and Belgium.

By representing initial insights about the current mode of audit regulation, this study is a first step in comparative audit oversight research, and therefore points out to various research questions to be addressed in the future. First, this study does not differentiate between different segments of the accounting profession. However, in the new era of “post-professionalism” (Suddaby et al., 2007, p. 356), large and globally operating accounting firms have started to disconnect themselves from the majority of local audit firms by following their own strategic and regulatory agenda (Cooper and Robson, 2006; Covalleski et al., 2003; Suddaby et al., 2007). As anecdotal evidence from data used in this study indicates, particular representatives of the Big4 are involved in the governance of the oversight authority and in the organization of audit inspections. Future research has therefore to focus on the possible side effects of the overrepresentation of the Big4 (and the underrepresentation of small auditors) in regulatory affairs on the local context.

Second, further research should address the causes of significant variation of audit oversight structures. The analysis shows that some of the countries that implemented their oversight systems before the PCAOB came into existence, such as Ireland, Belgium, and Denmark, still possess public institutions that are close to the profession and have not left their chosen regulatory path. Further research could therefore elaborate on how relevant actors were able to secure this earlier mode of regulation and how these sectoral and national patterns intervene with European

regulatory harmonisation efforts. More in-depth analytical case studies are required to identify the factors and motives shaping audit oversight arrangements. This is particularly important for those countries in which a strong interrelation between the oversight authorities and the accounting profession has been identified. Future research has to identify the ways and mechanisms that have enabled this specific understanding of regulation to remain accepted by the regulatory community of statutory audit oversight, while being widely contested by the public and policy makers.

## Notes

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<sup>1</sup> The following countries did not respond to the research request: Spain, Slovenia, Portugal, Italy, Estonia and Cyprus. As it was neither possible to get in contact with the relevant authorities nor possible to identify the relevant regulatory provisions, the oversight board of Cyprus is not included in the analysis. The survey instrument can be received on request.

<sup>2</sup> Two research assistants were involved in the data collection. The coding process (i.e. the translation of the collected materials into the coding scheme), was only made by the author.

<sup>3</sup> This scale was used as the majority of variables had three indicators. In the case of four indicators, the scale was further differentiated (0.75 - 1.50 - 2.25 - 3.00).

<sup>4</sup> Gilardi (2002) points out that combining and weighing variables is unavoidably arbitrary. To cut this Gordian knot, this study attributes the same weight to each variable, which was done by others (Gilardi, 2002; Tenbücken and Schneider, 2004).

<sup>5</sup> Eldaly (2012) provides a useful analysis of the 11 core principles and their key features of the IFIAR (Eldaly, 2012, pp. 117–124).

<sup>6</sup> For the analysis, the software SYSTAT, Version 12 was used.

<sup>7</sup> Due to the reduction of ten dimensions to two, there is some error. The stress factor indicates that the percentage of the dimensions is not correctly represented after the reduction. A stress factor of <0.2 is considered to be acceptable for the POSAC.

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## Appendices

### Appendix 1: National oversight authorities

Austria	Austrian Auditors Supervisory Authority
Belgium	High Council for Economic Professions
Bulgaria	Commission for Public Oversight of Statutory Auditors
Czech Republic	Audit Public Oversight Council
Croatia	Audit Public Oversight Committee
Denmark	Danish Supervisory Authority on Auditing
Estonia	Auditors Activities Oversight Council
Finland	Auditing Board of the Central Chamber of Commerce
France	Haut Conseil du Commissariat aux Comptes
Germany	Auditor Oversight Commission
Greece	Hellenic Accounting and Auditing Standards Oversight
Hungary	Auditors' Public Oversight Committee
Italy	Commissione Nazionale per le Società e la Borsa
Ireland	Irish Auditing & Accounting Supervisory Authority
Latvia	The Authority of Audit and Accounting
Lithuania	The Authority of Auditing and Accounting
Luxembourg	Commission de Surveillance du Secteur Financier
Malta	Quality Assurance Oversight Committee
Netherlands	Netherlands Authority for the Financial Markets
Poland	Audit Oversight Commission
Portugal	National Audit Oversight Board
Romania	Council for the Public Oversight of the Activity of the Statutory Audit
Slovakia	Auditing Oversight Authority
Slovenia	Agency for Public Oversight of Auditing
Spain	Accounting and Auditing Institute
Sweden	Supervisory Board of Public Accountants
United Kingdom	Financial Reporting Council
United States	Public Company Accounting Oversight Board

## Appendix 2: Coding for Organisational Independence

	1	2	3	4	5	6	7	8	9	10
AT	3.00	1.00	1.00	1.00	1.00	3.00	3.00	0.75	3.00	0.75
BE	1.00	1.00	3.00	2.00	3.00	3.00	3.00	2.25	0.75	0.75
BG	3.00	1.00	3.00	2.00	3.00	1.00	1.50	1.50	2.25	1.50
HR	3.00	1.00	1.00	1.00	3.00	3.00	2.25	1.50	2.25	1.50
CZ	2.25	1.00	1.00	1.00	3.00	3.00	1.50	0.75	3.00	0.75
DK	0.75	1.00	1.00	1.00	1.00	3.00	0.75	0.75	2.25	0.75
EE	3.00	1.00	1.00	2.00	1.00	1.00	1.50	2.25	2.25	0.75
FI	0.75	1.00	1.00	1.00	1.00	1.00	1.50	0.75	1.50	0.75
FR	0.75	1.00	3.00	1.00	1.00	1.00	1.50	0.75	3.00	0.75
DE	0.75	1.00	1.00	2.00	1.00	3.00	3.00	2.25	2.25	3.00
GR	1.50	1.00	1.00	1.00	1.00	1.00	2.25	0.75	1.50	0.75
HU	3.00	3.00	3.00	1.00	3.00	3.00	3.00	2.25	1.88	1.88
IE	1.50	1.00	1.00	1.00	1.00	1.00	0.75	0.75	1.88	0.75
IT	2.25	3.00	3.00	1.00	3.00	3.00	3.00	0.75	3.00	3.00
LV	3.00	1.00	3.00	2.00	3.00	3.00	3.00	2.25	1.88	1.88
LT	3.00	1.00	1.00	2.00	1.00	1.00	0.75	1.50	1.50	0.75
LU	2.25	3.00	3.00	1.00	3.00	3.00	3.00	0.75	3.00	0.75
MT	1.85	1.00	1.00	2.00	1.00	1.00	0.75	2.25	1.50	0.75
NL	1.50	3.00	3.00	1.00	3.00	3.00	0.75	1.50	2.25	0.75
PT	2.25	1.00	1.00	1.00	3.00	1.00	1.50	0.75	0.75	0.75
PL	2.25	1.00	1.00	2.00	1.00	3.00	1.50	1.50	2.25	0.75
RO	1.50	1.00	1.00	1.00	1.00	1.00	1.50	0.75	1.50	1.50
SK	1.50	1.00	1.00	1.00	1.00	3.00	0.75	2.25	2.25	1.50
SI	2.25	1.00	3.00	2.00	1.00	1.00	3.00	2.25	3.00	0.75
ES	0.75	1.00	3.00	1.00	1.00	3.00	3.00	0.75	0.75	0.75
SE	0.75	3.00	3.00	3.00	2.00	3.00	1.50	0.75	1.50	0.75
UK	1.50	1.00	2.00	3.00	2.00	3.00	3.00	1.50	1.50	0.75
U.S.	3.00	1.00	3.00	3.00	3.00	3.00	0.75	0.75	2.25	1.50

- 1 Form of financing
- 2 Form of jurisdiction
- 3 Employment status of head
- 4 Cooling-off requirement for head
- 5 Employment status of board members
- 6 Nomination and/or appointment under influence of professional body
- 7 Practitioners involved in the governance of the board
- 8 Cooling-off requirement for board members
- 9 Term of office
- 10 Appointment of board members renewable

### Appendix 3: Coding for Functional Independence

	1	2	3	4	5
AT	3.00	0.75	3.00	3.00	0.75
BE	1.00	1.50	1.00	1.00	0.75
BG	1.00	3.00	3.00	3.00	0.75
HR	2.00	2.25	2.00	2.00	0.75
CZ	2.00	2.25	3.00	2.00	0.75
DK	3.00	3.00	3.00	3.00	0.75
EE	3.00	1.50	1.00	3.00	0.75
FI	2.00	3.00	3.00	3.00	0.75
FR	3.00	3.00	3.00	2.00	0.75
DE	2.00	3.00	3.00	2.00	0.75
GR	1.00	2.25	3.00	3.00	0.75
HU	2.00	3.00	3.00	3.00	0.75
IE	1.00	2.25	1.00	1.00	0.75
IT	3.00	3.00	3.00	3.00	0.75
LV	1.00	3.00	3.00	1.00	0.75
LT	2.00	0.75	3.00	2.00	0.75
LU	3.00	3.00	3.00	3.00	0.75
MT	3.00	3.00	3.00	3.00	0.75
NL	3.00	3.00	3.00	3.00	0.75
PT	1.00	0.75	3.00	3.00	0.75
PL	3.00	2.25	3.00	3.00	0.75
RO	2.00	2.25	2.00	2.00	0.75
SK	2.00	1.50	2.00	2.00	0.75
SI	1.00	2.25	3.00	3.00	0.75
ES	3.00	3.00	3.00	3.00	1.50
SE	3.00	3.00	3.00	3.00	3.00
UK	3.00	3.00	3.00	3.00	3.00
US	3.00	3.00	3.00	3.00	2.25

- 1 Registration of audit firms with PIE clients
- 2 Responsibility of inspections of audit firms with PIE clients
- 3 Responsible authority of inspection reports of audit firms with PIE clients
- 4 Operating authority of disciplinary measures for audit firms with PIE clients
- 5 Publication of inspection results of audit firms with PIE clients

### Appendix 3: Ranking of Material Independence

Ranking	Country	Organisational independence	Functional independence	Material independence
1	IT	0.85	0.92	0.89
2	LU	0.81	0.92	0.87
3	UK	0.73	1.00	0.87
4	SE	0.72	1.00	0.86
5	HU	0.85	0.84	0.84
6	US	0.69	0.98	0.83
7	NL	0.73	0.92	0.83
8	ES	0.62	0.95	0.78
9	MT	0.59	0.92	0.75
10	FI	0.66	0.84	0.75
11	PL	0.66	0.83	0.75
12	DE	0.80	0.69	0.74
13	BG	0.75	0.72	0.73
14	DK	0.49	0.92	0.71
15	SI	0.74	0.67	0.70
16	RO	0.83	0.58	0.70
17	FR	0.61	0.78	0.69
18	LV	0.78	0.60	0.69
19	EE	0.73	0.64	0.68
20	CZ	0.68	0.63	0.66
21	AT	0.66	0.63	0.64
22	SK	0.65	0.57	0.61
23	GR	0.55	0.67	0.61
24	LT	0.60	0.57	0.58
25	HR	0.56	0.58	0.57
26	PT	0.58	0.50	0.54
27	BE	0.75	0.32	0.53
28	IE	0.44	0.39	0.41

**Table 1: Coding for Organisational Independence**

Coding system			Coding source	
Variables	Indicators	Coding	Principles of audit regulation	Prior studies
Form of financing of governing body	Fully financed by government subsidy	3.00	IFIAR Core Principle 2; EU Regulation No 537/2014 (22)	Edwards and Waverman (2006); Gilardi (2005, 2002); Tenbücken and Schneider (2004)
	Government subsidy (major part) and levy of audit firms	2.25		
	Levy of audit firms (major part) and government subsidy	1.50		
	Levy of audit firms	0.75		
Employment status of head of governing body	Full-time	3.00	IFIAR Core Principles 5 and 6	Cukierman et al. (1992); Gilardi (2005, 2002); Elgie and McMenamin (2005)
	Part-time	2.00		
	Honorary member	1.00		
Cooling-off requirement for head of governing body	Head was and is a non-practitioner	3.00	IFIAR Core Principles 2, 5 and 6	
	Cooling-off period between two and five years	2.00		
	No provision exists	1.00		
Employment status of board members of the governing body	Employed by the POB	3.00	IFIAR Core Principles 5 and 6	Gilardi (2005, 2002); Elgie and McMenamin (2005)
	Part-time	2.00		
	Honorary member	1.00		
Appointment of board members under influence	No	3.00	IFIAR Core Principle 5; EU Directive 2014/56/EU (18)	Edwards and Waverman (2006); Elgie and McMenamin (2005); Smithey and Ishiyama (2000)
	Yes	1.00		
Number of practising auditors involved in the governing body	None	3.00	IFIAR Core Principle 2; EU Regulation No 537/2014 (22); EU Directive 2014/56/EU (8)	Gilardi (2002, 2005); Edwards and Waverman (2006)
	0 %–14 % of board members	2.25		
	15 %–29 % of board members	1.50		
	30 %–49 % of board members	0.75		
Cooling-off requirement for members of the governing body	All members were and are non-practitioners	3.00	IFIAR Core Principle 2; EU Regulation No 537/2014; EU Directive 2014/56/EU (18)	
	Cooling-off period between two and five years for all	2.25		
	Cooling-off period for 'majority' of board members	1.50		
	No provision	0.75		
Form of jurisdiction of oversight entity	Multi-sector jurisdictions	3.00		Tenbücken and Schneider (2004); Edwards and Waverman (2006); Maggetti (2007)
	Single-sector jurisdictions	1.00		
Term of office for members of governing body	>6	3.00		Smithey and Ishiyama (2000); Tenbücken and Schneider (2004); Elgie and McMenamin (2005); Edwards and Waverman (2006)
	Four or five years	2.25		
	Two or three years	1.50		
	No fixed term	0.75		
Re-appointment provisions of board members	No	3.00		Smithey and Ishiyama (2000); Tenbücken and Schneider (2004); Elgie and McMenamin (2005); Edwards and Waverman (2006)
	Yes, once	2.25		
	Yes, twice	1.50		
	No provision or indefinite	0.75		

**Table 2: Coding for Functional Independence**

Coding system			Coding source	
Variables	Indicators	Coding	Principles of audit regulation	Prior studies (on competencies of regulatory authorities)
Registration of audit firms	Professional Oversight Board	3.00	IFIAR Core Principle 2; EU Directive 2006/43/EC (19)	Cukierman et al. (1992); Gilardi (2005, 2002); Elgie and McMenamin (2005); Smithey and Ishiyama (2000); Edwards and Waverman (2006)
	National Chamber of Auditors/Accountants	2.00		
	Accounting association	1.00		
Responsibility of conducting inspections	Inspectors directly employed by the oversight	3.00	IFIAR Core Principles 2, 4, 8; EU Regulation No 537/2014 (22), (24)	Cukierman et al. (1992); Gilardi (2005, 2002); Elgie and McMenamin (2005); Smithey and Ishiyama (2000); Edwards and Waverman (2006)
	Inspectors employed by the accounting	2.25		
	Combination of reviewers and employed	1.50		
	Peer reviewers	0.75		
Responsible authority of inspection reports	Professional Oversight Board	3.00	IFIAR Core Principle 2	Cukierman et al. (1992); Gilardi (2005, 2002); Elgie and McMenamin (2005); Smithey and Ishiyama (2000); Edwards and Waverman (2006)
	National Chamber of Auditors/Accountants	2.00		
	Accounting association	1.00		
Operating authority of disciplinary measures	Professional Oversight Board	3.00	IFIAR Core Principle 4; EU Regulation No 537/2014 (22)	Cukierman et al. (1992); Gilardi (2005, 2002); Elgie and McMenamin (2005); Smithey and Ishiyama (2000); Edwards and Waverman (2006)
	National Chamber of Auditors/Accountants	2.00		
	Accounting association	1.00		
Publication of inspection results	Yes	3.00	IFIAR Core Principle 3	
	Only in the event of serious deficiencies	2.00		
	No	1.00		

Figure 1: Organisational Profiles (Stress Level: 0,1)

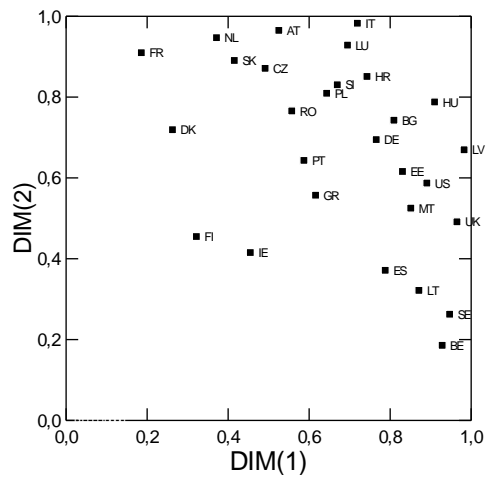


Figure 2: Functional Profiles (Stress Level: 0,1)

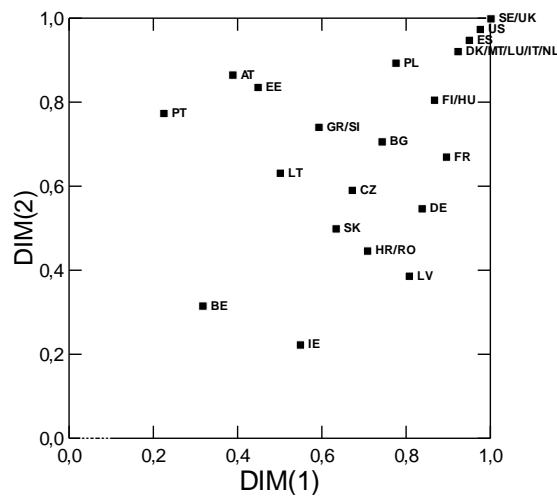


Figure 3: Material Independence of audit oversight boards

