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# Audit Firm Governance: Do Transparency Reports Reveal Audit Quality?

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**SUMMARY:** As a result of legal and regulatory requirements, audit firms in certain jurisdictions have recently started issuing transparency reports containing information on audit firm governance. In this study we investigate whether audit firm governance disclosure is associated with actual audit quality. Based on a sample of transparency reports of 103 audit firms in a number of EU countries, we find that there is variation in the extent and type of governance disclosures across audit firms. We, however, do not find an association with actual audit quality, apart from a weak association with an audit firm's statement on the effectiveness of its internal quality control system.

**Keywords:** corporate governance; audit firm; transparency report.

**Data Availability:** All data are available from public sources indicated in the study.

## INTRODUCTION

Audit quality research has a long history (e.g., Francis 2011). This is not surprising as audit quality is the *raison d'être* of the audit market: the audit has no value without public trust in the quality of the audit (e.g., Maijoor and Vanstraelen 2012). Similarly, audit quality is an important area of concern for regulators because credible financial reporting is considered to be essential for the well functioning of the capital market (e.g., Bolkestein 2003). In the aftermath of the high-profile corporate failures at the beginning of the twenty-first century and the recent financial crisis, we observe that regulators perceive increased pressure for more intervention (e.g., FRC 2006; EC 2010; PCAOB 2011).

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Regulators in a number of jurisdictions have begun (or are considering) requiring certain audit firms to issue transparency reports containing information on audit firm governance. In this regard, the European Union can be considered a front-runner. In its Eighth EU Directive the EU requires statutory auditors of Public Interest Entities (PIEs)[1] to publish, as of June 2008, annual transparency reports disclosing certain information relating to, for example: their legal structure and ownership; governance structure; internal quality control system; quality assurance review; education and independence practices; and partner remuneration. In the U.S., the Advisory Committee on the Auditing Profession has issued a recommendation to the PCAOB in 2008 to take similar action, but the PCAOB has not yet followed suit.[2]

The regulators' underlying motivation to require audit firms to issue public transparency reports is that more transparency on audit firm governance is expected to reveal audit quality and allows differentiation between audit firms. Specifically, as the governance of audit firms is perceived to have a significant influence on audit quality, transparency on audit firm governance may enable market participants to differentiate among audit firms, which in turn is expected to provide incentives for audit firms to increase audit quality (IOSCO 2009).

In this study, we test whether the conjecture holds that transparency on audit firm governance reveals audit quality. Specifically, we test whether there is variation in audit firm governance disclosure across audit firms and, if so, whether this variation is associated with actual audit quality, based on widely used audit quality measures. To this end, we examine transparency reports of 103 audit firms in a number of EU countries (Austria, Germany, The Netherlands, and the U.K.).[3] We assess disclosure using a self-constructed transparency report disclosure score. This score is based on current regulatory requirements, guidance by national oversight bodies, expert opinions, international standards, and our own review of transparency reports. In our main analyses, we focus on those governance disclosure items that are most likely to be informative about audit quality. In particular, we focus on policies and procedures relating to (1) auditor continuous education, (2) auditor independence, and (3) audit firms' internal quality control systems.

The results of our study show that there is variation in the extent and type of disclosures across audit firms, suggesting that transparency reports are not merely a fulfillment of minimum legal disclosure requirements. At the same time, however, we find that in general, audit firm governance disclosure contained in audit firm transparency reports is not associated with actual audit quality. We only find a weak association between an audit firm's statement on the effectiveness of its internal quality control system and actual audit quality.

This study is the first to examine whether the audit firm governance disclosures contained in transparency reports enables audit quality differentiation among audit firms.[4] Our findings have

[1] Article 2 (13) of the Eighth EU Directive defines Public Interest Entities as "entities governed by the law of a Member State whose transferable securities are admitted to trading on a regulated market of any Member State."

[2] Despite the controversy on the topic in the U.S., Deloitte LLP was the first global network in the U.S. to publish a report in 2010 entitled "Advancing Quality through Transparency" containing information including governance, ethical principles, independence, quality controls, and legal structure (Bedard et al. 2010).

[3] The choice of countries included in the sample is pragmatic, as we need to master the language in which the transparency reports are issued, which are Dutch, German, and English. We exclude countries that have multiple official languages such as Switzerland (German, French, and Italian) and Belgium (Dutch, French, and German) because transparency reports of the same firm may not reflect the same message in different languages.

[4] Prior research on transparency reporting is very limited. A notable exception is Pott et al. (2008), who investigate how practitioners assess the effectiveness of several aspects of transparency reporting in improving auditor independence. Petersen and Zwirner (2009) examined a sample of transparency reports of German audit firms, finding that the extent of disclosures varies across firms and is positively correlated with a proxy for audit firm size. In The Netherlands, Pheijffer (2010) studied the transparency reports of the Big 4 audit firms and concluded that the Dutch Big 4 audit firms meet the minimum legal disclosure requirements.

important policy implications, and the transparency disclosure score that is developed in this study may prove useful for future research in this area.

The remainder of this study is organized as follows. The next section describes the background of this study and develops the underlying theory and research questions. The third section outlines the research design including the transparency report disclosure score, empirical models, and the sample that is used to test the models. The fourth section presents the results of our empirical tests and the fifth section concludes the study.

## BACKGROUND AND DEVELOPMENT OF RESEARCH QUESTIONS

Audit regulators as well as audit professionals have argued that greater audit firm transparency (on, for example, audit policies, processes and methodologies, management and governance, and revenues) can bolster confidence in audit quality (e.g., Wyman 2004). In order to increase transparency of audit firms, regulators in a number of jurisdictions now mandate, or are considering mandating, audit firm transparency reports. The EU was one of the first to do so.[5] In Article 40, entitled "Transparency Report," of its Eighth Directive (2006), the EU requires disclosures on audit firm governance from audit firms with PIE clients on the following items: (a) a description of the legal structure and ownership; (b) when the audit firm belongs to a network, a description of the network and the legal and structural arrangement in the network; (c) a description of the governance structure of the audit firm; (d) a description of the internal quality control system of the audit firm and a statement by the administrative or management body on the effectiveness of its functioning; (e) an indication of when the last quality assurance review took place; (f) a list of public interest entities for which the audit firm has carried out statutory audits during the preceding financial year; (g) a statement concerning the audit firm's independence practices, which also confirms that an internal review of independence compliance has been conducted; (h) a statement on the policy followed by the audit firm concerning the continuing education of statutory auditors; (i) financial information showing the importance of the audit firm; and (j) information concerning the basis for the partners' remuneration.[6]

The reporting requirements on audit firm governance stipulated in Article 40 leave audit firms with considerable reporting discretion. For example, an audit firm may choose to provide a detailed description of its systems and procedures in place and the functioning of these systems and procedures, or alternatively may limit itself to a mere compliance check with legal requirements such as statements confirming that certain policies or procedures exist and/or comply with laws and regulations. This leads us to the central question of this study: Does audit firm governance disclosure in transparency reports enable audit quality differentiation among audit firms? The answer to this question can only be affirmative when two conditions are met. First, there needs to be variation in the extent and type of disclosures contained in transparency reports of audit firms. Second, the observed variation in disclosure has to be a signal of the underlying audit quality delivered by the firm. Therefore, we formulate the following two research questions:

**RQ1:** Is there variation in the extent and type of disclosures contained in audit firm transparency reports?

**RQ2:** Are the extent and type of disclosures contained in audit firm transparency reports associated with actual audit quality?

[5] The CPA Act in Japan, also in force since 2008, has requirements similar to those contained in Article 40 of the EU Directive. Other countries (e.g., Canada) also require transparency disclosure, but to a decidedly lesser extent (and mostly not publicly available).

[6] These items are listed in Appendix A and are based on guidance by national oversight bodies, expert opinions, and international standards (e.g., IFAC's International Standard on Quality Control 1 and Code of Ethics for Professional Accountants, see IFAC 2009, 2010), as well as an initial review of transparency reports.

Following economic theory, audit firms will assess the costs and benefits of disclosure in transparency reports. It can be expected that the outcome of this cost-benefit analysis differs across audit firms due to specific audit firm characteristics. Disclosure costs are likely to be higher for smaller audit firms. In terms of benefits, enhanced transparency of audit firms may increase investor confidence in the financial reporting of its clients. This is to the benefit of both the client company (e.g., lower risk premium) and the auditor (e.g., positive influence on audit committee decisions on auditor appointment and shareholder ratification of auditor selection). In this study we examine whether transparency reports are used as a differentiation strategy and a tool to signal audit quality, or whether they are merely a fulfillment of minimum legal requirements. The outcome is *a priori* unclear. Given that transparency reports did not voluntarily emerge in the audit market, it could be argued that the incentives to do so were, and continue to be, perceived to be limited. One reason could be that audit firms, while internally assessing and managing audit quality, are not convinced that information about governance and professional practices is meaningful or convenient for public disclosure. Some market participants also expressed concern about the value of disclosures contained in transparency reports, as these may be nothing more than marketing for audit firms (IOSCO 2009). In addition, the reliability of disclosures contained in transparency reports of audit firms is currently not monitored, which may result in misleading or inaccurate disclosures. Further, disclosure on audit firm governance will not reveal audit quality when audit firms with weaker governance practices engage in mimicking behavior or issue boilerplate statements.

Alternatively, one could argue that in a setting where transparency reports become mandatory, this is likely to create new incentives for audit firms whereby high-quality audit firms may want to signal their high-quality status to the market, and therefore can be expected to report in a more transparent way. As sound governance practices of audit firms are perceived to have a significant influence on audit quality (IOSCO 2009), it can be expected that there is an association between audit firm governance disclosure and actual audit quality.

## RESEARCH DESIGN

### Transparency Report Disclosure Score

All information items (a) to ( j) stipulated in Article 40 of the EU Directive (and listed in more detail in Appendix A) could, in theory, be informative about audit quality and therefore be included in our Transparency Report Disclosure Score (*TRDS*) to study the relationship between disclosures in the transparency report and audit quality. However, in developing *TRDS* we focus on those information items that we consider to be most likely to be informative about audit quality.[7] Specifically, we focus on information on policies and procedures relating to (1) continuous education (item (h)), (2) independence (item (g)), and (3) internal quality control systems (item (d)). The first two categories are derived from DeAngelo (1981), who defined audit quality as a function of auditor competence and auditor independence. The third category relates to the monitoring of these two key components of audit quality. Like competence and independence, the way in which audit firms implement and monitor internal quality control systems can directly affect audit quality (IOSCO 2009). Consequently, these disclosures can potentially provide insights on the quality of audit practice.

For each of the above mentioned disclosure categories, we examined the transparency reports in our sample for the presence or absence of the elements pertaining to each disclosure category, subject to the applicability of the element to the audit firm. For each item (d), (g), and (h) we then computed a disclosure score by dividing the number of elements disclosed on each item by the

[7] As further discussed in the "Sensitivity Analyses" section, our conclusions are identical when we include all information items in a transparency report disclosure score.

number of applicable elements, resulting in *Score_D1*, *Score_D2*, *Score_D3*, *Score_D4*, *Score_G*, and *Score_H*, each ranging from 0 (no disclosure) to 1 (full disclosure).[8]

To create a valid and reliable disclosure measure from these scores, we carry out our data analysis in accordance with the two-step methodology of structural equation modeling (SEM) in which the measurement model is first developed and evaluated separately from the full structural equation model (Andersen and Gerbing 1988).

In developing the measurement model, we establish the unidimensionality, validity, and reliability of our disclosure construct with confirmatory factor analysis (CFA) using STATA software (Version 12).[9] The estimation method that we employ is maximum likelihood (ML).[10] As depicted in Figure 1, the measurement model specifies the hypothesized link between the observed variables *Score_D1*, *Score_D2*, *Score_D3*, *Score_D4*, *Score_G*, and *Score_H*, and the underlying constructs they are designed to reflect, the unobserved latent variables *IQCS* (Internal Quality Control System disclosure score) and *TRDS* (Transparency Report Disclosure Score). In our model, *IQCS* is a first-order latent construct that explains *Score_D1*, *Score_D2*, *Score_D3*, and *Score_D4*. *TRDS* is a second-order latent construct that explains *IQCS*, *Score_G*, and *Score_H*.

Figure 1 summarizes the CFA results for the measurement model. Standardized regression weights vary between 0.47 and 0.85 and are highly significant ($p < 0.01$). The Chi-square statistic and other goodness-of-fit statistics indicate that the model achieves an adequate fit to the data, thus satisfying the conditions of unidimensionality.[11] Turning to assessment of validity, the values of average variance extracted (AVE) reveal that both constructs exceed the minimum value of 0.50 indicated by Fornell and Larcker (1981), implying that the variance captured by the constructs is greater than the variance due to measurement error. Finally, composite reliability (CR) values exceed the minimum value of 0.70 for reliability suggested by Nunnally (1978).[12] Hence, we conclude that the disclosure measure *TRDS* that we developed can be used in a structural model, and include it in our empirical models discussed below.

## Empirical Models

To answer our research questions, we define two empirical models: (1) a model to examine the variation in disclosure contained in audit firm transparency reports; and (2) a model to

[8] As shown in Appendix A, item (d) contains a large number of information items on conceptually different aspects of internal quality control systems. To better reflect these different aspects and also to balance the number of items per category, we subdivide this category into: (1) human resources (item (d-1)), (2) engagement performance (item (d-2)), (3) monitoring compliance with the firm's quality control policies and procedures (item (d-3)), and (4) other information about the internal quality control system (item (d-4)).

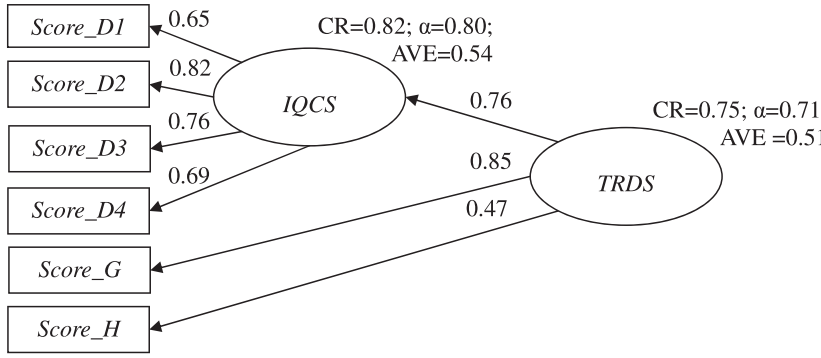
[9] We also ran our analyses using AMOS (Version 19). Our findings are not sensitive to the particular SEM application used.

[10] Tests for multivariate normality show no indication of non-normality. Hence, the use of ML is appropriate (see e.g., Byrne 2010). To assess statistical power, we employed the method developed by MacCallum et al. (1996). The results of this test (not reported) indicate adequate power.

[11] A non-significant Chi-square statistic is indicative of adequate fit. Because of the limitations of the Chi-square statistic, however, other fit indices were also examined to obtain a better picture of model fit. Hu and Bentler (1999) show that it is best to rely on multiple goodness-of-fit measures from different families of fit indices. Although they note that it is difficult to designate specific cutoff values, their results indicate that generally CFI $\geq 0.95$, RMSEA $\leq 0.06$, and SRMR $\leq 0.08$ are needed to conclude that there is a relatively good fit between the hypothesized model and the observed data. Because Hu and Bentler (1999) further caution that RMSEA tends to over-reject true-population models in case the sample size is relatively small, the fact that the value for RMSEA reported in Figure 1 is slightly above the cutoff value is not of major concern. When we analyze the first-order *IQCS* factorial structure separately, fit indices show close fit: Chi-square (2) = 2.17 ($p = 0.34$); CFI = 0.99; RMSEA = 0.03; SRMR = 0.02. CR, alpha and AVE values for *IQCS* are identical when we test this first-order factorial structure separately.

[12] Cronbach's alpha values also exceed 0.70 for both constructs. However, see Raykov (1997, 1998) for a discussion on the drawbacks of Cronbach's alpha, some of which apply to our setting.

**FIGURE 1**
**CFA Results for Measurement Model *TRDS***
**n = 103**




All factor loadings are significant at $p < 0.01$.
Goodness-of-fit Statistics: $\chi^2(8) = 14.41$ ($p = 0.072$); Goodness-of-Fit Index (GFI) = 0.957; Comparative Fit Index (CFI) = 0.969; Root Mean Square Error of Approximation (RMSEA) = 0.088; Standardized Root Mean Square Residual (SRMR) = 0.039.
CR = Composite reliability; α = Cronbach's coefficient alpha; AVE = Average variance extracted.

Variable Definitions:
*TRDS* = transparency report disclosure score (second-order latent variable);
*IQCS* = internal quality control system disclosure score (first-order latent variable);
*Score_D1* = score on internal quality control policies and procedures relating to human resources;
*Score_D2* = score on internal quality control policies and procedures relating to engagement performance;
*Score_D3* = score on internal quality control policies and procedures relating to monitoring compliance with the firm's quality control policies and procedures;
*Score_D4* = score on other information about the internal quality control system;
*Score_G* = score on policies and procedures relating to independence; and
*Score_H* = score on policies and procedures relating to continuous education.

assess whether transparency disclosure is associated with actual audit quality. In the first model we relate transparency disclosure to a number of audit firm characteristics. We proxy for audit firm transparency disclosure by means of the transparency report disclosure score (*TRDS*) discussed above. In the second model we relate actual audit quality to this same transparency report disclosure score, as well as a number of control variables. We measure actual audit quality by abnormal accounting accruals as a proxy for the extent of client earnings management. The extent of client earnings management, and especially the abnormal accounting accruals proxy, is widely used to infer differences in audit quality (e.g., Becker et al. 1998; Carey and Simnett 2006; Francis and Wang 2008).[13] Both of our models are discussed in more detail below.

[13] The underlying premise for the use of this proxy is that, "all things being equal, earnings with relatively larger amounts of accruals are presumed to be inherently less reliable and more likely to be the result of opportunistic discretion by managers in applying accrual-based accounting" (Francis et al. 2009, 53), and that higher quality auditing will be reflected in less earnings management and therefore lower abnormal accounting accruals (Becker et al. 1998).

### *Transparency Report Disclosure Model*

To explore the determinants of *TRDS* at the audit firm level, our structural model is specified as follows:

$$TRDS = \beta_1 LNREV + \beta_2 BIG4 + \beta_3 NETW + \beta_4 UK + \beta_5 NL + \beta_6 AT + \beta_7 FIRST + \delta. \quad (1)$$

We consider two variables that are related to audit firm size: the natural logarithm of total revenues of an audit firm as reported in its transparency report (*LNREV*),[14] and a dummy variable with a value of 1 if an audit firm is a Big 4 auditor (*BIG4*), and 0 otherwise. Smaller audit firms have relatively high information production costs and the benefits of disclosure may be relatively low because their disclosures are of interest to fewer stakeholders. Compared to larger audit firms, smaller firms are also subject to less public scrutiny. Besides audit firm size, we also examine whether audit firm network membership is associated with *TRDS*. Network member firms may want to signal to stakeholders that they have common standards regarding internal quality control, and shared audit methodologies and professional resources that potentially lead to higher audit quality. We define *NETW* as a dummy variable that has a value of 1 if an audit firm reports that it belongs to a network, based on the definition of the IFAC Code of Ethics (IFAC 2010) and the Eighth EU Directive, and 0 otherwise. To test for differences in *TRDS* as a result of differences in national audit firm disclosure requirements, we include three dummy variables for the U.K. (*UK*), The Netherlands (*NL*), and Austria (*AT*).[15] Finally, we include a dummy variable *FIRST* in our model with a value of 1 if the examined transparency report is the first report that is issued by the audit firm, and 0 otherwise. We expect that *TRDS* is lower in the first year due to the fact that audit firms lack experience and also because information production costs may be relatively high in the first year of reporting compared to later years.

### *Earnings Management Model*

We estimate the following earnings management model to test whether disclosures contained in audit firm transparency reports are associated with actual audit quality:

$$\begin{aligned} |AWCA| = {} & \beta_0 + \beta_1 TRDS + \beta_2 BIG4 + \beta_3 LNSIZE + \beta_4 GROWTH + \beta_5 |OCF| + \beta_6 LEV \\ & + \beta_7 LOSS + \beta_8 STD\_SALES + \beta_9 STD\_CF + \beta_{10} - \beta_{12} COUNTRY \\ & + \beta_{13} - \beta_{19} INDUSTRY + \varepsilon. \end{aligned} \quad (2)$$

The dependent variable $|AWCA|$ is the level (absolute value) of client firms' abnormal working capital accruals, scaled by lagged total assets, and is our measure of the extent of client firms' earnings management.[16] We focus on abnormal working capital accruals because those are more

[14] Note that these revenues include revenues from all of the audit firm's clients, i.e., both publicly listed and private clients.

[15] We do not formulate expectations for country differences. On the one hand, due to more extensive audit firm disclosure guidelines in Germany and (to somewhat lesser extent) Austria, we expect the extent of reporting to be higher in these countries compared to the U.K. and The Netherlands. On the other hand, based on prior research, one could expect differences in corporate transparency across countries (e.g., Bushman et al. 2004), where transparency is highest in the U.K., and then The Netherlands, and then Germany (note that Austria was not included in Bushman et al. 2004). Besides, audit firms with a global network could have similar guidelines for the transparency report across countries, thereby mitigating the effect of national disclosure requirements.

[16] The abnormal working capital accruals model based on DeFond and Park (2001) is commonly used in studies relating to European and other non-U.S. countries (e.g., Carey and Simnett 2006; Francis and Wang 2008). As discussed in the next section, in sensitivity analyses we re-estimated the earnings management model using two alternative measures of abnormal total accruals: a measure based on the performance-adjusted Jones model (Jones 1991; Francis and Yu 2009), and a measure based on Francis and Wang (2008).

likely to be managed than non-working capital accruals (e.g., DeFond and Jiambalvo 1994). Abnormal working capital accruals are computed as the difference between actual and expected non-cash working capital, where expected working capital is a fixed proportion of sales (DeFond and Park 2001):

$$AWCA_t = WC_t - [(WC_{t-1}/Sales_{t-1}) * Sales_t], \quad (3)$$

where $WC$ = non-cash working capital = (Current Accruals − Cash) − (Current Liabilities − Short Term Debt). Subsequently, the abnormal working capital accruals are scaled by lagged total assets. In our tests, we use the absolute value of abnormal working capital accruals because firms may have incentives to manage earnings either upward or downward (e.g., Menon and Williams 2004; Francis and Yu 2009; Prawitt et al. 2009).

Our test variable in Equation (2) is *TRDS*, the transparency report disclosure score discussed above. To the extent that disclosures in transparency reports reveal actual audit quality, we expect *TRDS* to be negatively associated with $|AWCA|$. Our control variables are in line with prior research and include measures of audit firm size (*BIG4*); client size (*LNSIZE*); client sales growth (*GROWTH*); client cash flow performance ($|OCF|$); client leverage (*LEV*); client earnings performance (*LOSS*); client sales and cash flow volatility (*STD_SALES* and *STD_CF*); and client country (*COUNTRY*) and client industry (*INDUSTRY*) dummies.[17]

## Sample and Data Collection

To conduct our empirical tests, we need data on both audit firm transparency disclosures and client firm characteristics.

First, we collected public audit firm transparency reports issued in four EU countries: Austria, Germany, The Netherlands, and the U.K.[18] Our starting point for collecting the reports was the listings of PIE auditors obtained from the respective audit firm oversight bodies in our sample countries.[19] We then located transparency reports for the financial year 2008 for the audit firms on those listings via the websites of the audit firms, from the public oversight bodies, and—on rare occasions—via emails to audit firms.

Next, we collected information on the publicly listed client firms of the audit firms with transparency reports from the Worldscope database. Because auditor identity information was missing for a number of clients, we hand-collected this information from these firms' financial reports. We have excluded clients in the utilities and financial industries due to the difficulty of estimating abnormal accruals for these industries (e.g., Francis and Yu 2009).

Combining our two samples resulted in a final sample of 103 audit firms and 1,373 client firms for which all data required for our analyses are available. Table 1 shows the country distribution (both audit and client firms) and industry distribution (client firms only) for our final sample.

[17] For argumentation and expected signs see e.g., DeAngelo et al. 1994; DeFond and Jiambalvo 1994; Dechow et al. 1995; Becker et al. 1998; Menon and Williams 2004; Francis and Wang 2008; Francis and Yu 2009; and Prawitt et al. 2009.

[18] As indicated in footnote 3, language barriers prevented us from increasing the number of countries in our sample and we also exclude countries that have multiple official languages.

[19] In Austria, this is the Austrian Audit Quality Control Oversight Board (Qualitätskontrollbehörde für Abschlussprüfer und Prüfungsgesellschaften) of the Federal Ministry of Economics and Labour (Bundesministerium für Wirtschaft, Familie, und Jugend); in Germany the Chamber of Public Accountants (Wirtschafstprüferkammer); in The Netherlands the Authority of Financial Markets (Autoriteit Financiële Markten); and in the U.K. the Public Oversight Board of the Financial Reporting Council.

**TABLE 1**

**Sample Information on 103 Audit Firms and 1,373 Client Firms**

**Panel A: Audit Firm Country Distribution**

| Country | | |
|---|---|---|
| Austria | 4 | (4%) |
| Germany | 71 | (69%) |
| The Netherlands | 7 | (7%) |
| U.K. | 21 | (20%) |
| Total | 103 | (100%) |

**Panel B: Client Firm Country Distribution**

| Country | | |
|---|---|---|
| Austria | 16 | (1%) |
| Germany | 406 | (30%) |
| The Netherlands | 75 | (5%) |
| U.K. | 876 | (64%) |
| Total | 1,373 | (100%) |

**Panel C: Client Firm Industry Distribution**

| Industry (Based on SIC Codes) | | |
|---|---|---|
| Agriculture, forestry, and fishing (SIC 0) | 9 | (1%) |
| Mining and construction (SIC 1) | 136 | (10%) |
| Manufacturing (SIC 2 and 3) | 581 | (42%) |
| Trade (SIC 5) | 182 | (13%) |
| Services (SIC 7 and 8) | 463 | (34%) |
| Public Administration (SIC 9) | 2 | (0%) |
| Total | 1,373 | (100%) |

## RESULTS

### Transparency Report Disclosure Model

#### *Descriptive Statistics*

Table 2 displays the descriptive statistics for all variables in the transparency report disclosure model. Overall, audit firms meet the minimum legal disclosure requirements. However, the descriptive statistics of *TRDS* indicate that there is considerable variation in the disclosure score of the audit firms in the sample.[20] Values of *TRDS* range from −1.831 to 1.780, and the standard deviation of *TRDS* is 0.897.[21] Untabulated results show that there is also substantial variation in the individual item scores.

[20] The descriptive statistics of *TRDS* in Table 2 are based on the factor score calculated for this latent variable in the measurement model (discussed in the "Research Design" section).

[21] When we partition the sample into Big 4 (n = 18) and non-Big 4 audit firms (n = 85), we find that the mean (standard deviation) of *TRDS* is 0.744 (0.494) and −0.158 (0.885), respectively. Mean and variance comparison tests reveal that the difference in mean and standard deviation is significant across both groups ($p < 0.01$). So, while there is considerable variation in *TRDS* within both groups of audit firms, the mean (standard deviation) of *TRDS* is higher (lower) for Big 4 audit firms than for non-Big 4 audit firms.

**TABLE 2**

**Descriptive Statistics of Variables in Transparency Reporting Model (n = 103)**

| Variables | Mean | Median | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| *TRDS* | 0.0000 | 0.1172 | 0.8966 | −1.8309 | 1.7795 |
| *LNREV* | 9.4589 | 9.3611 | 2.3211 | 5.2523 | 14.6319 |
| *REV* | 157,691 | 11,627 | 418,697 | 191 | 2,262,305 |
| *BIG4* | 0.1748 | 0.0000 | 0.3816 | 0.0000 | 1.0000 |
| *NETW* | 0.6990 | 1.0000 | 0.4609 | 0.0000 | 1.0000 |
| *UK* | 0.2039 | 0.0000 | 0.4049 | 0.0000 | 1.0000 |
| *NL* | 0.0680 | 0.0000 | 0.2529 | 0.0000 | 1.0000 |
| *AT* | 0.0388 | 0.0000 | 0.1941 | 0.0000 | 1.0000 |
| *FIRST* | 0.1359 | 0.0000 | 0.3444 | 0.0000 | 1.0000 |

Variable Definitions:
*TRDS* = transparency report disclosure score (factor score);
*LNREV* = natural logarithm of total revenues (in €000) of the audit firm;
*REV* = total revenues (in €000) of the audit firm;
*BIG4* = dummy variable with a value 1 if the audit firm is a Big 4 auditor, and 0 otherwise;
*NETW* = dummy variable with a value 1 if the audit firm belongs to a network, and 0 otherwise;
*UK* = dummy variable with a value 1 if the audit firm is registered in the U.K., and 0 otherwise;
*NL* = dummy variable with a value 1 if the audit firm is registered in The Netherlands, and 0 otherwise;
*AT* = dummy variable with a value 1 if the audit firm is registered in Austria, and 0 otherwise; and
*FIRST* = dummy variable with a value of 1 if the transparency report is the first report that is issued by the audit firm, and 0 otherwise.

Pair-wise correlations (untabulated) among all variables in our transparency reporting model show that *TRDS* is significantly positively associated with *LNREV* ($p < 0.01$), *BIG4* ($p < 0.01$), and *NETW* ($p < 0.05$), and significantly negatively associated with *UK* ($p < 0.01$) and *FIRST* ($p < 0.01$), providing preliminary support for some of our expectations.

### *Multivariate Results*

Table 3 shows the results of estimating the transparency reporting model using SEM.[22] The model has an acceptable fit and an overall $R^2$ of 0.586. While we find no significant association between *TRDS* and *NETW*, the results show that *TRDS* is significantly positively associated with *LNREV* ($p < 0.01$) and *BIG4* ($p < 0.05$). We interpret this as evidence that larger audit firms are more transparent than smaller audit firms, in line with our expectation. The results further indicate that there is significantly more disclosure in Germany compared to the U.K. ($p < 0.01$) and The Netherlands ($p < 0.01$), but that disclosure in Germany is not significantly different from Austria.[23] We attribute this result to the more extensive audit firm disclosure guidelines in Germany and Austria compared to the U.K. and The Netherlands. The negative association between *TRDS* and *FIRST* ($p < 0.05$) confirms our expectation that the extent of reporting is lower in the first year of reporting.

[22] Results based on ordinary least squares (OLS) with White's corrected standard errors are very similar and lead to identical conclusions for all variables in the model.

[23] Further tests (not tabulated) indicate that there is weakly significantly more disclosure in The Netherlands compared to the U.K. ($p < 0.10$).

**TABLE 3**

**SEM Results of Transparency Reporting Model**
**(n = 103)**

| Relationship Tested | Predicted Sign | Path Coefficient | z-value |
|---|---|---|---|
| *LNREV* → *TRDS* | + | 0.4377 | 3.56*** |
| *BIG4* → *TRDS* | + | 0.2532 | 2.19** |
| *NETW* → *TRDS* | + | −0.0361 | −0.42 |
| *UK* → *TRDS* | ? | −0.5553 | −5.65*** |
| *NL* → *TRDS* | ? | −0.2177 | −2.94*** |
| *AT* → *TRDS* | ? | −0.0603 | −1.02 |
| *FIRST* → *TRDS* | − | −0.1809 | −1.76** |
| Overall $R^2$ | | 0.5857 | |

**,*** Indicates statistical significance at the 5 percent and 1 percent levels, respectively, based on one-tailed tests if the sign of the coefficient is in the predicted direction, and is based on a two-tailed test otherwise.
All independent variables are as defined in Table 2. For reasons of brevity, only the results of the structural part of the model are reported here. Results for the measurement part of the model are almost identical to the results reported in Figure 1.
Goodness-of-fit statistics: $\chi^2(8) = 62.549$ ($p = 0.027$); GFI = 0.948; CFI = 0.964; RMSEA = 0.066; and SRMR = 0.065.

## Earnings Management Model

### *Descriptive Statistics*

Table 4 reports summary statistics of the variables used in the earnings management model. Following Francis and Yu (2009), signed abnormal working capital accruals are winsorized at −0.999 and 0.999. Focusing on our variables of interest, mean (median) |*AWCA*| amounts to 8.94 (4.19) percent of lagged total assets, and mean (median) *TRDS* is 0.311 (0.315). Both variables show substantial variation based on the range of values shown.

The (untabulated) correlation matrix for the earnings management model shows that *TRDS* is significantly and negatively correlated with |*AWCA*|, with a correlation coefficient of −0.154 and $p < 0.01$. This would initially suggest that *TRDS* reveals actual audit quality.[24]

### *Multivariate Results*

Table 5 reports the estimation results of the earnings management model using ordinary least squares (OLS) and White's corrected standard errors. The model is significant (at $p < 0.01$) and has an adjusted $R^2$ of 0.271. Tests suggest that multicollinearity does not affect our results. Unlike correlation results discussed above, Table 5 shows that the test variable *TRDS* is not significant once we control for other factors that may influence abnormal working capital accruals ($t = 0.47$, $p > 0.10$). Hence, we find no statistical support for an association between the transparency report disclosure score and the level of abnormal accruals of the clients in the audit firms' portfolios. In line with prior research, most control variables (*SIZE*, *GROWTH*, |*OCF*|, *LOSS*, and *STD_SALES*) are significant, with coefficients in the predicted direction. However, some control variables (*BIG4*, *LEV*, and *STD_OCF*) are not significant at conventional levels.

[24] Other correlations in the matrix are consistent with expectations and prior research.

**TABLE 4**

**Descriptive Statistics Earnings Management Model**
**(n = 1,373)**

| Variables | Mean | Median | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| *\|AWCA\|* | 0.0894 | 0.0419 | 0.1485 | 0.0000 | 0.9990 |
| *TRDS* | 0.3114 | 0.3145 | 0.7879 | −1.8309 | 1.7795 |
| *BIG4* | 0.6373 | 1.0000 | 0.4810 | 0.0000 | 1.0000 |
| *LNSIZE* | 11.7290 | 11.5315 | 2.2531 | 4.5152 | 19.1154 |
| *SIZE* | 2,184,481 | 101,871 | 12,300,000 | 91.3959 | 200,000,000 |
| *GROWTH* | 0.2076 | 0.1050 | 0.4961 | −1.0000 | 2.0000 |
| *\|OCF\|* | 0.1482 | 0.0994 | 0.1913 | 0.0000 | 2.6198 |
| *LEV* | 0.2052 | 0.1645 | 0.2266 | 0.0000 | 2.8864 |
| *LOSS* | 0.2017 | 0.0000 | 0.4015 | 0.0000 | 1.0000 |
| *STD_SALES* | 0.1944 | 0.1069 | 0.3492 | 0.0004 | 6.9225 |
| *STD_OCF* | 0.0806 | 0.0450 | 0.1753 | 0.0000 | 4.7177 |

Variable Definitions:
*|AWCA|* = absolute value of client abnormal working capital accruals computed following DeFond and Park (2001);
*TRDS* = transparency report disclosure score (factor score);
*BIG4* = dummy variable with a value of 1 if the client has a Big 4 auditor, and 0 otherwise;
*LNSIZE* = natural logarithm of client total assets in €000;
*SIZE* = client total assets in €000;
*GROWTH* = one-year growth in client sales, where the maximum value is winsorized at a value of 2 (Francis and Yu 2009);
*|OCF|* = absolute value of client operating cash flows to lagged client total assets;
*LEV* = client total debt to client total assets;
*LOSS* = dummy variable with a value of 1 if the client has reported an operating loss in each of the last two years, and 0 otherwise;
*STD_SALES* = standard deviation of client sales for the most recent three years; and
*STD_OCF* = standard deviation of client cash flow from operations for the most recent three years.

## Sensitivity Analyses

We performed sensitivity analyses to test the robustness of reported results for our earnings management model.

First, we ran the earnings management model, Equation (2), using two alternative measures of abnormal accruals, i.e., a measure of abnormal total accruals based on the performance-adjusted Jones model (Francis and Yu 2009) and a measure of abnormal total accruals based on Francis and Wang (2008). The results (not tabulated) are qualitatively similar to our main results and again show no statistically significant association between the transparency report disclosure score and the level of abnormal accruals of the clients in the audit firms' portfolios.

Second, we examined whether alternative disclosure measures are associated with audit quality. To this end we replaced our test variable by the factor score of the latent variable *IQCS* (discussed in the "Research Design" section). Use of *IQCS* as an alternative transparency report disclosure measure highlights the importance that various oversight and standard setting bodies (e.g., IFAC 2009) attribute to the internal quality control system. We also replaced our test variable by the scores of all individual disclosure items (i.e., disclosure scores for item (a) through item (j) listed in Appendix A). Further, we calculated an average disclosure score for all items. In line with our main results, we find no significant association between the level of abnormal accruals and these alternative measures. One exception occurs when we replace our test variable by an indicator variable *IQCS_STAT* with a value of 1 if an audit firm states in its transparency

**TABLE 5**

**OLS Regression Results Earnings Management Model with *TRDS***
**(n = 1,373)**

| Independent Variables | Predicted Sign | Coefficient Estimate | t-value |
|---|---|---|---|
| Intercept | ? | 0.0777 | 2.16** |
| *TRDS* | − | 0.0042 | 0.47 |
| *BIG4* | − | −0.0176 | −1.25 |
| *LNSIZE* | − | −0.0083 | −3.64*** |
| *GROWTH* | + | 0.1097 | 6.45*** |
| *\|OCF\|* | + | 0.0713 | 1.53* |
| *LEV* | + | 0.0399 | 1.26 |
| *LOSS* | ? | 0.0210 | 1.69* |
| *STD_SALES* | ? | 0.0624 | 2.19** |
| *STD_OCF* | + | 0.0739 | 0.90 |
| *COUNTRY* dummies | | Included | |
| *INDUSTRY* dummies | | Included | |
| Adj. $R^2$ | | 0.2713 | |

*,**,*** Indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, and is based on a one-tailed test if the sign of the coefficient is in the predicted direction, and is based on a two-tailed test otherwise. Results for the country and industry dummies are not reported for parsimony.
The dependent variable *|AWCA|* is the absolute value of abnormal non-cash working capital accruals, computed as in DeFond and Park (2001).
*COUNTRY* and *INDUSTRY* dummies are as defined in the "Research Design" section. All other variables are as defined in Table 4.

report that it has an effective internal quality control system, and 0 otherwise. Results reported in Table 6 show that the estimated coefficient on *IQCS_STAT* is negative and weakly significant ($t = -1.37$, $p < 0.10$, one-tailed).[25] This contrasts with our main results and suggests that observations from audit firms not providing a statement on the effectiveness of the internal quality control system have, on average, higher abnormal accruals. Hence, the absence of a statement on the effectiveness of the internal quality control system, which in itself constitutes a violation of Article 40 of the Eighth EU Directive, seems to be a signal of lower audit quality. Interestingly, we repeated the analyses with the indicator variable *IQCS_STAT* on the subsamples of observations from Non-Big 4 audit firms and Big 4 audit firms and find that the effect only holds for the Non-Big 4 subsample. This suggests that providing a statement is a means to signal audit quality, especially among Non-Big 4 firms.

Third, in some additional analyses we used two alternative audit quality measures to examine the relationship between audit firm transparency disclosure and audit quality: (1) audit fees, and (2) the issuance of a going concern opinion. Both alternative measures are briefly discussed below.

Our use of audit fees as a proxy for audit quality is based on the audit fee literature, initiated by Simunic (1980) and meta-analyzed by Hay et al. (2006), who argue that "a higher audit fee implies higher audit quality, *ceteris paribus*, either through more audit effort (more hours) or through greater expertise of the auditor (higher billing rates)" (Francis 2004). We therefore examine

[25] Note that the model fit and results for the control variables are in line with those reported in Table 5 for our earnings management model including *TRDS*. Furthermore, descriptive statistics for *IQCS_STAT* (not tabulated) show a mean (median) value of 0.983 (1.000), a standard deviation of 0.131, a minimum value of 0.000, and a maximum value of 1.000.

**TABLE 6**

**OLS Regression Results Earnings Management Model with *IQCS_STAT* (n = 1,373)**

| Independent Variables | Predicted Sign | Coefficient Estimate | t-value |
|---|---|---|---|
| Intercept | ? | 0.1342 | 2.34** |
| *IQCS_STAT* | − | −0.0658 | −1.37* |
| *BIG4* | − | −0.0106 | −1.21 |
| *LNSIZE* | − | −0.0081 | −3.70*** |
| *GROWTH* | + | 0.1103 | 6.51*** |
| *\|OCF\|* | + | 0.0717 | 1.53* |
| *LEV* | + | 0.0384 | 1.24 |
| *LOSS* | ? | 0.0209 | 1.68* |
| *STD_SALES* | ? | 0.0636 | 2.22** |
| *STD_OCF* | + | 0.0741 | 0.91 |
| *COUNTRY* dummies | | Included | |
| *INDUSTRY* dummies | | Included | |
| Adj. $R^2$ | | 0.2739 | |

*,**,*** Indicates statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, and is based on a one-tailed test if the sign of the coefficient is in the predicted direction, and is based on a two-tailed test otherwise. Results for the country and industry dummies are not reported for parsimony.
The dependent variable *|AWCA|* is the absolute value of abnormal non-cash working capital accruals, computed as in DeFond and Park (2001).
*IQCS_STAT* is a dummy variable with a value of 1 if an audit firm states in its transparency report that it has an effective internal quality control system, and 0 otherwise.
*COUNTRY* and *INDUSTRY* dummies are as defined in the "Research Design" section. All other variables are as defined in Table 4.

whether transparency disclosure is associated with audit fees. If audit firms use transparency disclosures to signal audit quality, the audit firm transparency report disclosure score would be expected to be positively associated with audit fees. Adding our transparency report disclosure score *TRDS* to an audit fee model based on prior research, we find that *TRDS* is not significantly associated with audit fees.[26] This suggests that, in line with our main results, transparency report disclosure is not associated with actual audit quality.

[26] As discussed earlier, we collected the 2008 transparency reports of audit firms in 4 EU countries: Austria, Germany, The Netherlands, and the U.K. Since audit fees were not available for Austrian audit clients, our fee analysis is confined to observations from Germany, The Netherlands, and the U.K. Furthermore, our audit fee model is specified as follows: $LNFEE = \beta_0 + \beta_1 TDRS + \beta_2 LNSIZE + \beta_3 SEGMENTS + \beta_4 FOREIGN + \beta_5 INV + \beta_6 REC + \beta_7 CURRENT + \beta_8 LEV + \beta_9 ROA + \beta_{10} LOSS + \beta_{11} YEAREND + \beta_{12} BIG4 + \beta_{13} NL + \beta_{14} UK + \beta_{15}\text{-}\beta_{20} INDUSTRY + \varepsilon$, where *LNFEE* is the natural logarithm of audit fees; *TRDS* is our transparency report disclosure score; *LNSIZE* is the natural logarithm of client total assets; *SEGMENTS* is the natural log of the sum of the number of client geographic and product segments; *FOREIGN* is the ratio of client foreign to total sales; *INV* is the ratio of client inventory to total assets; *REC* is the ratio of client receivables to total assets; *CURRENT* is the ratio of client current assets to client current liabilities; *LEV* is the ratio of client long-term liabilities and debt to client total assets; *ROA* is the ratio of client net income to total assets; *LOSS* has a value of 1 if the client has reported an operating loss in each of the last two years, and 0 otherwise; *YEAREND* has a value of 1 if the client has a December year-end, and 0 otherwise; *BIG4* has a value of 1 if the client has a Big 4 auditor, and 0 otherwise; *NL* has a value of 1 if the client is located in The Netherlands, and 0 otherwise; *UK* has a value of 1 if the client is located in the U.K., and 0 otherwise; and *INDUSTRY* represents six dummy variables for the seven industries present in the sample. Using OLS and White's corrected standard errors, we run our fee model on the 1,104 observations for which data on fees and the other variables in the model are available. The model provides a good fit with an adjusted $R^2$ of 0.735 and results for control variables in line with prior research. The two-tailed p-value for *TRDS* is 0.521.

In line with prior research that suggests that the auditor's propensity to issue a going concern opinion increases with auditor independence and (thus) audit quality (see e.g., Reynolds and Francis 2001; DeFond et al. 2002; Francis 2004), we also use the issuance of a going concern audit opinion as a proxy for audit quality and investigate whether our transparency report disclosure score is positively associated with the issuance of a going concern opinion. We add *TRDS* to a going concern opinion model based on prior research and find that it is not significantly associated with the issuance of a going concern opinion.[27] This, again, suggests that transparency report disclosure is not associated with actual audit quality.

Overall, our sensitivity analyses confirm our main results, and taken together our results suggest that currently audit firm governance disclosure is not associated with audit quality. The only specific disclosure item that we find to be weakly associated with audit quality is the statement on the effectiveness of the audit firm's internal quality control system.

## CONCLUSION

Since the governance of audit firms is considered to have a significant influence on audit quality, regulators expect that more transparency on audit firm governance may provide insight in firms' audit quality, and as a result may provide incentives for audit firms to compete more directly on audit quality. We examine audit firm governance disclosures contained in transparency reports of 103 audit firms in four EU countries (Austria, Germany, The Netherlands, and the U.K.) to investigate whether transparency report disclosures enable audit quality differentiation among audit firms. To this end, we examine whether there is variation in the extent and type of disclosures in audit firm transparency reports, and whether these are associated with the underlying audit quality delivered by the audit firm.

We develop a transparency report disclosure score based on the items required by Article 40 of the Eighth EU Directive and recommendations by national oversight bodies, expert opinions, international standards, and our own review of transparency reports. In our analyses, we focus on those policies and procedures that are most likely to be informative about audit quality.

Our results show that there is variation in the transparency report disclosure scores across audit firms. In particular we find that, as expected, larger audit firms have a higher transparency report disclosure score. We also observe significant country differences, with German and Austrian audit firms having higher transparency report disclosure scores than U.K. and Dutch audit firms. This is likely due to more extensive disclosure guidelines on transparency reporting in Germany and

[27] Our going concern opinion model is as follows: $GC = \beta_0 + \beta_1 TDRS + \beta_2 LNSIZE + \beta_3 ROA + \beta_4 CURRENT + \beta_5 LEV + \beta_6 DEBTCHG + \beta_7 GROWTH + \beta_8 LOSS + \beta_9 BIG4 + \beta_{10} AT + \beta_{11} NL + \beta_{12} UK + \varepsilon$, where *GC* has a value of 1 if the client received a going concern opinion in the year of analysis, and 0 otherwise; *TRDS* is our transparency report disclosure score; *LNSIZE* is the natural logarithm of client total assets; *ROA* is the ratio of client net income to total assets; *CURRENT* is the ratio of client current assets to client current liabilities; *LEV* is the ratio of client long-term liabilities and debt to client total assets; *DEBTCHG* is the ratio of total debt to total assets in the year prior to analysis minus the ratio of total debt to total assets in the year of analysis; *GROWTH* is the growth in total assets in the year of analysis compared to the previous year; *LOSS* has a value of 1 if the client has reported an operating loss in each of the last two years, and 0 otherwise; *BIG4* has a value of 1 if the client has a Big 4 auditor, and 0 otherwise; *AT* has a value of 1 if the client is located in Austria, and 0 otherwise; *NL* has a value of 1 if the client is located in The Netherlands, and 0 otherwise; and *UK* has a value of 1 if the client is located in the U.K., and 0 otherwise. In line with prior research we restrict our analyses to a sample of financially distressed client firms, operationalized as firms that have negative earnings in the year of analysis (see e.g., Hopwood et al. 1994). Out of the 1,299 observations for which audit opinion information was available, 413 observations are financially stressed based on the above criterion, and 93 of these receive a going concern opinion. Running our model on the 413 financially stressed firms shows that the fit and results for control variables are in line with those of prior research (pseudo $R^2$ of 0.124). The two-tailed p-value for *TRDS* is 0.569.

Austria. Further, we find that initial transparency reports have a significantly lower transparency report disclosure score, implying that disclosure increases over time.

Next, we examine whether the transparency report disclosure score is associated with actual audit quality measured by the level of abnormal accruals of listed clients in audit firms' portfolios. Generally, the results do not provide evidence of such an association. These results remain robust across a number of sensitivity tests. The absence of statistical support for an association between audit firm governance disclosure and audit quality could have at least two possible explanations. First, it could mean that audit firm governance does not matter for actual audit quality, which seems unlikely. Second, it could be that both high and low audit quality firms provide disclosures which do not reflect the actual quality of their services. However, we do find evidence suggesting that a more specific disclosure required by Article 40, i.e., a statement on the effectiveness of the audit firm's internal quality control system, is a more informative type of disclosure. Although the evidence is weak and only a few audit firms are silent about the effectiveness of their internal quality control system, the results do suggest that clients of audit firms not providing such a statement have higher abnormal accruals.

Overall, we conclude that current transparency report disclosure does not appear to reveal underlying audit firm quality. This is in line with recent recommendations of oversight bodies and the auditing profession that encourage audit firms to further improve the information value of audit firm disclosures (see e.g., POB 2010; Nierop 2010). Further, the results confirm the concerns expressed by the PCAOB about the information value of disclosures in transparency reports like those required by Article 40 of the EU Eighth Directive. In particular, the disclosures required by Article 40 appear to be very general and our results suggest that both audit firms with sound and weaker governance practices are able to provide extensive disclosures on their audit firm governance practices, which distorts the audit quality signal.

We acknowledge that our study is limited to transparency reports from only four EU countries, which could affect the generalizability of our results. However, the four countries that are included show variation in their cultural background and legal and institutional quality (e.g., Leuz et al. 2003), which supports the representativeness of our sample. Nevertheless, the Eighth EU directive has been enforced EU-wide by means of national legislation, affecting all EU audit firms with PIE clients, so future research including observations from more and/or different countries could prove useful.

To conclude, we argue that requiring audit firms to disclose audit firm governance practices needs careful (re-)consideration. If the goal of such requirements is to provide publicly available indicators of audit quality, more work seems necessary to develop such indicators.

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## APPENDIX A[28]

### Elements of Audit Firm Transparency Score

**(a) Description of the legal structure and ownership**

**(b) When the audit firm belongs to a network, a description of the network and the legal and structural arrangements in the network**

**(c) A description of the governance structure of the audit firm**

**(d) A description of the internal quality control system of the audit firm and a statement by the administrative or management body on the effectiveness of its functioning**

**(d-1) Human Resources (Maximum 10 Points)**

- Outline of policies and procedures concerning recruitment.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning employee performance evaluations.

[28] For parsimony, we only report the detailed elements of each item for those items that are included in our transparency report disclosure score *TRDS*, i.e., items (d) (and sub-items (d-1), (d-2), (d-3), and (d-4)), (g), and (h). Information on the detailed elements for each of the other items is available from the authors upon request.

  - Reference to responsible personnel.
- Outline of policies and procedures concerning employee promotions.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the assignment of engagement/lead partners.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the assignment of other members of engagement teams.
  - Reference to responsible personnel.

**(d-2) Engagement Performance (Maximum 16 Points)**

- Whether IT software is used to support audit work, and if so, a description of its integration into the audit process.
- Outline of policies and procedures concerning supervision.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning difficult or contentious matters.
  - Reference to responsible personnel.
- Outline of criteria against which all audits and reviews of historical financial information and other assurance and related services engagements except for those concerned with public listed entities are evaluated in order to select engagements for quality control reviews.
- Number of engagement quality control reviews performed in the reporting period.
- Outline of policies and procedures concerning the extent of engagement quality control reviews.
- Outline of criteria for eligibility of engagement quality control reviewers.
- Outline of policies and procedures concerning differences of opinion.
  - Reference to responsible personnel.
- Outline of policies and procedures helping to ensure timely completion of engagement documentation.
  - Reference to responsible personnel.
- Outline of policies and procedures helping to ensure safe custody, integrity, accessibility, and/or retrievability of engagement documentation.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the retention of engagement documentation.

**(d-3) Monitoring Compliance with the Firm's Quality Control Policies and Procedures (Maximum 10 Points)**

- Outline of policies and procedures concerning inspection cycles.
  - Reference to responsible personnel.

- Outline of policies and procedures concerning the selection of specific engagements for inspections.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the evaluation, communication, and remediation of identified deficiencies.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning necessary improvements of the internal quality control system due to new developments in professional standards and applicable legal and regulatory requirements.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning complaints and allegations.
  - Reference to responsible personnel.

**(d-4) Other Disclosures Relating to the Internal Quality Control System of the Audit Firm (Maximum 17 Points)**

**General**

- Objectives of the internal quality control system according to ISQC1 (or a similar statement).
  - Additional objectives formulated for the internal quality control system.
- Description of the scope of the internal quality control system.
- Information on how a quality-oriented internal culture is sought to be achieved by established policies and procedures.

**Statements by the Administrative or Management Body**

- Statement that firm's chief executive officer (or equivalent), or the principal management body as a whole assume ultimate responsibility for the entity's internal quality control system.
- Statement on the effectiveness of the internal quality control system.
  - Explicit reference to "effective functioning" without any reservations.

**Relevant Ethical Requirements**

- Outline of measures taken in order to encourage adherence to other ethical requirements (i.e., due care, confidentiality, and professional behavior).
- Outline of measures specifically taken in order to ensure data privacy.

**Acceptance and Continuance of Client Relationships and Specific Engagements**

- Outline of policies and procedures helping to ensure integrity of clients.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the continuance of client relationships and eventual withdrawal.

- Reference to responsible personnel.

**Documentation of the Internal Quality Control System**

- Information on how the internal quality control system is documented.
  - Reference to responsible personnel.
  - How documentation is made accessible to responsible personnel.
  - Outline of content of quality control manual.

**(e) An indication of when the last quality assurance review referred to in Article 29 of the Eighth EU Directive took place**

**(f) A list of public interest entities for which the audit firm has carried out statutory audits during the preceding financial year**

**(g) A statement concerning the audit firm's independence practices which also confirms that an internal review of independence compliance has been conducted (Maximum 21 Points)**

- Outline of policies and procedures concerning the communication of (new) requirements to employees.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the monitoring of threats or breaches.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the reporting of threats or breaches.
  - Reference to responsible personnel.
- Outline of policies and procedures concerning the evaluation of identified threats or breaches.
  - Reference to responsible personnel.
  - Description of possible actions subsequent to the evaluation of identified breaches.
- Outline of policies and procedures concerning written confirmation of compliance.
  - Reference to responsible personnel.
- Description of tools and processes available to employees in case of doubt (i.e., to help them prevent/identify threats).
  - Reference to responsible personnel.
- Outline of measures specifically taken in order to avoid self-interest threats.
- Outline of measures specifically taken in order to avoid self-review threats.
- Outline of measures specifically taken in order to avoid familiarity threats.
- Statement that an internal review of independence practices has been conducted.
  - Statement is given by one of the main management bodies.
- Outcome of internal review of independence practices [not applicable if such review was not conducted].
  - Broad statement about the nature of any deficiencies discovered [not applicable if no deficiencies are discovered].

- Outline of consequences of any deficiencies discovered [not applicable if no deficiencies are discovered].

**(h) A statement on the policy followed by the audit firm concerning the continuing education of statutory auditors referred to in Article 13 of Directive 2006/43/EC (Maximum 13 Points)**

- Whether there are minimum requirements or goals regarding continuing education, and if so, a description of these minimum requirements.
- Form(s) of continuing education used (except "on-the-job" training).
  - Type(s) of education providers used.
  - Example(s) of the content of important training modules for employees involved in audit work.
- Whether continuing education is considered in promotion decisions and/or employee remuneration policies.
- Outline of policies and procedures concerning the monitoring of employee competence development.
  - Reference to responsible personnel.
  - Whether competence development is documented.
- Whether, and if so, how relevant literature is provided to employees.
- Whether, and if so, how employees striving to obtain professional certification(s) are supported.
- Outline of measures taken in order to facilitate "on-the-job" training.
  - Reference to responsible personnel.
- Whether, and if so, how employees willing to participate in technical committees, projects, or teaching engagements are supported.

**(i) Financial information showing the importance of the audit firm, such as the total turnover divided into fees from the statutory audit of annual and consolidated accounts, and fees charged for other assurance services, tax advisory services, and other non-audit services**

**(j) Information concerning the basis for the partners' remuneration**