Received: 31 May 2016 | Revised: 12 February 2018 | Accepted: 26 March 2018

DOI: 10.1111/ijau.12120

ORIGINAL ARTICLE

WILEY

Exploring the association between the content of internal audit disclosures and external audit fees: Evidence from Sweden

Linus Axén

Division of Business Administration, Department of Management and Engineering, Linköping University, Sweden

Correspondence
Linus Axén, Division of Business Administration, Department of Management and Engineering, Linköping University, 58183 Linköping, Sweden.
Email: linus.axen@liu.se

The aim of this study is to explore the content of internal audit (IA) disclosures in annual reports and explain the relationship between IA disclosures and external audit fees. A content analysis of the IA disclosures made it possible to generate inductive categories that were used as a basis for statistical analysis. The findings show a large variation in disclosure practices, and only a small portion of all disclosures contain firm-specific information related to IA. Evidence is provided that the use of an IA function (IAF) is associated with higher external audit fees. However, companies that disclose firm-specific information related to IA pay lower audit fees than those not providing this disclosure. Overall, the results of this study indicate that firm-specific IA disclosures most likely represent actual investments in IA and can be used as a proxy for IAF quality.

KEYWORDS

Audit fees, corporate governance, disclosure, internal audit

1 | INTRODUCTION

The aim of this study is to explore the content of internal audit (IA) disclosures in annual reports and explain the relationship between IA disclosures and external audit fees. Although the IA function (IAF) is seen as an important governance mechanism (Gramling, Maletta, Schneider, & Church, 2004), there are generally no statutory requirements to disclose information about the composition and activities of the IAF (Holt & DeZoort, 2009). Current governance disclosures focus mainly on management, the audit committee, and external auditors, while little information is disclosed about the nature of the IAF (Archambeault, DeZoort, & Holt, 2008). According to the Swedish corporate governance code (the Code), the use of an IAF is recommended and the absence of an IAF needs to be evaluated on an annual basis and clarified in the corporate governance report (Swedish Corporate Governance Board, 2010). However, there are no additional reporting requirements connected to IA. Companies that want to share information can do so by voluntary disclosures. Therefore, managers have the opportunity to voluntarily disclose information that they believe is relevant and useful to external stakeholders (Meek, Roberts, & Gray, 1995). According to Beekes and Brown (2006), companies with superior governance quality differentiate themselves from other companies by the use of more informative disclosures in the annual report.

By considering both internal and external auditing as important elements of corporate governance, previous IA research has examined whether the existence of an IAF (Goodwin-Stewart & Kent, 2006; Hay, Knechel, & Ling, 2008; Singh & Newby, 2010), IAF quality (Gros, Koch, & Wallek, 2017; Zain, Zaman, & Zulkifflee, 2015), and external auditors' reliance on the IAF (Abbott, Parker, & Peters, 2012; Felix, Gramling, & Maletta, 2001; Messier, Reynolds, Simon, & Wood, 2011) are associated with the external audit fees. Owing to mixed results and different theoretical perspectives, it has been argued that the IA can act, at least in part, as either a substitute for or a complement to the external audit. This study extends existing IA research by examining the relationship between IA disclosures and external audit fees. Based on previous findings that more informative disclosures signal actual investments in disclosed activities (Toms, 2002) and increased governance quality (Beekes & Brown, 2006), this study posits that companies with more informative IA disclosures have higher IAF quality, which will likely have an impact on the external audit fees. Yatim, Kent, and Clarkson (2006) argue that good corporate governance practice improves both risk management and internal control processes, which affects auditors' risk assessments and, in the end, leads to lower external audit fees. Conversely, investments in IA may also signal that those charged with governance are willing to pay more for an external

audit, and hence demand a higher quality audit (Goodwin-Stewart & Kent, 2006).

This study investigates variation in disclosure practice by conducting a content analysis and classifying the identified disclosures into separate categories. Lack of previous research made it necessary to initially use an inductive approach. The categories identified in this process were then used as a basis for statistical analysis of data related to companies listed on Nasdaq Stockholm during 2013. The sample consists of 197 listed companies, of which 46 companies had an IAF. The main analysis in this study examines the relationship between firm-specific IA disclosures and external audit fees.

The results of this study support a complementary relationship between the use of an IAF and external audit fees, and add new evidence that the content of IA disclosures is related to external audit fees in Sweden. The categorization shows that only a small portion of all IA disclosures are informative and contain firm-specific information. Firm-specific IA disclosures are related to both qualitative (specific focus areas and in-depth audits) and quantitative (number of internal auditors and number of IAs performed) aspects of the IAF. Companies that are more transparent and voluntarily disclose firm-specific information connected to IA pay lower audit fees than those not providing this disclosure. The overall results of this study thus support a negative relationship between firm-specific IA disclosures and external audit fees (substitution perspective), and suggest that firm-specific IA disclosures can be used as a proxy for IAF quality. This study also adds new evidence from a different context (Nordic corporate governance context) and time period (2013) than those covered by previous studies from common law countries (Anderson & Zéghal, 1994; Goodwin-Stewart & Kent, 2006; Hay et al., 2008; Singh & Newby, 2010). Two major differences between the Swedish and the US context concern the ownership structures of public companies and the different internal control regimes. The ownership structure of companies quoted on the Swedish stock market is often more concentrated around one or a small number of strong owners, whereas in the USA the ownership structure is more fragmented (Swedish Corporate Governance Board, 2010). Some other characteristics of Nordic corporate governance are relatively weak minority protection, high transparency toward shareholders, and annual general meetings with extensive governing power (Gabrielsson, 2012; Lekvall, 2014).

The remainder of the paper is organized as follows: Section 2 presents the literature review and development of hypotheses; Section 3 describes the research design, data collection, and operationalization of the variables; Section 4 covers the analysis and findings; and Section 5 presents the discussion and conclusions.

2 | LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

2.1 | Internal audit function and external audit fees

In the auditing literature, the use of IA is argued to be, at least in part, either a substitute (Ettredge, Reed, & Stone, 2000; Prawitt, Sharp, & Wood, 2011; Simunic, 1980; Wallace, 1984) or a complement (Anderson & Zéghal, 1994; Goodwin-Stewart & Kent, 2006; Hay et al., 2008) to the external audit. The substitution perspective assumes that the work of internal auditors can be used to reduce the time and effort of external auditors, and hence result in lower external audit fees (Prawitt et al., 2011). Given that the central role of IA is to "evaluate and improve the effectiveness of risk management, control, and governance processes" (IIARF, 2013, p. 2), the IAF has the ability to reduce both the inherent risk and control risk, which in the end reduces the work effort for the external auditors. Wallace (1984) exemplifies how internal auditors can contribute to reduced external audit fees by improving the accounting controls of a company and providing assurance services related to risk-management and control processes. A critical element in regard to the substitution effect is the extent to which external auditors use and trust the work of internal auditors (Gramling et al., 2004). Simunic (1980) argues that, in a situation of monopoly pricing, the auditee may substitute internal control for external auditing, and an inverse relationship exists when the external auditor becomes more experienced and efficient. Despite several arguments for a substitute perspective, only a few studies (Wallace, 1984) seem to have found a significant negative relationship between the existence of an IAF and external audit fees.

Contrary to a substitution perspective, a comprehensive meta-analysis of audit fee research (Hay, 2013) found significant results indicating a positive relationship between IA and the external audit fees. These results are consistent with the findings of several other studies (Anderson & Zéghal, 1994; Goodwin-Stewart & Kent, 2006; Hay et al., 2008; Singh & Newby, 2010) and support the view of a complementary relationship. Companies that believe in strong corporate governance culture and advocate monitoring activities are likely to invest resources in both internal and external audits. The risk of insufficient financial reporting motivates governance mechanisms such as audit committee members and managers to implement monitoring activities to protect their reputation and avoid personal liabilities (Hay et al., 2008). The agent can increase bonding costs by investing in IA to demonstrate that they are acting in the interest of the owners (Adams, 1994). Major shareholders with a strong economic interest are likely to expect that the financial statement will be free from material misstatements and that companies will manage risk efficiently and effectively. The use of an IAF can be seen as a signal to the market that those charged with governance value investments in external audit, and hence demand higher audit quality (Goodwin-Stewart & Kent, 2006). After evaluating previous research, the expectations are that the use of an IAF has a positive relationship with external audit fees.

> H1 *The use of an IAF is associated with higher external audit fees.*

2.2 | Internal audit disclosures and external audit fees

Lack of regulation and standards related to IA disclosures creates a broad discretion for companies to determine whether information should be communicated to the market. Managers have the opportunity to voluntarily select information that they believe is relevant and useful to external stakeholders (Meek et al., 1995). Toms (2002)

argues that verifiable firm-specific information is more likely to represent actual investments in disclosed activities and to be of higher quality. Quantifiable and specified information is hard to imitate because it requires a genuine commitment to IA and is costly to achieve. With regard to IA disclosures, it is more likely that companies that have invested substantial resources in IA will disclose information that is difficult to mimic and that does not merely describe the aim and task of the IAF at a more general level.

Beekes and Brown (2006) find further evidence that companies with superior governance quality differentiate themselves from other companies by the use of more informative disclosures in the annual report. Regarding essential governance mechanisms, such as corporate boards and audit committees', previous findings by Lim, Matolcsy, and Chow (2007) and Allegrini and Greco (2013) support a positive relationship between the independence and composition of boards and audit committees and voluntary disclosures. Companies with a good corporate governance practice will likely improve their risk management and internal control processes, which in the end affect the risk assessments conducted by the external auditors (Yatim et al., 2006). Based on previous findings that more informative disclosures signal actual investments in disclosed activities (Toms, 2002) and increased governance quality (Beekes & Brown, 2006), this study argues that companies with more informative IA disclosures have higher IAF quality that will likely have an impact on the external audit fees.

Prior research into the association between IAF quality and external audit fees has shown mixed results. From a substitution perspective, a recent study by Gros et al. (2017) finds evidence that higher IAF quality is negatively related to both audit delays and external audit fees. Superior IAF quality can be used to reduce the time and effort of external auditors both by directly assisting the external auditors (Prawitt et al., 2011) and by improving risk-management and control processes. Felix et al. (2001) argue that higher IAF quality increases the external auditors' reliance on the IAF, which in the end leads to reduced audit fees.

Conversely, Zain et al. (2015) find contradictory evidence and support a complementary relationship between IAF quality and external audit fees. Higher IAF quality can be expected to lead to more internal reviews and reports due to an increased exchange with other governance mechanisms, such as corporate boards and audit committees. A greater number of reports and reviews will likely increase the workload of the external auditors and, in the end, increase external audit fees (Zain et al., 2015). Companies that believe in strong corporate governance and advocate monitoring activities are likely to invest resources in both internal and external audits (Goodwin-Stewart & Kent, 2006). To protect their reputation and avoid personal liabilities due to insufficient financial reporting, independent managers have incentives to increase the quality of the IAF and include more voluntary disclosures (Hay et al., 2008; Lim et al., 2007).

It is thus possible to argue for either a negative or a positive relationship between informative IA disclosures and external audit fees. Based on the foregoing discussion, the second hypothesis is formulated in a neutral way:

> H2 *There is a relationship between firm-specific IA disclosures and external audit fees.*

2.3 | The Swedish setting

The Code was introduced on July 1, 2005, and originally applied to listed companies with a market cap larger than 3 billion Swedish kronor. In 2008, the Code was revised to include all public companies quoted on either of Sweden's two regulated markets (Nasdaq OMX Stockholm and NGM Equity). The current Code dates from 2010 and has been modified via amended legislation (Swedish Companies Act 2005:551 and The Annual Accounts Act 1995:1554)[1] because of, inter alia, implementation and changes in the fourth (78/660/EEC), seventh (83/349/EEC), and eighth (2006/43/EC) EU Company Law Directive. A number of other modifications have occurred over the years; for example, September 1, 2015, was the deadline for a new open consultation on the Code.[2]

According to the European Parliament and the Council of the European Union Directive 2013/34/EU, companies that are publicly traded on a regulated market must incorporate a corporate governance statement in their management report (EU, 2013). The Code follows the "comply or explain" principle, which allows companies to decide whether to follow the principles stated in the Code (Swedish Corporate Governance Board, 2010). According to the Code, an IAF is recommended but not required, so the absence of an IAF needs to be evaluated on an annual basis and explained in the corporate governance report. In the Nordic context, the 2010 Finnish Corporate Governance Code postulates the use of an IAF, while in Sweden and Denmark it is strongly recommended (ECIIA, 2012).

3 | RESEARCH DESIGN

3.1 | Data

The empirical material in this study consists of data pertaining to companies listed on the Nasdaq Stockholm during 2013. The initial sample of 253 companies included all listed companies in any of the three different segments: Large Cap, Mid Cap, and Small Cap. Of these, 45 financial companies were excluded since their operations and financial statements differed substantially from those of the majority of the other listed companies (Gonthier-Besacier & Schatt, 2007). Nonfinancial companies are commonly used within audit fee research, and this is also applicable in previous studies conducted in a Nordic context (Holm & Thinggaard, 2014; Niemi, 2002). A further 11 companies were excluded due to lack of data, leaving 197 companies for inclusion in the analysis. The audit fee, nonaudit fee, IAF, and disclosure data were manually collected from the annual reports. Other financial data were obtained from Reuters 3000 Xtra and Amadeus. The beta values were received from the Swedish magazine *Aktiespararen*.

3.2 | Content analysis

Content analysis was selected as a technique to classify IA disclosures into categories and investigate variation in disclosure practice (Abraham & Cox, 2007; Beattie, McInnes, & Fearnley, 2004). There are several different definitions of content analysis (Berelson, 1952; Neuendorf, 2002; Weber, 1990), but this study follows Krippendorff

(2013), who defines content analysis as a "research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (p. 24). Lack of previous research concerning IA disclosures motivated the use of an inductive categorization process with primary focus on understanding the empirical data (Mayring, 2000). To get a better understanding of the phenomena studied, generated inductive categories were used as a basis for statistical analysis (Vourvachis & Woodward, 2015).

In accordance with the majority of previous studies (Beck, Campbell, & Shrives, 2010; Vourvachis & Woodward, 2015), the annual reports of companies with an IAF were selected as sampling units. The annual reports of listed companies are widely distributed public documents, which according to Adams and Harte (1998, p. 784) act as "the main form of corporate communication." Any disclosures in the annual reports can influence the public's perceptions of the company (Gray, Kouhy, & Lavers, 1995) and form the basis for investment decisions. Systematic reviews of the annual reports were conducted to locate existing IA disclosures and identify relevant context units, on the basis of a search within the annual reports (including tables and figures) for the following phrases: IA(s), internal auditor(s), IAF, IA programme, IA plan, IA training, IA manager, IA work, and IA report.

In the analysis, paragraphs were used as context units to ensure "that the original text can be reconstructed without loss" (Krippendorff, 2013, p. 102). The initial review of the annual reports facilitated the selection of paragraphs, as the disclosed data were typically clustered in and restricted to specific parts of the annual report. In line with previous accounting studies using content analysis (Jones & Shoemaker, 1994), themes were selected as coding units and used in the categorization process. There are several challenges associated with the selection of a coding unit, connected both to the interpretation of the text (Unerman, 2000) and to different writing styles in the annual reports (Abraham & Cox, 2007). Unerman (2000) criticizes the use of characters, words, or sentences as coding units, as they do not take into account non-narrative disclosures. In a comparison between different coding units, Milne and Adler (1999, p. 243) also criticize words as coding units and state that "Individual words have no meaning to provide a sound basis for coding social and environmental disclosures without a sentence or sentences for context."

The categorization process began with a close reading of all collected disclosures in order to become familiar with the data and gain a primary understanding of the material (Thomas, 2006). Themes were identified and coded, and after a process involving constant comparison of the data, emerging categories were developed. To minimize the risk of an inadequate categorization, it was essential to create categories that were internally homogeneous and externally heterogeneous (Patton, 2002). Patton (2002, p. 465) states that internal homogeneity "concerns the extent to which the data that belong in a certain category hold together or 'dovetails' in a meaningful way" and external heterogeneity "concerns the extent to which differences among categories are bold and clear."

The subjective nature of content analysis makes it highly important to consider the reliability and validity of the study (Linsley & Shrives, 2006). There are several different measures of inter-coder reliability, including Cohen's kappa, Krippendorff's alpha, and Scott's pi; this study uses Cohen's kappa. Milne and Adler (1999, p. 240) state that Cohen's kappa is a reliability measure that "adjust[s] for chance by manipulating the pooled ex ante," and Rust and Cooil (1994) argue that Cohen's kappa is a conservative measure of reliability. Regarding inter-coder reliability, the empirical material was initially coded by the author and subsequently by an independent researcher. Cohen's kappa was calculated as 0.826, which is generally perceived as an acceptable level of inter-coder reliability (Krippendorff, 2013; Landis & Koch, 1977). Differences between the coders were discussed before a final decision was made on categorization.

3.3 | Operationalization

3.3.1 | Dependent variable

The audit fees (*AFEE*) were used as the dependent variable. In accordance with the majority of previous audit fee studies (Hay, Knechel, & Wong, 2006), this variable was transformed by using the natural logarithm.

3.3.2 | Independent variables

The existence (absence) of an IAF was determined by a review of the annual reports. In some cases, it was necessary to obtain a separate corporate governance report from the companies' websites. As in previous studies (Ezzamel, Gwilliam, & Holland, 2002; Willekens & Achmadi, 2003), the use of an IAF was measured as a dummy variable, with 1 denoting that the company had an IAF. The use of a dummy variable may be a rough proxy, but the major intention was to distinguish between companies that invested resources in IA and those that did not. The *IA_DISCLOSURE* and *FIRM_SPECIFIC* variables were based on the content analysis, which is described in more detail in Sections 3.2 and 4.1. By identifying the total number of IA disclosures for each company, it was possible to distinguish (at an overall level) between companies with large or small numbers of IA disclosures. *IA_DISCLOSURE* was coded 1 if the company disclosed more information than the average company and 0 otherwise, and *FIRM_SPECIFIC* was coded 1 if the company disclosed any firm-specific information related to IA and 0 otherwise.

3.3.3 | Control variables

Based on Simunic (1980) and a large number of subsequent studies, different audit fee models have been developed where it has become essential to control for size (*ASSETS*), complexity (*SUBS*) and risk (*INVREC*). Two meta-analyses (Hay, 2013; Hay et al., 2006) have shown convincing results indicating that client size is the most important determinant of audit fees. The size of the company was operationalized by using the natural logarithm of total assets at year-end (*ASSETS*) (Firth, 1997; Holm & Thinggaard, 2014; Niemi, 2002). To control for inherent risk, inventory and receivables were aggregated and divided by total assets (*INVREC*) (Ahmed & Goyal, 2005; Griffin, Lont, & Sun, 2009; Niemi, 2005). Both inventory and receivables are seen as complex to audit, due to large volumes and a relatively large risk of fraud (Firth, 1997).

Previous studies (Goodwin-Stewart & Kent, 2006; Singh, Woodliff, Sultana, & Newby, 2014; Thinggaard & Kiertzner, 2008)

argue that a high number of subsidiaries is associated with greater complexity, because this requires more coordination and knowledge about consolidation and different sets of regulations (Firth, 1997). This study follows previous literature by using the square root of the total number of subsidiaries (*SUBS*) as a proxy for complexity. The nonaudit fees were operationalized by using the natural logarithm of nonaudit fees (*NON_AFEE*) and, as in previous studies (Köhler & Ratzinger-Sakel, 2012; Zerni, Haapamäki, Järvinen, & Niemi, 2012), were expected to have a positive relationship with the audit fees. Changes in the signing audit firm (*AUDCHA*) were measured as a dummy variable, coded as 1 if the company had changed its signing audit firm in the last 2 years. This variable was collected by comparing the audit report for 2012 with the audit report for 2013. Audit firms that accept a new client may lower the initial audit fees, and over time gradually increase them to more normal levels (DeAngelo, 1981).

The systematic risk of the company (*BETA*) was used as a proxy of inherent risk. Companies with high beta values can be seen as more risky than other companies in the same market, and therefore pay a risk premium (Nikkinen & Sahlström, 2003; O'Sullivan, 2000), meaning that it is appropriate to include this variable in the models.

The ownership variable (*OWN*) was measured by adding together the voting rights of the five largest shareholders. In a Swedish context, all shareholders have equal rights to the company's profit, though different classes of shares may have different voting rights (Tagesson & Collin, 2016). Voting rights were used as an ownership variable to capture the owner's ability to influence the governance of the company. In accordance with previous studies (Casterella, Francis, Lewis, & Walker, 2004; Firth, 1985; Niemi, 2002), the occurrence of financial losses (*LOSS*) was measured as a dummy variable, coded as 1 if the company had reported a negative net income in any of the last 3 years and 0 otherwise.

Evidence from Hay (2013) shows that both Big 4 audit firms and audit firms that are industry specialists are able to earn audit fee premiums. However, in Sweden, only a small number of companies are audited by non-Big 4 audit firms, which makes it difficult to control for a Big 4 premium. Instead of including a Big 4 dummy variable, each of the Big 4 audit firms (*KPMG*, *PWC*, *EY*, *DELOITTE*) and other non-Big 4 audit firms (*OAF*) were recoded into five separate dummy variables. Following Numan and Willekens (2012), industry specialization was measured by a dummy variable in which audit firms with an audit fee market share of at least 30% in an industry where the auditee operates were coded 1 and those with less than 30% were coded 0 (*SPECIALIST*). More specifically, the audit fee market share was measured by calculating the total revenues (audit fees) for a specific audit firm in a specific industry and then dividing the sum by the total revenues (audit fees) for all audit firms in the same industry.

Each company in the sample was coded as an industry sector dummy variable based on sector classifications used by Nasdaq Stockholm. The following classifications were used: basic materials (*BMI*), consumer goods (*CGI*), consumer services (*CSI*), health care (*HCI*), industrials (*IND*), and technology (*TECI*). Only a small number of companies belonged to the oil and gas, telecommunication, and utilities industries. Therefore, these were merged into one category named 'other industries' (*OI*). Definitions of all variables are summarized in Table 1.

With regard to various independent variables, the audit fee model 1 (*IAF*), model 2 (*IA_DISCLOSURE*), and model 3 (*FIRM_SPECIFIC*) have the following structure:

$$\begin{aligned} AFEE = {} & \alpha + \beta_1 \text{IAF} + \beta_2 \text{IA\_DISCLOSURE} + \beta_3 \text{FIRM\_SPECIFIC} \\ & + \beta_4 \text{ASSETS} + \beta_5 \text{INVREC} + \beta_6 \text{SUBS} + \beta_7 \text{NON\_AFFE} \\ & + \beta_8 \text{BETA} + \beta_9 \text{LOSS} + \beta_{10} \text{OWN} + \beta_{11} \text{AUDCHA} \\ & + \beta_{12} \text{SPECIALIST} + \beta_{13} \text{KPMG} + \beta_{14} \text{EY} + \beta_{15} \text{DELOITTE} \\ & + \beta_{16} \text{OAF} + \beta_{17} \text{BMI} + \beta_{18} \text{CGI} + \beta_{19} \text{CSI} + \beta_{20} \text{HCI} + \beta_{21} \text{TECI} \\ & + \beta_{22} \text{OI} + e \end{aligned}$$

With regard to a limited number of observations, the audit fee model 4 (*FIRM_SPECIFIC*) has the following structure:

$$\begin{aligned} AFEE = {} & \alpha + \beta_1 \text{FIRM\_SPECIFIC} + \beta_2 \text{ASSETS} + \beta_3 \text{INVREC} + \beta_4 \text{SUBS} \\ & + \beta_5 \text{NON\_AFFE} + \beta_6 \text{BETA} + \beta_7 \text{LOSS} + \beta_8 \text{OWN} \\ & + \beta_9 \text{AUDCHA} + \beta_{10} \text{SPECIALIST} + \beta_{11} \text{IND} + e \end{aligned}$$

4 | ANALYSIS AND FINDINGS

4.1 | Content analysis

The results of the content analysis are presented in Figure 1. Initially, a distinction is made between substantial and nonsubstantial disclosures: substantial disclosures are directly related to the task and aim of the IAF, and nonsubstantial disclosures are related to the governance structures of companies and their audit committees. The substantial disclosures are divided into two different subcategories: generic disclosures and firm-specific disclosures. Generic disclosures focus on the roles and objectives of the IAF, usually with respect to the effectiveness of internal controls, risk management, and compliance with laws and regulation. The independence of the IAF and its aim to add value are also associated with generic disclosures.

Firm-specific disclosures contain more detailed information about the IAF, both qualitative and quantitative. From a qualitative point of view, the firm-specific disclosures highlight aspects such as specific target areas and processes, the occurrence of particular irregularities, and the use of different types of IA services. Several companies disclose information related to IAs performed in specific continents, countries, or business areas. In quantitative terms, firm-specific disclosures are commonly related to the total number of performed IAs even specified in weeks or hours. Other examples include disclosures related to the total number of internal auditors, the number of different countries where IAs were performed, and the number of irregularities detected. A common feature of the firm-specific disclosures is that they contain some type of verifiable information that could be linked to investments in IA. Only half of all companies disclose specific information about the IAF, and only 15% of all disclosures are firm specific. Table 2 shows a selection of quotations from the annual reports supporting the content analysis.

Regarding nonsubstantial disclosures, a distinction is made between information related to the audit committee and that related

TABLE 1 Definitions of variables used in the regression models

Variable name	Definition
Dependent	
AFEE	Natural logarithm of total audit fees
Independent	
IAF	A dummy variable given the value of 1 if the company has an IAF and 0 otherwise
IA_DISCLOSURE	A dummy variable given the value of 1 if the company discloses more information than the average company and 0 otherwise
FIRM_SPECIFIC	A dummy variable given the value of 1 if the company disclose any firm-specific information related to IA and 0 otherwise
Control	
ASSETS	Natural logarithm of total assets
INVREC	Inventory and receivables divided by total assets
SUBS	Square root of number of subsidiaries
NON_AFEE	Natural logarithm of nonaudit fees
BETA	The systematic risk of the company
LOSS	A dummy variable given the value of 1 if the company has reported a negative net income during any of the last three years and 0 otherwise
OWN	∑ (%) of voting rights held by the five largest shareholders
AUDCHA	A dummy variable, given the value of 1 if the company has changed its signing audit firm during any of the last two years and 0 otherwise
SPECIALIST	A dummy variable, given the value of 1 if an audit firm has a fee market share of at least 30% in an industry and 0 otherwise
KPMG	A dummy variable given the value of 1 if KPMG is the signing audit firm and 0 otherwise
EY	A dummy variable given the value of 1 if EY is the signing audit firm and 0 otherwise
DELOITTE	A dummy variable given the value of 1 if Deloitte is the signing audit firm and 0 otherwise
PWC	A dummy variable given the value of 1 if PWC is the signing audit firm and 0 otherwise
OAF	A dummy variable given the value of 1 if a non-Big 4 audit firm is the signing audit firm and 0 otherwise
BMI	A dummy variable given the value of 1 if the company is in the basic materials industry and 0 otherwise
CGI	A dummy variable given the value of 1 if the company is in the consumer industry and 0 otherwise
CSI	A dummy variable given the value of 1 if the company is in the consumer services industry and 0 otherwise
HCI	A dummy variable given the value of 1 if the company is in the health care industry and 0 otherwise
TECI	A dummy variable given the value of 1 if the company is in the technology industry and 0 otherwise
OI	A dummy variable given the value of 1 if the company is in the oil & gas, telecommunications, or utilities industries and 0 otherwise
IND	A dummy variable given the value of 1 if the company is in the industrials industry and 0 otherwise

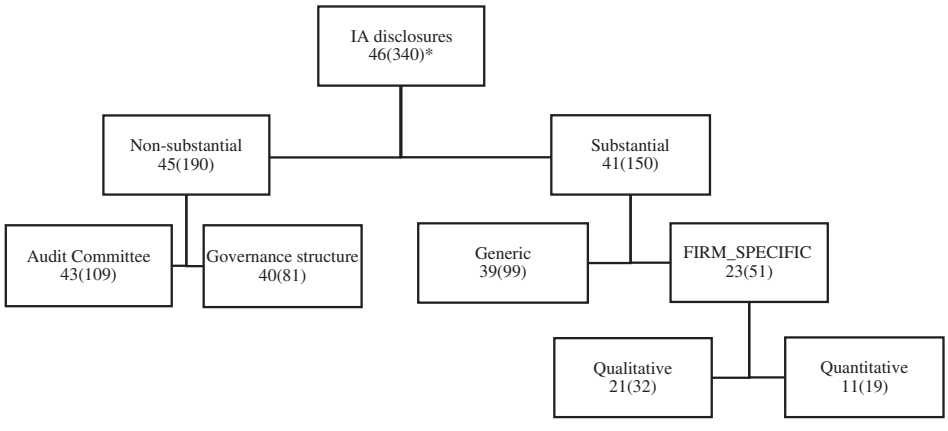

FIGURE 1 Categorization of IA disclosures

to the governance structures of companies. Audit committee disclosures include, among other things, information about the audit committee's task to review the effectiveness of the IAF, participation at meetings with the IAF, and the approval of the IA plan. Governance structure disclosures are mainly related to communication and reporting between the IAF and the board of directors, audit

TABLE 2 Quotations from annual reports illustrating the basis for categorization

Category	Quotation in the annual report
Substantial	
Generic	Internal audit is a dynamic process, evolving in line with the changes to the internal and external business conditions. This aims to ensure that the Group's objectives are met in terms of appropriate and effective processes, and that the financial statements are prepared in accordance with applicable laws and regulations in order to provide a reasonable assurance of reliability. *Lindab International AB, 2013, p. 53*
	The internal auditor of Lundin Petroleum provides an independent and objective appraisal function established as a service adding value to the organisation. The internal auditor is concerned with the adequacy and effectiveness of systems of control and whether they are managed, maintained, complied with and function effectively. To this end, the internal auditor will evaluate controls that promote efficient management reporting, compliance with procedures, protection of organisational assets and interests and effective control. *Lundin Petroleum, 2013, p. 62*
Firm-specific (quantitative)	The internal audit function comprises two internal auditors, supplemented by internal specialist resources and auditors from the auditing company KPMG. In 2013, 30 internal audits were performed. *Alfa Laval, 2013, p. 57*
	During 2013, slightly more than 170 weeks of internal audits were performed. *Tele2, 2013, Corporate Governance Report, p. 9*
	In 2013, the Group internal audit function conducted internal audits in 107(88) units out of 452 (438). The audits were conducted in 38 countries. *Atlas Copco, 2013, p. 65*
Firm-specific (qualitative)	The Eurasian operations are an important part of the audit scope, including on-site reviews with focus on revenue assurance, processes and governance. In 2013, other focus areas were: Procurement and logistics, IT and information security, Investment process and CAPEX. *Telia, 2013, p. 48*
	Finally, Saab's Internal Audit department is responsible for monitoring the implementation of the Group's corruption prevention processes. *Saab, 2013, p. 37*
	In-depth audits in target areas such as Treasury, Financial Reporting, process for sale of Gift Cards, invoicing and collection of Technical Service Fees and major Capital Investment projects are also carried out in selected hotels. *The Rezidor Hotel Group, 2013, p. 91*
	Emphasis was on Europe, China and the U.S. Most of the internal audits were conducted by the Internal Control staff function in cooperation with internal resources from other staff functions with specialist competence in such areas as purchasing and finance, or jointly with controllers from various business areas. Internal audits of IT security were carried out by the head of the IT Group staff function together with external consultants. In 2013, the Internal Control staff function worked on a broad front with reviews of all processes. A particular focus area for 2013 was the management of project accounting. *Trelleborg, 2013, p. 56*
Non-substantial	
Audit committee	The main task of the Audit Committee is to monitor the company's financial reporting, to secure that principles adopted for financial reporting, internal control, internal audit and risk assessment are observed and efficient. *Husqvarna, 2013, p. 50*
	The Company's auditor, as well as the head of the Internal Audit, participated in all of the meetings of the Audit Committee in 2013 and, at two of these meetings, also met with the Committee without the presence of the management of the Company. *Swedish Match, 2013, p. 100*
	The Audit Committee's tasks include: To follow up the activities of the internal audit function Management Assurance & Special Assignments as regards to organization, recruiting, budgets, plans, results and audit reports. *Electrolux, 2013, p. 153*
Corporate governance structure	The Head of the internal audit reports to the Board of Directors, the CEO and CFO and informs management in each business area and other units on the results of the audits performed. *Mekonomen, 2013, p. 29*
	Group Assurance is subordinated to the Board's Audit Committee and the head of the unit reports to the Audit Committee. In functional terms, the head of Group Assurance reports to Sandvik's CFO. *Sandvik, 2013, p. 70*
	The Management Assurance staff function operates as the Group's internal audit function and reports directly to the Senior Vice President Finance with an open line of communication to the Audit Committee. *Securitas, 2013, p. 45*

committee, chief executive officer, chief financial officer, and other committees.

4.2 | Descriptive statistics

Table 3 presents descriptive statistics for the variables used in the study. Approximately 23% of the 197 companies in the final sample had implemented an IAF by the end of 2013. This number is in line with previously disclosed data from the Swedish Corporate Governance Board. Of the 46 companies with an IAF, 20 companies disclose more information than the average and 23 disclose firm-related information related to IA. A corporate group, on average, consists of 42.38 subsidiaries with a standard deviation of 25.30. The mean share of the five largest shareholders is 55%, meaning that they possessed the majority of the total voting rights of the company. Of all the companies, 35.5% had presented a negative net income in any of the last three years. During any of the last two years, 11.1% of the listed companies had replaced their signing audit firm and, on average, 29% of the total assets consisted of inventory and receivables.

More than 40% of all the listed companies have PWC as their signing auditor, followed by EY with a market share of 24.4%, KPMG with 21.3%, and Deloitte with 11.2%. Only 2.5% of all companies have a signing audit firm that did not belong to the Big 4, and 50.8% of all listed companies were audited by an audit firm considered a specialist. *IND* is by far the largest industry, with 34.5% of all companies, followed by *TECI* (16.2%), *HCI* (14.2%), *CGI* (12.2%), *CSI* (12.2%), and *BMI* (6.1%). *OI* includes only 4.6% of all companies.

A correlation matrix (Pearson correlations) was used to examine the correlations between the variables; the results are presented in Table 4. As shown, the dependent variable *AFEE* positively correlates

TABLE 3 Descriptive statistics n = 197 (n = 46)

Variable	Mean	Median	Minimum	Maximum	SD
Dependent variable					
AFEE	14.81 (16.63)	14.60 (16.62)	11.73 (13.76)	19.08 (19.08)	1.51 (1.19)
Independent variables					
IAF	0.23 (1.00)	0.00 (1.00)	0.00 (1.00)	1.00 (1.00)	0.42 (1.00)
IA_DISCLOSURE	0.10 (0.43)	0.00 (0.00)	0.00 (0.00)	1.00 (1.00)	0.30 (0.50)
FIRM_SPECIFIC	0.12 (0.50)	0.00 (0.50)	0.00 (0.00)	1.00 (1.00)	0.32 (0.51)
Control variables					
Continuous					
ASSETS	21.55 (24.03)	21.17 (24.39)	17.24 (21.29)	26.62 (26.62)	2.05 (1.56)
INVREC	0.29 (0.26)	0.29 (0.28)	0.01 (0.03)	0.88 (0.53)	0.16 (0.12)
SUBS	6.51 (11.42)	4.90 (9.59)	1.00 (2.50)	26.27 (26.27)	5.04 (6.22)
NON_AFEE	13.22 (14.70)	13.81 (15.62)	0.00 (0.00)	18.56 (18.56)	3.58 (4.12)
BETA	0.58 (0.83)	0.60 (0.90)	−0.3 (0.02)	1.70 (1.30)	0.36 (0.30)
OWN	0.55 (0.45)	0.55 (0.45)	0.06 (0.06)	0.96 (0.89)	0.18 (0.17)
Binary	% [1]	Number	% [0]	Number	Total
LOSS	35.5 (21.7)	70 (10)	64.5 (78.3)	127 (36)	197 (46)
AUDCHA	11.1 (10.9)	22 (5)	88.9 (89.1)	175 (41)	197 (46)
SPECIALIST	50.8 (59.0)	100 (27)	49.2 (41.0)	97 (19)	197 (46)
KPMG	21.3 (17.4)	42 (8)	78.7 (82.6)	155 (38)	197 (46)
EY	24.4 (26.1)	48 (12)	75.6 (73.9)	149 (34)	197 (46)
DELOITTE	11.2 (13.0)	22 (6)	88.8 (87.0)	175 (40)	197 (46)
PWC	40.6 (43.5)	80 (20)	59.4 (56.5)	117 (26)	197 (46)
OAF	2.5 (0)	5 (0)	97.5 (0)	192 (46)	197 (46)
BMI	6.1 (8.7)	12 (4)	93.9 (91.3)	185 (42)	197 (46)
CGI	12.2 (13.0)	24 (6)	87.8 (87.0)	173 (40)	197 (46)
CSI	12.2 (17.4)	24 (8)	87.8 (82.6)	173 (38)	197 (46)
HCI	14.2 (2.2)	28 (1)	85.8 (97.8)	169 (45)	197 (46)
TECI	16.2 (8.7)	32 (4)	83.8 (91.3)	165 (42)	197 (46)
OI	4.6 (10.9)	9 (5)	95.4 (89.1)	188 (41)	197 (46)
IND	34.5 (39.1)	68 (18)	65.5 (60.9)	129 (28)	197 (46)

with *IAF*, *IA_DISCLOSURE*, *FIRM_SPECIFIC*, *ASSETS*, *SUBS*, *NON_AFEE*, *BETA*, *SPECIALIST*, *PWC*, and *IND* and negatively correlates with *LOSS*, *OWN*, *DELOITTE*, *OAF*, *HCI*, and *TECI*. Some of the independent variables have a correlation that is close to or higher than 0.7, and to further examine potential problems with multicollinearity, a variance inflation factor (VIF) test was performed. The likelihood of serious multicollinearity is low, as all VIF values except two are lower than 2.5. and the maximum VIF value in any of the models is lower than 5.5. More specifically, there are only two variables (*ASSETS* and *SUBS*) that have a VIF value higher than 2.5. The main results were not affected by the exclusion of *SUBS* from the different audit fee models.

4.3 | Regression results

Table 5 presents results from the ordinary least squares regressions performed using previously explained variables. Model 1 uses *IAF* as the independent variable, model 2 uses *IAF* and *IA_DISCLOSURE*, model 3 uses *IAF* and *FIRM_SPECIFIC*, and model 4 uses *FIRM_SPECIFIC*.

A comparison of the adjusted R^2 values of the different models shows that model 3 has a slightly higher adjusted R^2 value of 91.1% than the other models. In a Swedish setting, an adjusted R^2 value of around 90% is not uncommon and is in line with previous research (Zerni et al., 2012). All models are significant according to F statistics,

The results in model 1 are consistent with H1 at the 5% level and support the existence of a positive relationship between the use of an IAF and the external audit fees; listed companies that have implemented an IAF pay approximately 30% higher audit fees than companies without an IAF. The results in model 2 show that no significant relationship exists between disclosing more information than the average company and the external audit fees. However, the results in models 3 and 4 support H2 and show that companies disclosing firm-specific information related to IA pay significantly lower audit fees than other companies in the sample. More specifically, the results in models 3 and 4 support H2 at the 10% level, but in model 3 the *FIRM_SPECIFIC* variable has a p-value of 0.053, which is close to acceptance at the 5% level.

Model 4 only includes companies with an IAF. Owing to a limited number of observations, this model controls for industry by using the largest industry (*IND*) as a control variable. Instead of including dummy

TABLE 4 Correlation table[a] (Pearson correlations) $n = 197$

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	14.1	14.2	14.3	14.4	15	15.1	15.2	15.3	15.4	15.5	15.6
1	*AFEE*	**1**																								
2	*IAF*	.668**	**1**																							
3	*IA_DISCLOSURE*	.479**	.609**	**1**																						
4	*FIRM_SPECIFIC*	.474**	.659**	.820**	**1**																					
5	*ASSETS*	.931**	.670**	.503**	.518	**1**																				
6	*INVREC*	−.074	−.096	−.079	−.120	−.178*	**1**																			
7	*SUBS*	.832**	.540**	.428**	.424**	.763**	−.004	**1**																		
8	*NON_AFEE*	.345**	.228**	.271**	.296**	.349**	−.078	.306**	**1**																	
9	*BETA*	.545**	.476**	.367**	.375**	.567**	−.099	.497**	.104	**1**																
10	*LOSS*	−.280**	−.159*	−.144*	−.105	−.307**	−.221**	−.292**	−.118†	−.081	**1**															
11	*OWN*	−.203**	−.302**	−.171*	−.145*	−.227**	−.259**	−.169**	−.027	−.176**	.031	**1**														
12	*AUDCHA*	−.019	−.005	−.012	.022	.019	−.174*	−.111	−.007	−.056	.107	.011	**1**													
13	*SPECIALIST*	.218**	.088	.096	.105	.168*	−.068	.156*	.142*	.103	.011	−.024	−.005	**1**												
14	*KPMG*	−.022	−.053	−.052	−.012	.003	.008	−.013	−.114	−.001	.028	−.028	−.052	−.405**	**1**											
14.1	*EY*	−.004	.022	−.034	−.022	−.003	.046	−.093†	−.029	.050	.073	.184**	.137†	.015	−.295**	**1**										
14.2	*DELOITTE*	−.124†	−.124	.041	.072	−.132†	.015	.003	−.058	−.110	.006	.004	−.023	−.328**	−.185**	−.201**	**1**									
14.3	*OAF*	−.129†	−.129	−.054	−.059	−.132†	.049	−.100	−.004	−.106	−.120†	.029	−.057	−.164*	−.084	−.092	−.057	**1**								
14.4	*PWC*	.143*	.143*	.064	.086	.127†	−.072	.123	.159*	.062	−.052	−.150*	−.129†	−.587**	−.430**	−.469**	−.293**	−.133	**1**							
15	*BMI*	.041	.060	.055	.040	.143*	.070	−.025	−.018	.089	.121†	−.093	−.023	−.216**	−.029	.152*	−.023	−.041	−.081	**1**						
15.1	*CGI*	.109	.015	.029	.039	.061	.132†	.052	−.066	−.070	−.050	−.033	−.083	−.068	.033	−.067	.016	.039	.008	−.095	**1**					
15.2	*CSI*	.030	.078	−.022	.010	.076	−.003	−.132†	−.054	.122†	.015	.005	.114	−.099	.033	.114	−.083	−.060	−.055	−.095	−.139†	**1**				
15.3	*HCI*	−.236**	−.190**	−.089	−.103	−.218**	−.203**	−.216**	−.006†	−.085	.153*	−.026	.040	.023	−.034	−.028	.086	.119	−.041	−.104	−.152*	−.152*	**1**			
15.4	*TECI*	−.208**	−.113	−.148*	−.117	−.232**	.011	−.119	.031	−.250**	−.039	−.050	−.025	−.007	−.061	−.058	.019†	.016	.084	−.112	−.164*	−.164*	−.179*	**1**		
15.5	*OI*	.057	.167**	.168*	.223**	.135	−.237**	−.030	.095	.016	.041	.034	−.000	.118	−.114	.102	.077	−.035	−.032	−.056	−.081	−.081	−.089	−.096	**1**	
15.6	*IND*	.194**	.054	.074	.069	.115	.212**	.332**	.030	.073	−.137	.109	−.020	.160*	.091	−.089	−.054	−.049	.052	−.185**	−.270**	−.270**	−.296**	−.320**	.159*	**1**

Significance at:

**$p < 0.01$,

*$p < 0.05$,

†$p < 0.10$.

Variables are as defined in Table 1.

[a]A separate correlation matrix (Pearson correlations) was calculated for the restricted sample ($n = 46$); the results did deviate substantially from the correlations reported in this table.

TABLE 5 Regression results

Dependent variable *AFEE*	Exp. sign	Model (1)		Model (2)		Model (3)		Model (4)	
Independent variables		Coef.	*t*-stat	Coef.	*t*-stat	Coef.	*t*-stat	Coef.	*t*-stat
IAF	+	0.265*	2.370	0.311*	2.554	0.378**	3.022		
IA_DISCLOSURE	?			−0.135	−0.956				
FIRM_SPECIFIC	?					−0.274†	−1.950	−0.258†	−1.848
Control variables									
ASSETS	+	0.528**	14.567	0.529**	14.580	0.531**	14.749	0.602**	7.974
INVREC	+	0.451†	1.878	0.452†	1.884	0.443†	1.860	1.230†	1.756
SUBS	+	0.075**	6.041	0.075**	6.068	0.075**	6.107	0.051**	3.076
NON_AFEE	+	0.005	0.541	0.007	0.663	0.008	0.829	−0.012	−0.659
BETA	+	−0.102	−0.865	−0.093	−0.790	−0.082	−0.696	−0.344	−1.310
LOSS	+	0.152*	1.934	0.150†	1.900	0.156*	1.993	0.331†	1.745
OWN	+	−0.006	−0.031	−0.003	−0.015	0.024	0.117	−0.223	−0.545
AUDCHA	–	−0.021	−0.189	−0.019	−0.169	−0.009	−0.086	0.244	1.093
SPECIALIST	+	0.155	1.603	0.157	1.617	0.151	1.567	0.335*	2.251
KPMG	+/−	0.008	0.067	0.007	0.061	−0.011	−0.100		
EY	+/−	0.103	1.099	0.099	1.050	0.087	0.928		
DELOITTE	+/−	−0.040	−0.286	−0.036	−0.257	−0.032	−0.230		
OAF	+/−	0.056	0.244	0.057	0.246	0.055	0.241		
Constant		2.618	3.595	2.580	3.536	1.878	2.507	1.589	0.935
Control for industry		Yes		Yes		Yes		Yes[a]	
Observations *n*		197		197		197		46	
F-statistic		99.169**		94.445**		96.131**		30.769**	
Adjusted R^2		90.9		90.9		91.1		87.9	

Significance at:

**$p < 0.01$,

*$p < 0.05$,

†$p < 0.10$.

Variables are as defined in Table 1. Reference category models 1 to 3: *PWC* and *IND*.

[a]Owing to a limited number of observations, model 4 only uses *IND* as a control variable for industry.

variables for each of the Big 4 audit firms and other audit firms, the model uses industry specializations (*SPECIALIST*) to control for firm effects. Additional regressions controlling for each of the Big 4 audit firms did not change the significance of the independent variable, but the adjusted R^2 value was reduced.

Overall, the results in the different audit fee models show contradictory evidence, indicating that it is important to distinguish between the use of an IAF and the decision to voluntarily disclose firm-specific information. A possible explanation for the contradictory results between the different models is that firms with higher IAF quality include more informative and quantifiable IA disclosures in the annual report. There is no evidence that a higher quantity of IA disclosures is associated with external audit fees; instead, the results indicate that it is the content of the IA disclosures that is of importance. Concerning the control variables, *ASSETS*, *INVREC*, *SUBS*, and *LOSS* show a significant positive relationship with the audit fees in all the models. There are no significant results indicating that any of the signing audit firms earned a fee premium. However, in model 4, audit firms with a fee market share of at least 30% in an industry (*SPECIALIST*) are able to charge a fee premium.

In an analysis of the residuals in models 1–3, sensitivity tests were used by trimming the continuous variables to exclude the bottom and top 1% and 3%. This trimming of the data had no major effect on the findings, and thus untrimmed data were used to capture the full variation of the data.

5 | DISCUSSION AND CONCLUSIONS

The aim of this study has been to explore the content of IA disclosures in annual reports, and to explain the relationship between IA disclosures and external audit fees. Content analysis enabled categorization of the IA disclosures and formed the basis for statistical analysis. Identified IA disclosures are either of a more substantial nature, containing firm-specific and generic information connected to the IAF, or of a nonsubstantial nature, focusing on the task of the audit committee and governance structures. Only a small portion of all IA disclosures are verifiable and contain firm-specific information relevant to shareholders and potential investors. In more detail, firm-specific disclosures focus on actual investments in IA, either by including

quantifiable information or by highlighting specific target areas and processes. It is possible that this small number of firm-specific disclosures can be explained by the fact that verifiable and quantitative disclosures require a genuine commitment to IA and will be costly to achieve (Toms, 2002).

The findings supporting H1 are consistent with those of previous studies (Anderson & Zéghal, 1994; Goodwin-Stewart & Kent, 2006; Hay et al., 2008; Singh & Newby, 2010) and contribute additional evidence for a positive relationship between the use of an IAF and external audit fees. However, further analysis of the IA disclosures, H2, shows that companies which disclose firm-specific information related to IA pay significantly lower audit fees than other companies in the sample. Given previous findings that more informative disclosures signal actual investments in disclosed activities (Toms, 2002) and increased governance quality (Beekes & Brown, 2006), it can be argued that more informative IA disclosures signal higher IAF quality. By improving risk-management and control processes, higher IAF quality can reduce the time and effort of external auditors, and hence result in lower audit fees (Prawitt et al., 2011). The contradictory results in the different models may be explained by the fact that companies that use an IAF are heterogeneous and differ with regard to actual investments in IA.

This study adds new evidence from a different context (Nordic corporate governance context) and time period (2013) compared with previous studies from common law countries (Anderson & Zéghal, 1994; Goodwin-Stewart & Kent, 2006; Hay et al., 2008; Singh & Newby, 2010; Zain et al., 2015). The characteristics of Nordic corporate governance include concentrated ownership with controlling shareholders, high transparency towards shareholders, and annual general meetings with extensive governing power (Gabrielsson, 2012; Lekvall, 2014).

Shareholders, policy-makers, and managers are all likely to be interested in the practical implications of the present results. Since only a small portion of all IA disclosures contains firm-specific information, policy-makers may seek to use regulatory instruments to encourage companies to depart from standardized and generic disclosures. Managers who promote superior governance quality and invest in IA are able to include more firm-specific disclosures in the annual reports in order to differentiate themselves from companies that are not genuinely committed to IA. From a theoretical and methodological perspective, this study contributes to the IA literature by exploring IA disclosures using a content analysis. The results in the different audit fee models show contradictory evidence, supporting a positive relationship between the use of an IAF and the external audit fees (complementary perspective) and a negative relationship between the use of firm-specific IA disclosures and external audit fees (substitute perspective). Overall, the results of this study indicate that firm-specific IA disclosures can be used as a proxy for IAF quality.

This study has a number of limitations that need to be considered. To obtain more robust results, it might have been beneficial to use panel data instead of cross-sectional data. Some advantages of panel data are that you are able to control for omitted variables that vary over time and usually have more sample variability and degrees of freedom. However, the exploratory nature of this study has been highly labor intensive, which limited the opportunity to collect further data. Owing to a small sample size (especially in model 4) and the use of cross-sectional data, the results of this study should be interpreted with caution. However, there are no indications that the particular year (2013) was strongly affected by new regulations, financial instability, or any other extraordinary circumstances. The binary nature of the independent variables used in this study could have affected the ability to capture all the variation in the external audit fees. Future research should attempt to refine the analysis of IA disclosures; for example, by constructing different IA disclosure indices. As a complement to archival data, it would have been beneficial to collect additional survey data in order to construct a more suitable proxy for IAF quality. Since investments in IA are not necessarily synonymous with IAF quality, future studies may further investigate this relationship; for example, by using information about the size of the IA budget.

In addition to this study, knowledge about the practice of IA disclosures is limited, and there is a great potential for the use of content analysis within other institutional contexts. A future way of categorizing IA disclosures may be based on auditing standards (ISA 610, AU322). By considering the external auditor's reliance on the internal auditor function (for a review of this research see Bame-Aldred, Brandon, Messier, Rittenberg, & Stefaniak, 2013), it would be possible to create categories based on information disclosed about the competence, independence, objectivity, and role of the IAF. The interaction between the IAF and the external auditor is an area that needs to be further investigated; for example, by gaining a better understanding of how different IAF characteristics and activities are related to the external audit fees.

ACKNOWLEDGEMENTS

I would like to acknowledge the anonymous referees for their constructive comments. I am also thankful to the participants in the 39th EAA Annual Congress for their valuable comments on an earlier version of this paper.

ENDNOTES

[1] For further information on these legislations, see www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Aktiebolagslag-2005551_sfs-2005-551/ and www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/rsredovisningslag-19951554_sfs-1995-1554/ respectively.

[2] Further information about the Swedish Corporate Governance Code can be found at http://www.corporategovernanceboard.se.

ORCID

Linus Axén http://orcid.org/0000-0002-4254-0342

REFERENCES

Abbott, L. J., Parker, S., & Peters, G. F. (2012). Audit fee reductions from internal audit-provided assistance: The incremental impact of internal audit characteristics. *Contemporary Accounting Research*, *29*(1), 94–118.

Abraham, S., & Cox, P. (2007). Analysing the determinants of narrative risk information in UK FTSE 100 annual reports. *The British Accounting Review*, *39*, 227–248.

Adams, C., & Harte, G. (1998). The changing portrayal of the employment of women in British banks' and retail companies' corporate annual reports. *Accounting, Organisation and Society*, *23*(8), 781–812.

Adams, M. B. (1994). Agency theory and the internal audit. *Managerial Auditing Journal*, *9*(8), 8–12.

Ahmed, K., & Goyal, M. (2005). A comparative study of pricing of audit services in emerging economies. *International Journal of Auditing*, *9*(2), 103–116.

Allegrini, M., & Greco, G. (2013). Corporate boards, audit committees and voluntary disclosure: Evidence from Italian listed companies. *Journal of Management and Governance*, *17*(1), 187–216.

Anderson, T., & Zéghal, D. (1994). The pricing of audit services: Further evidence from the Canadian market. *Accounting and Business Research*, *24*(95), 195–207.

Archambeault, D., DeZoort, T., & Holt, P. (2008). The need for an internal auditor report to external stakeholders to improve governance transparency. *Accounting Horizons*, *22*(4), 375–388.

Bame-Aldred, C. W., Brandon, D. M., Messier, W. F., Rittenberg, L. E., & Stefaniak, C. M. (2013). A summary of research on external auditor reliance on the internal audit function. *Auditing: A Journal of Practice & Theory*, *32*(1), 251–286.

Beattie, V., McInnes, B., & Fearnley, S. (2004). A methodology for analysing and evaluating narratives in annual reports: A comprehensive descriptive profile and metrics for disclosure quality attributes. *Accounting Forum*, *28*(3), 205–239.

Beck, A. C., Campbell, D., & Shrives, P. J. (2010). Content analysis in environmental reporting research: Enrichment and rehearsal of the method in a British–German context. *The British Accounting Review*, *42*, 207–222.

Beekes, W., & Brown, P. (2006). Do better-governed Australian firms make more informative disclosures? *Journal of Business Finance and Accounting*, *33*(3–4), 422–450.

Berelson, B. L. (1952). *Content analysis in communication research*. NewYork, NY: Free Press.

Casterella, J., Francis, J., Lewis, B., & Walker, P. (2004). Auditor industry specialization, client bargaining power, and audit pricing. *Auditing: A Journal of Practice and Theory*, *23*(1), 123–140.

DeAngelo, L. (1981). Auditor independence, "low balling", and disclosure regulation. *Journal of Accounting and Economics*, *3*(2), 113–127.

ECIIA (2012). *Corporate governance codes on internal audit: Current status in the EU*. Brussels: European Confederation of Institutes of Internal Auditing. Retrieved from http://www.eciia.eu/wp-content/uploads/2013/09/OCV-3.5-Corporate-Gov-Codes.pdf. accessed April 17, 2018

Ettredge, M., Reed, M., & Stone, M. (2000). An examination of substitution among monitoring devices: The case of internal and external audit expenditures. *Review of Quantitative Finance and Accounting*, *15*(4), 57–79.

EU (2013). Directive 2013/34/EU of European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of and repealing Council Directives 78/660/EEC and 83/349/EEC. *Official Journal of the European Union: Legislation*, *182*, 19–74.

Ezzamel, M., Gwilliam, D. R., & Holland, K. M. (2002). The relationship between categories of non-audit services and audit fees: Evidence from UK companies. *International Journal of Auditing*, *6*, 13–35.

Felix, W. L., Gramling, A. A., & Maletta, M. J. (2001). The contribution of internal audit as a determinant of external audit fees and factors influencing this contribution. *Journal of Accounting Research*, *39*(3), 513–534.

Firth, M. (1985). An analysis of audit fees and their determinants in New Zealand. *Auditing: A Journal of Practice & Theory*, *4*(2), 23–37.

Firth, M. (1997). The provision of non-audit services and the pricing of audit fees. *Journal of Business Finance and Accounting*, *24*(3–4), 511–525.

Gabrielsson, J. (2012). Corporate governance and initial public offerings in Sweden. In A. Zattoni, & W. Judge (Eds.), *Corporate governance and initial public offerings: An international perspective* (pp. 422–448). New York, NY: Cambridge University Press.

Gonthier-Besacier, N., & Schatt, A. (2007). Determinants of audit fees for French quoted firms. *Managerial Auditing Journal*, *22*(2), 139–160.

Goodwin-Stewart, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics, and internal audit. *Accounting and Finance*, *46*, 387–404.

Gramling, A. A., Maletta, M. J., Schneider, A., & Church, B. K. (2004). The role of the internal audit function in corporate governance: A synthesis of the extant internal auditing literature and directions for future research. *Journal of Accounting Literature*, *23*, 194–244.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing and Accountability Journal*, *8*(2), 47–77.

Griffin, P. A., Lont, D. H., & Sun, Y. (2009). Governance regulatory changes, International Financial Reporting Standards adoption, and New Zealand audit and non-audit fees: empirical evidence. *Accounting and Finance*, *49*(4), 697–724.

Gros, M., Koch, S., & Wallek, C. J. (2017). Internal audit function quality and financial reporting: Results of a survey on German listed companies. *Journal of Management and Governance*, *21*(2), 291–329.

Hay, D. (2013). Further evidence from meta-analysis of audit fee research. *International Journal of Auditing*, *17*(2), 162–176.

Hay, D., Knechel, W. R., & Ling, H. (2008). Evidence on the impact of internal control and corporate governance on audit fees. *International Journal of Auditing*, *12*(1), 9–24.

Hay, D., Knechel, W. R., & Wong, N. (2006). Audit fees: a meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research*, *23*(1), 141–191.

Holm, C., & Thinggaard, F. (2014). Leaving a joint audit system: conditional fee reductions. *Managerial Auditing Journal*, *29*(2), 131–152.

Holt, T. P., & DeZoort, T. (2009). The effects of internal audit report disclosure on investor confidence and investment decisions. *International Journal of Auditing*, *13*(1), 61–77.

IIARF. (2013). *International Professional Practice Framework (IPPF)*. Altamonte Springs, FL: IIA Research Foundation.

Jones, M. J., & Shoemaker, P. A. (1994). Accounting narratives: A review of empirical studies of content and readability. *Journal of Accounting Literature*, *13*, 142–185.

Köhler, A., & Ratzinger-Sakel, N. (2012). Audit and non-audit fees in Germany—the impact of audit market characteristics. *Schmalenbach Business Review*, *64*, 281–307.

Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Landis, J. R., & Koch, G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*(1), 159–174.

Lekvall, P. (Ed.) (2014). *The Nordic corporate governance model*. Stockholm: SNS Förlag.

Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, *16*(3), 555–583.

Linsley, P. M., & Shrives, P. J. (2006). Risk reporting: a study of risk disclosures in the annual reports of UK companies. *The British Accounting Review*, *38*(1), 387–404.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, *1*(2): Art. 20. Retrieved from http://www.qualitative-research.net/index.php/fqs/article/viewArticle/1089/2385 (accessed April 17, 2018).

Meek, G., Roberts, C., & Gray, S. (1995). Factors influencing voluntary annual report disclosures by U.S., U.K. and continental European multinational corporations. *Journal of Business Studies*, *21*(3), 555–572.

Messier, W. F., Reynolds, J. K., Simon, C. A., & Wood, D. A. (2011). The effect of using the internal audit function as a management training ground on the external auditor's reliance decision. *The Accounting Review*, *86*(6), 2131–2154.

Milne, M. J., & Adler, R. W. (1999). Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing and Accountability Journal*, *12*(2), 237–256.

Neuendorf, K. (2002). *The content analysis guide book*. Thousand Oaks, CA: Sage Publications.

Niemi, L. (2002). Do firms pay for audit risk? Evidence on risk premiums in audit fees after direct control for audit effort. *International Journal of Auditing*, *6*(1), 37–51.

Niemi, L. (2005). Audit effort and fees under concentrated client ownership: Evidence from four international audit firms. *International journal of Accounting*, *40*(4), 303–323.

Nikkinen, J., & Sahlström, P. (2003). Do auditors assess the systematic market risk in their audit pricing decisions? International evidence. *Advances in Accounting*, *20*, 233–244.

Numan, W., & Willekens, M. (2012). An empirical test of spatial competition in the audit market. *Journal of Accounting and Economics*, *53*, 450–465.

O'Sullivan, N. (2000). The impact of board composition and ownership on audit quality: Evidence from large UK companies. *British Accounting Review*, *32*, 397–414.

Patton, M. Q. (2002). *Qualitative research & evaluation methods*. Thousand Oaks, CA: Sage Publications.

Prawitt, D., Sharp, N., & Wood, D. (2011). Reconciling archival and experimental research: Does internal audit contribution affect the external audit fee? *Behavioral Research in Accounting*, *23*(2), 187–206.

Rust, R., & Cooil, B. (1994). Reliability measures for qualitative data: Theory and implications. *Journal of Marketing Research*, *31*(1), 14.

Simunic, D. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, *18*(1), 161–190.

Singh, H., & Newby, R. (2010). Internal audit and audit fees: further evidence. *Managerial Auditing Journal*, *25*(4), 309–327.

Singh, H., Woodliff, D., Sultana, N., & Newby, R. (2014). Additional evidence on the relationship between an internal audit function and external audit fees in Australia. *International Journal of Auditing*, *18*, 27–39.

Swedish Corporate Governance Board. (2010). *The Swedish corporate governance code*. (2010). Retrieved from http://www.corporategovernanceboard.se/UserFiles/Archive/502/svenskkodbolagsstyrn_2010_eng_korrigerad20110321.pdf (accessed April 17, 2018).

Tagesson, T., & Collin, S.-O. (2016). Corporate governance influencing compliance with the Swedish Code of Corporate Governance. *International Journal of Disclosure & Governance*, *13*(3), 262–277.

Thinggaard, F., & Kiertzner, L. (2008). Determinants of audit fees: Evidence from a small capital market with a joint audit requirement. *International Journal of Auditing*, *12*(2), 141–158.

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237–246.

Toms, J. S. (2002). Firm resources, quality signals and the determinants of corporate environmental reputation: Some UK evidence. *British Accounting Review*, *34*, 257–282.

Unerman, J. (2000). Reflections on quantification in corporate social reporting content analysis. *Accounting, Auditing & Accountability Journal*, *13*(5), 667–681.

Vourvachis, P., & Woodward, T. (2015). Content analysis in social and environmental reporting research: trends and challenges. *Journal of Applied Accounting Research*, *16*(2), 166–195.

Wallace, W. (1984). Internal auditors can cut outside CPA costs. *Harvard Business Review*, *62*(16), 20.

Weber, R. (1990). *Basic content analysis* (2nd ed.). Newbury Park, CA: Sage Publications.

Willekens, M., & Achmadi, C. (2003). Pricing and supplier concentration in the private client segment on the audit market: Market power or concentration. *The International Journal of Accounting*, *38*(4), 431–455.

Yatim, P., Kent, P., & Clarkson, P. (2006). Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*, *21*, 757–782.

Zain, M., Zaman, M., & Zulkifflee, M. (2015). The effect of internal audit function quality and internal audit contribution to external audit on audit fees. *Internal Journal of Auditing*, *19*, 134–147.

Zerni, M., Haapamäki, E., Järvinen, T., & Niemi, L. (2012). Do joint audits improve audit quality? Evidence from voluntary joint audits. *European Accounting Review*, *21*(4), 731–765.

Linus Axén is a PhD candidate in accounting and auditing at Linköping University.

How to cite this article: Axén L. Exploring the association between the content of internal audit disclosures and external audit fees: Evidence from Sweden. *Int J Audit*. 2018;22:285–297. https://doi.org/10.1111/ijau.12120