

# Would You Trust an Opinion Signed by a Convicted Auditor?

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# **Would You Trust an Opinion Signed by a Convicted Auditor?**

## **Abstract**

We investigate how auditor's adverse personal characteristics affect various aspects of the audit engagement. We therefore contribute the auditing literature by relaxing the assumption that auditors are homogenous individuals with similar personal characteristics. Using a unique dataset on Swedish auditors' prior crime behavior, we find that auditors with criminal convictions are more likely to be males employed in Non-Big-N audit firms. We also find that firms with large shareholders who have been convicted of crimes are more likely to appoint auditors with criminal convictions. In addition, convicted auditors engage in high-risk audits and charge higher audit fees after controlling for other audit-risk variables. Finally, our results show that firms audited by convicted auditors exhibit a lower degree of conditional accounting conservatism than firms audited by auditors without crime convictions. An important policy implication of our study is that financial statement users could benefit from knowing who is in charge of the audit in order to assess the quality of the audit.

JEL Classification: M41, M42, G30, K42

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## **1. Introduction**

External auditors are hired by firms to reduce agency costs arising when ownership and management are separated (Jensen and Meckling, 1976). As Fan and Wong (2005) argue, firms with higher expected agency costs are more likely to hire Big-5 auditors to mitigate agency costs. However, most studies on audit quality and audit risk normally assume that auditors are homogeneous individuals, even within large audit firms. This assumption is inherent in most studies on auditing as these studies normally address research questions using client-specific data, audit-firm-specific data, or audit-firm-office-specific data. While office-specific analysis expands our understanding of auditor behavior beyond audit-firm level analysis, it is possible in some countries, as pointed out by DeFond and Francis (2005), to push the analysis down to

individual auditors. In Australia, and Taiwan, for instance, the name of the signing audit partner appears in the audit report, making the signing auditor more visible to criticism. In Sweden, firms have to file the names of their responsible auditors to a public insider register. Furthermore, studies that use auditor level analysis could potentially examine whether personal characteristics of the auditor, for example, his/her propensity to take risk, affect the audit engagement. However, to-date due to data limitations, empirical archival studies have only looked at the effect of auditor gender on audit quality (Chin and Chi; 2008).

We use data on individual auditors to examine how personal auditor characteristics affect various aspects of the audit engagement. We employ a unique dataset on Swedish auditors that includes information on whether auditors have been convicted or suspected of crimes. Prior research in criminology indicates that individuals with criminal convictions are over-confident and tend to take unwarranted risks. Over-confidence and higher propensity to take risks could be particularly relevant in the audit profession.

We develop predictions as to the type of audits performed by auditors with and without criminal convictions. In particular, we argue that auditors with criminal convictions will engage in more risky audits than those without criminal convictions. We also argue that riskier firms are more likely to appoint auditors with criminal convictions, as these auditors are expected to be more tolerant towards these companies. This tolerance is likely to manifest itself in the degree of accounting conservatism. We therefore expect that companies audited by convicted auditors exhibit more aggressive financial reporting (less conservative earnings) than companies audited by auditors without criminal convictions. In addition, we expect audit fees in audits performed by convicted auditors to be, on average, higher than audits performed by auditors without criminal convictions, to compensate these auditors for higher risk tolerance. However, we do not

expect auditors with criminal convictions to earn higher personal salaries than those without criminal convictions, because the additional risk born by the convicted auditors is not fully compensated.

Our unique and proprietary database includes all criminal convictions of leading auditors who audit listed Swedish firms. There are a total of 482 Swedish auditors in our sample, of which 53 auditors have been convicted of a crime according to official court records, and seven additional auditors have been suspected of serious crimes by police authorities according to a register maintained by Swedish National Police Board. These crime convictions are mostly related to serious drunk driving but also include more serious crimes. While it may seem that drunk driving is not a factor in auditing, prior literature clearly shows that individuals who have been convicted of these crimes tend to be overconfident and take unwarranted risks.

Our results show that auditors with criminal convictions are more likely to be males employed in non-Big-N audit firms. This result indicates that Big-N audit firms have a stricter screening policy for their employees, which in turn could result in higher audit quality. Also, firms with large shareholders who have been convicted of crimes are more likely to appoint auditors with criminal convictions. In addition, convicted auditors engage in high-risk audits and charge higher audit fees after controlling for other audit-risk variables. We also find that firms audited by convicted auditors exhibit a lower degree of conditional accounting conservatism than firms audited by auditors without crime convictions. Finally, we find that salaries and personal wealth of convicted auditors are not materially different than those of auditors without criminal convictions.

The main contribution of this study is relaxing the assumption often made in auditing research that auditors are homogenous individuals with similar personal characteristics. Existing

literature largely ignores auditor personal characteristics and focuses on observable variables such as audit and non-audit fees, size of audit firms, audit tenure, and gender. In contrast, our results suggest that the quality of an auditor with criminal conviction employed by a Big-N firm may be lower than that of an auditor without criminal conviction employed by a smaller firm. The audit process and the decisions that must be made during this process are affected by personal characteristics, some of which are explored here.

We proceed as follows: Section 2 provides institutional background and a review of the literature. In Section 3, we develop our predictions. Section 4 discusses the sample and data, while in Section 5 we present our empirical analysis and results. Section 6 concludes the study.

## **2. Institutional Background and Literature Review**

### **2.1. The Audit Profession in Sweden**

All limited liability companies in Sweden (approx. 330,000 registered companies) must be audited on an annual basis. There are two types of auditors in Sweden who are allowed to audit listed firms: Approved auditors and Authorized auditors. To become an Approved auditor, the candidate must obtain a BA degree, practice at least three years, and pass an examination of professional competence. To become an Authorized auditor, the Approved auditor must obtain a Masters degree, complete five years of practice, and pass an examination for authorized auditors. The audit certification is valid for five years. After that the auditor has to reapply to the supervisory board for license renewal. In 2008, Sweden had 2,321 approved auditors and 1,787 authorized auditors.

The audit market in Sweden is largely controlled by the Big-4 audit firms, which employ 56% of the authorized auditors, and 29% of the approved auditors in Sweden. Their market share is about 40%, and it is increasing with client size. Auditors and registered public accounting firms are subject to independent quality control every six years. In addition, an auditor who audits at least one public company should be evaluated every three years.

The Supervisory Board for Public Accountants (SBPA) examines the criminal record of applicants and every five years when certification is renewed. In addition, the Supervisory Board checks whether auditors have any disputes with the Tax authorities, that they are not bankrupt and that they do not have legal guardianship. However, criminal record checks are limited to economic-related crimes and crimes related to the audit profession.

Auditing standards issued in Sweden are based on International Auditing Standards, but some additions and changes have been made to certain standards to make them consistent with Swedish laws. To maintain auditor independence, Swedish and European laws require that auditors have neither financial interest nor any close personal relationship with the client. Unlike in the US, audit firms in Sweden are generally not prohibited by Swedish or European regulation from providing most types of advisory services to clients. Audit failures may result in litigation by clients and disciplinary sanctions by the profession. Like in most other European countries, litigation risk is relative low in Sweden. The SBPA issues disciplinary sanctions against auditors in certain cases, although these cases are not common.

## **2.2. Crime convictions as a measure of auditors' personal attributes**

Individuals' personal characteristics have been shown to be related to their unethical or even criminal behavior. For instance, Jones and Kavanagh (1996) show that individuals lacking conventional morality exhibit significantly more unethical behavioral tendencies than others. In

addition, individuals showing hedonistic or over-confident behavior are more likely to commit crimes (for instance, Blickle et al., 2006). Unethical behavior is also associated with a person's willingness to take high risks. Specifically, a behavioral attribute known as sensation seeking is defined as an individual's tendency to take physical, social, legal and financial risks for the sake of the thrill (Zuckerman, 1994). Sensation seeking individuals are relatively fearless and they enjoy taking risks. Earlier studies (e.g. Jonah 1997, and Iversen and Rundmo, 2002) argue that criminal convictions such as traffic offences resulting from bad driving behavior may be a good empirical measure of sensation seeking.

Risk-seeking and in particular, its behavioral attributes, are relevant to our study. External auditors who have been convicted of crimes may be more predisposed to sensation seeking behavior. These auditors may take unwarranted risks related to their audit engagement. For instance, they may prefer to engage in auditing more risky companies and allow these companies to adopt less conservative accounting treatment and reporting.

Given the nature of the audit work, one would expect auditors to show above-average personal integrity due to the fiduciary responsibility entrusted in them. Consequently, it may seem rather implausible that public companies are audited by auditors who have been convicted of a crime. Normally, convicted individuals in the United States, Canada, United Kingdom, Sweden and other countries cannot complete the training and obtain the license allowing them to become certified public accountant (external auditors). However, in many western countries, including Sweden, individuals are barred from becoming certified auditors only if they have been convicted of economic-related crimes or other very serious crimes. Also, it is possible that auditors are convicted of crimes after receiving their license and in many cases these crime conviction do not trigger a loss of a license.

### **3. Testable Predictions**

Earlier studies on audit quality and audit pricing have used audit-firm-specific or audit-firm-office-specific data. For example, Reynolds and Francis (2000) examine client accrual and auditor going concern reports at the office level of analysis; they find evidence suggesting that auditors treated larger clients more conservatively. Craswell et al. (2002) also use office-level data and find no evidence that client size affect auditor reporting decisions. Chung and Kallapur (2003) use office level data and fail to find evidence that fees paid to auditors affect client accruals.

While audit-firm-level and office-level analyses have greatly contributed to our understanding of the causes and consequences of audit quality and pricing, significant insights in auditor behavior can be obtained by pushing the analyses to the level of individual auditors. Auditors as persons – not audit firms or offices – conduct the actual audit work in client firms. Auditing work requires high-level expertise and skills from auditors who use their personal judgments to assess various accounting choices made by the client firm. In addition, leading auditors responsible for the audit of a given client firm need to assess the risk and the amount of the required audit work in each case. Therefore, auditors' personal attributes affect all their decisions regarding the audit work. We next develop several predictions on how auditors' personal attributes, as reflected in their personal criminal behavior, are likely to affect audit quality and audit pricing.

Most previous studies use the size of the audit firm as a measure of audit quality – Big-N firms are perceived to be of higher quality than non-big-N firms. As a consequence, Big-N audit firms, on average, charge their clients higher audit fees as a reputation premium (Ferguson et al.; 2003). We argue that auditor quality is related not only to audit firm size but also to their prior



criminal behavior. Specifically, the quality of audits performed by auditors with prior criminal convictions is lower than that performed by auditors without prior criminal behavior. Still, to maintain their good reputation, Big-N audit firms are expected to be more concerned with their employees' background and better screen for prior criminal convictions, above and beyond what is required under state regulation. This leads to our first prediction:

*Prediction 1: Auditors with prior criminal behavior are less likely to be employed by Big-N audit firms.*

As part of the firm's corporate governance system, the role of the external auditor is to reduce agency costs by reducing information asymmetry between management and shareholders. Several prior studies argue that firms with weaker corporate governance appoint higher quality auditors to reduce agency costs and to increase the credibility of financial reporting, if they expect economic losses from increased agency costs due to weak governance (for instance, Fan and Wong, 2005; and Chi et al., 2009). Fan and Wong (2005) find that firms with higher agency costs due to concentrated ownership are more likely to employ Big-5 auditors, especially when they are raising equity capital frequently. Other studies show that firms adopting aggressive accounting practices use low-quality auditors who are more willing to allow these practices than high-quality auditors. For instance, Krishnan (2005) uses the Basu (1997) regression and finds that earnings of Andersen's Houston clients (such as Enron and Waste Management) were less conservative, suggesting that the Houston office could not constrain their clients' opportunistic reporting of accruals.

To the extent crime convictions reflect over-confident and risk-seeking behavior (as suggested by Blickle et al., 2006; and Zuckerman, 1994), auditors with prior crime may not be as prudent in their audit work as auditors without prior criminal convictions. Such auditors are also more likely to tolerate opportunistic accounting choices and other adverse consequences of the weak governance of their client-firms. Consequently, if the client-firm has board members or influential share owners who have been convicted of a crime, the corporate governance system is likely to be weaker, resulting in a higher likelihood of appointing an auditor with prior criminal behavior.

*Prediction 2: Firms having board members or major share owners who have been convicted of crimes are more likely to appoint an auditor with prior criminal behavior.*

As described above, individuals with past criminal behavior are known to have larger propensity to take risks. We therefore expect that riskier firms will self-select to appoint an auditor with past criminal behavior. Higher firm risk could result in appointing an auditor who is willing to audit high-risk companies. Auditors with criminal convictions may be more willing to take on these audit engagements than auditors without criminal convictions, because convicted auditors are characterized by greater risk-taking behavior. This leads to our third prediction:

*Prediction 3: Riskier firms are more likely to appoint an auditor with prior criminal behavior.*

Many studies (for instance, Simunic, 1980) have found that audit fees increase with firm risk. If firms audited by convicted auditors are indeed riskier than those audited by non-

convicted auditors, firms audited by convicted auditors should pay higher audit fee as a compensation for a greater audit risk. Being aware of the greater audit risk related to their clients, audit firms require compensation for bearing that risk in terms of higher audit fees. In equilibrium, firms with higher risk are audited by those auditors who are willing to take the risk for a higher audit fee. This leads to the fourth prediction:

*Prediction 4: Firms audited by auditors with prior criminal behavior pay higher audit fees than other firms, after controlling for firm-risk.*

The level of conditional accounting conservatism, often measured as the asymmetric recognition of good and bad economic news in earnings, is regarded as a fundamental characteristic of high quality accounting. One important task for the auditors is to ensure timely recognition of bad news. Prior research has documented a positive association between accounting conservatism and auditor independence (Amir et al., 2010). Other studies report that accounting conservatism increases with the audit quality. Becker et al. (1998) find that Non-Big 6 auditors allow management to exercise more discretion in the choice of discretionary accruals. Basu et al. (2001) find that the clients of Big-8 auditors show a greater degree of earnings conservatism than that of Non-Big 8 auditors. Khrisnan (2005) argues that high-quality auditors constrain the opportunistic reporting of accruals and compel clients to report bad news in a timelier fashion, thereby increasing the level of conditional accounting conservatism. Khrisnan's (2005) compares the asymmetric timeliness of earnings of Arthur Andersen's Houston-based clients with a control group and find evidence in support of this argument.

We expect auditors who have been convicted of a crime to be more tolerant to aggressive accounting treatment, resulting in less conservative financial reporting. This is primarily because the assessment of risk, including audit risk, by convicted individuals is fundamentally different than that of individuals without criminal convictions. This leads to our fifth prediction:

*Prediction 5: When the financial statements are audited by convicted auditors, the degree of accounting conservatism is lower than in audits performed by auditors without criminal convictions.*

In our previous predictions we argued that convicted auditors are more likely to engage in riskier audits, while more risky companies are more likely to be audited by convicted auditors. We also argued that the audit firm should be compensated for riskier audits by charging higher audit fees. These arguments are based on the premise that criminal convictions are associated with sensation-seeking behavior leading to higher propensity to take unwarranted risks. If convicted auditors indeed take unwarranted risks, their personal compensation and wealth should not be different than those of auditors without criminal convictions. This leads to our sixth prediction:

*Prediction 6: Personal salaries and wealth of convicted auditors are not different than those of auditors without criminal convictions.*

#### **4. Sample and Data Sources**

Our sample includes all companies listed on the Swedish stock market for the period 1999-2007 and monitored by Finansinspektionen, i.e. the Swedish securities regulator. The identities of auditors in all listed Swedish companies were obtained from *Finansinspektionen*. Data on auditors' criminal convictions and suspected criminal actions are taken from *Brå* (The Swedish National Council for Crime Prevention), a council within the Swedish judicial system formed by the Swedish government. Our data on criminal convictions contain information on criminal activity for all Swedish citizens as of 1974. More specifically, it contains information about individuals who have been found guilty by a court of law or received summary punishments by prosecutors.<sup>1</sup> This dataset is more comprehensive than the official crime records, because the database contains all criminal convictions in Sweden since 1974, regardless of the type of crime or whether these convictions have been expunged from the official crime records available for Swedish citizens. The information on which the database is based is collected from all Swedish courts and prosecution authorities. For each auditor registered, this dataset includes details of the crime and the punishment (the length of unconditional prison sentences, suspended sentences and monetary fines) and the details of the crime (for each crime an exact reference to the law or laws violated is given). The data base does not, however, contain information on minor offences like speeding, parking and violations of local bylaws for which the punishment is an on-the-spot fine. Hence, the database does not contain information about negligible crimes committed.

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<sup>1</sup> The purpose of *Brå* ([www.bra.se](http://www.bra.se)) is to reduce crime in Sweden by producing data and disseminating knowledge on crime and crime prevention. *Brå* also produces Sweden's official crime statistics, evaluates reforms, conducts research and provides support to local crime prevention agencies. Also, a criminal investigation does not always lead to a prosecution and trial. If the suspect confesses to the crime and it is clear what the punishment will be, the prosecutor may pronounce a so-called order of summary punishment (Source: Swedish Prosecution Authority, [www.aklagare.se](http://www.aklagare.se)).

Consistent with prior studies (Korsell, 2001), we measure criminal behavior based on criminal convictions and suspected criminal actions. While criminal convictions by a court of law are undoubtedly evidence of prior criminal behavior, focusing only on actual convictions could potentially cause a selection bias. This is because the burden of proof beyond any reasonable doubt is heavier in more serious crimes (Seyhun, 1998). Consequently, serious crimes are likely to be underrepresented in the dataset of actual criminal convictions. This selection bias could be reduced by including data on individuals suspected of serious crimes. Our dataset on suspected criminal actions contains information on all Swedish citizens who have been suspected of serious crimes. Suspicion of a crime in this study means that a police investigation had been launched but the prosecutor later on decided not to pursue the case in court. The database is maintained by the National Police Board and is mainly used by the Police, Tax Authorities, Custom and Coastguard to coordinate preliminary investigations against individuals in order to prevent, discover and investigate crimes. Table 1 presents a list of the most commonly violated laws. As described above, speeding, parking and similar minor violations of traffic laws are not included in our sample.<sup>2</sup>

(Table 1 about here)

Since listed firms are larger and their business operations tend to be more complicated, auditing firms employ a team of individual auditors to complete the audit task. These teams are led by senior auditors, partners in their audit firm, that are responsible key client-specific decisions, including the extent and focus of the audit engagement and audit pricing. Therefore, leading auditors' personal attributes, as measured by their criminal convictions, are likely to play an important role in the actual audit work.

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<sup>2</sup> Throughout this paper, we use the terms "convicted/suspected auditors", "auditors with prior criminal behavior", or "convicted auditors" to describe those 60 auditors that have been either convicted in court (53 auditors) or were suspected of serious crimes and hence are included in our sample (7 auditors).

We measure the criminal intensity of the auditors of a given client-firm using three different variables. First, we define *CONV\_AUD1* as an indicator variable that obtains the value of “1” if at least one such a leading auditor for firm *i* in year *t* have been convicted/suspected of a crime, and “0” otherwise. We also define *CONV\_AUD2* as the number of convicted leading auditors for firm *i* in year *t*. In our sample, the maximum number of convicted leading auditors per firm-year is 3 meaning that  $CONV\_AUD2 \in [0,3]$ . In addition, we define *CONV\_AUD3* as the number of convicted leading auditors divided by the total number of leading auditors for firm *i* in year *t*.

We also measure a criminal behavior of an individual auditor by constructing an indicator variable, which is equal to “1” if the auditor has been convicted or suspected in any year during our crime data period from 1974 to 2007 and “0” if not convicted in any year during this period. We denote this variable as *CONV\_AUD*. As almost all convictions occurred prior to our sample period from 1999 to 2007, this variable is constant during the sample period.

Data on auditors’ wealth includes stockholdings in listed companies, real estate, mutual funds, bank holdings and investments in debt securities. Data on stockholdings were taken from Euroclear Sweden, which maintains an electronic database on the ownership of all Swedish stocks. Data on other wealth were obtained from the Swedish tax authorities and are reported on an annual basis. Finally, accounting and market data for Swedish listed firms were obtained from Thomson’s Datastream.

## **5. Empirical Analysis**

### **5.1. Characteristics of convicted/suspected auditors**

First we identify several variables that are expected to be associated with the probability of being a convicted/suspected auditor: (i) *GENDER* – An indicator variable that is equal to “1” if the auditor is a male and “0” if a female. Earlier studies show that females are more risk averse and act more ethically than males (e.g. Chin and Chi, 2008). As for crime convictions, the criminology literature has dealt extensively with gender issues. Based on this literature, males are more involved in crime than females (e.g. Daly, 1989; Zahra *et al.*, 2005 and Blickle *et al.*, 2006). (ii) *AGE* – The age of the auditor in the middle of the sample period. Because our dataset covers criminal convictions since 1974, older auditors are more likely to be labeled as criminals simply because they were born earlier. Hence, we expect convicted/suspected auditors to be, on average, older. (iii) *CLIENTS* – the number of clients audited by the auditor. If auditors with criminal convictions are indeed overconfident, they will spend relatively less time on each audit engagement, allowing them to audit more clients. Also, if auditors with criminal convictions audit riskier firms, which are likely to be smaller, the number of clients will be, on average, larger. (iv) *BIGN\_AUD* – An indicator variable that is equal to “1” if the auditor is employed by a Big-N audit firm and “0” if not. To maintain their higher reputation, Big-N audit firms are likely to install stricter screening mechanisms and avoid employing individuals with criminal behavior. (v) *SALARY* – The annual salary of the auditor; and *WEALTH* – The personal wealth of the auditor. If convicted/suspected auditors audit riskier firms, their compensation and accumulated wealth should be higher reflecting the additional compensation for taking risks. On the other hand, if convicted/suspected auditors enjoy taking risks, as prior literature argues, there would not be any additional compensation for taking that risk.

Table 2, Panel A, presents descriptive statistics for the six variables introduced above. Panel B presents means and medians for these variables by different categories of auditors: 53



convicted auditors, 7 suspected auditors (60 convicted/suspected auditors) and 422 auditors without criminal convictions. For the variables *CLIENTS*, *BIGN\_AUD*, *SALARY* and *WEALTH*, we compute averages of the annual observations for each auditor over the sample period (1999-2007).

While 95% of auditors with criminal convictions are males, only 81% of auditors without criminal convictions are males (the difference in proportions is significant at the 0.01 level). Also, auditors with criminal convictions are older, as expected, than those without criminal convictions (significant at the 0.05 level). In addition, auditors with criminal convictions have more clients (significant at the 0.01 level), consistent with the arguments that they spend relatively less time on each audit engagement, and that their clients are smaller and hence riskier. Consistent with *Prediction 1*, the proportion of auditors with criminal convictions that are employed by Big-N firms (78%) is smaller than the proportion of auditors without criminal convictions that are employed by Big-N firms (87%). However, this difference is only significant at the 0.10 level. Finally, we find no significant difference between salaries and personal wealth of auditors with and without criminal convictions. We consider this last finding as preliminary evidence in support of *Prediction 6*, namely that convicted/suspected auditors are not compensated for taking higher audit risks.

(Table 2 about here)

Table 3 presents a multivariate analysis of the personal characteristics of convicted /suspected auditors using a logistic regression. We estimate the following model:

$$\begin{aligned}
 CONV\_AUD_i = & \alpha_0 + \alpha_1 GENDER_i + \alpha_2 AGE_i + \alpha_3 CLIENTS_i + \alpha_4 BIGN\_AUD_i \\
 & + \alpha_5 LNSALARY_i + \alpha_6 LNWEALTH_i + \varepsilon_i
 \end{aligned}
 \tag{1}$$

The sample includes 60 convicted/suspected auditors and 422 auditors without criminal convictions. Independent variables include the six personal characteristics identified above.

Consistent with prior literature, male auditors are more likely than female auditors to be convicted or suspected of a crime (coefficient significant at the 0.10 level). Also, convicted/suspected auditors tend to be older (at the 0.05 level) and they, serve more clients (at the 0.10 level). Surprisingly, the coefficient on *BIGN\_AUD* is not significant at the 0.10 level, although it is negative, as expected under *Prediction 1*. This last result suggests that the effects of gender, age and the number of clients subsume the effect of audit firm size in a multivariate setting. Finally, salaries and personal wealth are not reliably different between auditors with and without criminal convictions, which is consistent with *Prediction 6*.

(Table 3 about here)

## **5.2. Characteristics of firms appointing convicted/suspected auditors**

We next examine the characteristics of firms that appoint auditors with prior criminal behavior. To measure the quality of the corporate governance system of the client firm, we use the following four variables: (i) *CONV\_DIR* - the proportion of board members who have been convicted of a crime; (ii) *CONV\_OWNER* - an indicator variable that obtains the value of “1” if the firm has at least one owner who owns 10% or more of the firm’s equity and that has been convicted of a crime, and “0” otherwise; (iii) *OUT\_DIR* - the proportion of outside directors; and (iv) *BIGN* – An indicator variable that obtains the value of “1” if the firm is audited by a Big-N audit firms (Ernst & Young, KPMG, PWC, Deloitte, and Arthur Andersen) and “0” otherwise. Based on *Prediction 2*, we expect *CONV\_DIR* and *CONV\_OWNER* to be positively associated with appointing an auditor with past criminal behavior. We also expect *OUT\_DIR* and *BIGN* to be negatively associated with appointing auditors with past criminal behavior.

Based on *Prediction 3*, we expect that riskier firms will self-select to appoint an auditor with past criminal behavior. To measure operating and financial risk, respectively, we use (v) *CURRENT* – current ratio, measured as current assets divided by current liabilities; and (vi) *LEVERAGE* – measured as total interest-bearing debt divided by total assets. We expect *CURRENT* (*LEVERAGE*) to be negatively (positively) associated with the probability of appointing an auditor with past criminal behavior.

We also use (vii) firm size (*SIZE*), measured as the natural logarithm of total assets, and (viii) the market-to-book ratio (*PB*), measured as market value of equity divided by book value of equity, as two additional measures of risk. We expect *SIZE* (*PB*) to be negatively (positively) associated with the likelihood of appointing an auditor with past criminal behavior. Moreover, we use (ix) return-on-assets (*ROA*) as a measure of profitability, and expect that more profitable firms will be less likely to appoint an auditor with past criminal behavior.

Consistent with Simunic (1980) and others, we also use the following measures of audit risk: (x) *FOREIGN* – The proportion of sales generated by foreign operations. Foreign operations increase audit risk due to the complexity of verifying transactions and the need to consider exchange rates. (xi) *EXCEPTION* – An indicator variable that obtains the value of “1”, if the firm reports exceptional or extraordinary items, and “0” otherwise. The existence of extraordinary or exceptional items requires special attention by the auditor due to their relative magnitude and uniqueness. (xii) *LOSS* – The natural logarithm of the absolute value of earnings if earnings are negative and “0” otherwise. Firms that report losses are considered riskier for the auditor due to possible litigation or financial distress. (xiii) *HIGH\_TECH* – An indicator variable that obtains the value of "1" if the firm belongs to a high-tech industry, and "0" otherwise. Classification is based on OECD 2-digit SIC code classification (2-digit codes: 28,

35, 36, 37, 38, 48, 73 and 87, are classified as high-tech). High-tech firms increase audit risk due to the complexity of their products and production technologies. We expect the last four variables to be positively associated with the probability of appointing an auditor with past criminal convictions.

Based on *Prediction 4*, audit firms that audit riskier companies and that take additional audit risks should, on average, charge higher audit fees. We therefore use (xiv) *LNAUFEE* as the natural logarithm of total audit fees. We expect a positive association between this variable and the likelihood of appointing an auditor with past criminal behavior.

Table 4 provides descriptive statistics for our three measures of auditor convictions and for the 14 variables discussed above. We find that 34% of companies in our sample have at least one auditor with past criminal behavior (mean *CONV\_AUD1* = 0.34), and that some firms have up to 3 auditors with past criminal behavior (maximum *CONV\_AUD2* = 3).<sup>3</sup> Regarding the corporate governance variables, 24% of board members have criminal convictions, and 38% of the companies in our sample have a convicted major share owner. Also, the percentage of outside directors is, on average, 16%. Notice, that 90% of the firms in our sample are audited by Big-N firms, indicating that appointing auditors with past criminal behavior is not a phenomenon limited to small audit firms.

(Table 4 about here)

In Table 5, we provide means and medians of selected variables for sub-samples of companies according to the degree of using auditors with prior criminal behavior (zero convicted auditors, one convicted auditor, two convicted auditors, and at least one convicted auditor). The evidence provided in Table 5 is consistent with the argument that companies with

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<sup>3</sup> The three measures of auditor convictions are highly correlated (pairwise correlations ranging from 0.79 to 0.93, not reported in a table). We repeated all the analysis with the three measures obtaining very similar results. For the interest of saving space, we report results using only one measure.

weaker corporate governance are more likely to appoint auditors with prior criminal convictions. For instance, the proportion of convicted directors increases monotonically with the number of convicted auditors who audit the firm (the difference between “zero” and “at least one” is significant at the 0.10 level or better). The probability of having a convicted major share owner also increases with the number of convicted auditors. This probability is 0.25 when there are zero convicted auditors and 0.40 if there are two or more convicted auditors (significant at the 0.01 level). The proportion of outside directors decreases with the number of convicted auditors, but the difference is not significant at the 0.10 level. Overall, these univariate statistics provide support for *Prediction 2*, namely firms that appoint auditors with prior criminal behavior have, on average, weaker corporate governance.

Turning to measures of firm risk, the current ratio is lower (1.96) for companies with at least one convicted auditor, than for companies without convicted auditors (2.27), the difference being statistically significant. Leverage increases with the number of convicted auditors (from 0.16 to 0.19 if the firm is audited by at least one convicted auditor), and the difference is significant at the 0.01 level. These results provide some support for *Prediction 3* – companies that appoint convicted/suspected auditors have lower current ratios and higher financial leverage. We find no statistically significant difference in profitability (*ROA*) the firm size (*SIZE*) of the firms audited by at least one convicted auditors and firms audited by zero convicted auditors. Furthermore, market-to-book ratio is significantly lower for firms with at least one convicted auditor, the difference being significant at the 0.05 level or better.

Consistent with *Prediction 4*, companies that appoint auditors with prior criminal behavior pay higher audit fees. As Table 5 shows, audit fees increase with the number of convicted auditors, as expected, and the difference is significant at the 0.01 level.

(Table 5 about here)

We follow with a multivariate analysis of the firm-specific determinants associated with appointing auditors with prior criminal convictions using logistic regressions. The dependent variable is *CONV\_AUDI* (an indicator variable that obtains the value of “1” if at least one auditor of the firm has been convicted/suspected of a crime, and “0” otherwise). Specifically, we estimate the following model with industry and year fixed effects:<sup>4</sup>

$$\begin{aligned} CONV\_AUDI_{jt} = & \beta_0 + \beta_1 CONV\_DIR_{jt} + \beta_2 CONV\_OWNER_{jt} + \beta_3 OUT\_DIR_{jt} + \\ & \beta_4 CURRENT_{jt} + \beta_5 LEVERAGE_{jt} + \beta_6 ROA_{jt} + \beta_7 PB_{jt} + \beta_8 SIZE_{jt} + \beta_9 LNAUFEE_{jt} + \eta_j \end{aligned} \quad (2)$$

Starting with the three corporate governance variables, we find positive coefficients, as expected, on both *CONV\_DIR* (the proportion of convicted board members) and *CONV\_OWNER* (the firm has at least one convicted main share owner), but only the coefficient on *CONV\_OWNER* is significant at the 0.01 level. In addition, the coefficient on *OUT\_DIR* (the proportion of outside directors) is negative, as expected, and significant at the 0.01 level. These results supports *Prediction 2* – companies with weaker corporate governance are more likely to appoint convicted/suspected auditors.

Turning to the risk measures, the coefficients *CURRENT* and *LEVERAGE* have the predicted sign, but only the coefficients on *LEVERAGE* are significant at the 0.05. The coefficient on *SIZE* is negative, as expected, and significant at the 0.01 level, suggesting that smaller firms are more likely to appoint an auditor with prior criminal behavior. These results support *Prediction 3*. In support of *Prediction 4*, companies that appoint auditors with prior criminal convicted/suspected auditors pay higher audit fees, as reflected in the positive

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<sup>4</sup> We tried estimating the model with firm fixed-effects but the model is not identifiable. This is probably because we use a categorical dependent variable.

coefficient on *LNAUFEE* (significant at the 0.01 level). Finally, the coefficients on market-to-book ratios (*PB*) and on return-on-assets (*ROA*) are not significant at the 0.10 level.

(Table 6 about here)

### 5.3. Auditors' Prior Criminal Behavior Audit Fees

Results in Table 6 suggest that firms audited by auditors with prior criminal behavior pay higher audit fees. To examine this issue in more detail, we use a model similar to that used by Simunic (1980):

$$\begin{aligned}
 LNAUFEE_{jt} = & \gamma_0 + \gamma_1 CONV\_AUD2_{jt} + \gamma_2 CURRENT_{jt} + \gamma_3 LEVERAGE_{jt} + \gamma_4 ROA_{jt} + \\
 & \gamma_5 PB_{jt} + \gamma_6 SIZE_{jt} + \gamma_7 FOREIGN_{jt} + \gamma_8 EXCEPTION_{jt} + \gamma_9 LOSS_{jt} + \gamma_{10} HIGH\_TECH_{jt} + \\
 & \gamma_{11} BIGN_{jt} + \mathcal{E}_{jt}
 \end{aligned} \tag{3}$$

The dependent variable in the model is the log of audit fees (*LNAUFEE*) for firm *j* in year *t*. The primary independent variable of interest is the whether the firm is audited by auditors with prior criminal behavior. As described earlier, we use three alternative measures for auditors' crime behavior (*CONV\_AUD1*, *CONV\_AUD2* and *CONV\_AUD3*) All three variables exhibit qualitatively similar results, so to save space, we report only the results with *CONV\_AUD2* as an independent variable.

Other explanatory variables in equation (1) include the current ratio (*CURRENT*), financial leverage (*LEVERAGE*), return on assets (*ROA*), the price-to-book ratio (*PB*), the natural logarithm of total assets (*SIZE*), the proportion of foreign sales (*FOREIGN*), an indicator for exceptional and extraordinary items (*EXCEPTION*), the logarithm of the absolute value of earnings if earnings are negative and "0" otherwise (*LOSS*), an indicator of high-tech industries (*HIGH\_TECH*), and an indicator of Big-N audit firms (*BIGN*).<sup>5</sup> The 10 control variables in

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<sup>5</sup> See Section 5.2 for definitions of these variables.

Equation (1) have been found by prior studies be related to audit fees. Specifically, we expect audit fees to decrease with profitability (*ROA*) and short-term liquidity (*CURRENT*), and increase with market-to-book ratios (*PB*), firm size (*SIZE*) and financial leverage (*LEVERAGE*).

We also expect audit fees to increase with the proportion of foreign operations (*FOREIGN*), as multinational firms require additional audit resources. The existence of exceptional and/or extraordinary items (*EXCEPTION*) also requires special attention, which is expected to result in higher audit fees. Auditing technology-based companies (*HIGH\_TECH*) is likely to increase the amount of work required for rigorous auditing and likewise increase audit fees. Furthermore, losses (*LOSS*) increase an auditor's risk and, consequently, audit fees. Finally, Big-N audit firms (*BIGN*) are expected to charge additional fees as a premium for their reputation. We estimate Equation (3) using fixed year and firm effects and clustered standard errors as in Petersen (2009).

Results in Table 7 show a positive association between audit fees and the number of convicted auditors, as reflected by the positive coefficient on *CONV\_AUD2* (significant at the 0.05 level). This result supports *Prediction 4* in that firms audited by convicted auditors pay higher audit fees than other firms after controlling for other factors affecting audit fees. Combined with results in Table 6, we find that riskier firms are more likely to be audited by those auditors who are willing to take the risk for a higher audit fee. All the coefficients on the control variables have the predicted sign, although not all of them are significant at the 0.10 level.

(Table 7 about here)

#### **5.4. Auditors' Prior Criminal Behavior and Accounting Conservatism**



According to *Prediction 5*, financial statements audited by convicted/suspected auditors are expected to exhibit a lower degree of conservatism. To test this prediction, we use the Basu (1997) regression framework in a manner similar to Krishnan (2005) and Amir, Guan and Livne (2010). Specifically we estimate Equation (4):

$$\begin{aligned}
 EP_{jt} = & \delta_0 + \delta_1 RET_{jt} + \delta_2 DRET_{jt} + \delta_3 RET_{jt} \times DRET_{jt} + \delta_4 CONV\_AUD2_{jt} \\
 & + \delta_5 RET_{jt} \times CONV\_AUD2_{jt} + \delta_6 DRET_{jt} \times CONV\_AUD2_{jt} + \delta_7 RET_{jt} \times DRET_{jt} \times CONV\_AUD2_{jt} \\
 & + \delta_8 SIZE_{jt} \nu_{jt}
 \end{aligned} \tag{4}$$

$EP_{jt}$  is earnings per share divided by beginning-of-period share price;  $RET_{jt}$  is annual stock return;  $DRET_{jt}$  is an indicator variable obtaining the value of “1” if  $RET_{jt}$  is negative, and “0” otherwise; and  $CONV\_AUD2_{jt}$  is a variable measuring whether the firm is audited by convicted auditors. We estimate Equation (4) by using our three alternative measures of convicted auditors obtaining similar results, hence, Table 8 reports results obtained with  $CONV\_AUD2_{jt}$  (an indicator variable obtaining the value of “1” if at least one auditor has been convicted/suspected of a crime, and “0” otherwise). We estimate Equation (4) with a control for firm size and with fixed firm and year effects.

A positive coefficient on  $RET \times DRET$  would suggest that bad economic news are incorporated in earnings more timely than good news, and accounting is hence considered to be conservative. A negative coefficient on  $RET \times DRET \times CONV\_AUD2$  would suggest that firms audited by convicted auditors exhibit a lower degree of accounting conservatism than other firms. A positive coefficient on  $RET \times CONV\_AUD2$  would suggest that earnings of firms using convicted auditors reflect positive news more timely than firms not using them.

Results in Table 8 suggest that our sample firms exhibit accounting conservatism, as reflected by the positive coefficient on  $RET \times DRET$  (significant at the 0.01 level). In addition, the coefficient on  $RET \times DRET \times CONV\_AUD2$  is negative, as expected under *Prediction 5*, and

significant at the 0.01 level. This result suggests that firms audited by convicted auditors exhibit a lower degree of accounting conservatism. This result is corroborated by the positive coefficients on  $RET \times CONV\_AUD2$  (significant at the 0.05 level), suggesting that positive information is reflected in accounting earnings faster when the financial statements are audited by convicted auditors. Overall, the results in Table 8 support *Prediction 5*, and are consistent with the findings of Krishnan (2005) and Basu et al. (2001), namely convicted auditors exercise a lower degree of accounting conservatism. This lower degree of accounting conservatism also supports our basic argument that the quality of auditing is lower when financial statements are audited by auditors with prior criminal behavior.

(Table 8 about here)

So far we have shown that auditors with prior criminal behavior audit riskier firms and that the audit firms that employ these auditors charge higher audit fees for providing audit services. Next, we examine whether the convicted auditors themselves are compensated for taking additional risk. The sensation-seeking argument suggests that convicted auditors take risks without being properly compensated; hence we expect the personal salary and wealth of a convicted auditor to be, on average, the same as for an auditor without criminal convictions.

Table 9 presents results for double-sorted portfolios based on criminal convictions and the size of the audit firm. Specifically, we compare salaries and personal wealth across convicted and non-convicted auditors and across Big-N and non-Big-N firms. We find that salaries are not statistically different (at the 0.10 level) between convicted and non-convicted auditors, and convicted auditors have lower wealth (at the 0.10 level) than non-convicted auditors in non-Big-N audit firms. We also find that convicted auditors employed by Big-N audit firms earn a higher salary (at the 0.01 level) than convicted auditors employed in non-Big-N audit firms. Overall,

these findings support the argument that convicted auditors audit riskier companies and exercise a lower degree of accounting conservatism without being properly compensated by their employers.

(Table 9 about here)

## **6. Summary and Conclusions**

We investigate how auditor's personal characteristics affect various aspects of the audit engagement. The main contribution of this study is relaxing the assumption that auditors are homogenous individuals with similar personal characteristics. Existing empirical literature largely ignores personal characteristics and focuses on observable variables such as audit and non-audit fees, audit firm size, audit tenure, and gender. However, based on the behavioral research, it is clear that personal characteristics play a major role in decision making. The auditing process and the decisions that must be made during this process are affected by personal characteristics.

Using a unique dataset on Swedish auditors' prior crime behavior, we argue that auditors' adverse personal characteristics are likely to affect audit quality. Specifically, consistent with prior studies, we argue that auditors with prior criminal behavior will audit riskier firms, will charge higher audit fees, and will exercise a lower degree of accounting conservatism. Our main finding can be summarized as follows. First, convicted auditors are more often males than females. Second, we find that auditors employed by Big-N audit firms are less likely to be convicted of crimes than auditors employed by Non-Big-N audit firms. Third, firms having directors and main-owners who have also been convicted of crimes are more likely to appoint convicted auditors. Fourth, convicted auditors engage in high-risk audits. Fifth, firms audited by

convicted auditors show a lower degree of conditional accounting conservatism than firms audited by auditors without crime convictions. Sixth, audits performed by convicted auditors are more expensive. Seventh, salaries of convicted auditors are not materially different than those of non-convicted auditors.

These findings have several implications for future research. Clearly, a measure of audit quality based on audit firm size is not only incomplete, but could also be misleading. An auditor with prior criminal behavior who is employed by a Big-N firm is likely to be of lower quality than an auditor with a clean record employed by a non-Big-N firm. Second, results in studies that use data at the firm or office level could change if data on individual auditors become available. Our study also has important policy implications. Firms should disclose the name of the auditor in charge of the audit engagement. Financial statement users could benefit from knowing who is in charge of the audit in order to assess the quality of the audit.

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**Table 1**  
**Laws Violated by Auditors**

Code	Title	Number of convictions	Example	Penalty Range
1951:649	Act on Criminal Responsibility for Certain Traffic Offences	14	Drunken or reckless driving	Fines to 2 years in prison
1972:603	Road Traffic Promulgation	14	Various traffic-related crimes, all types of vehicles	Fines
1998:1276	Vehicle Ordinance	7	Various traffic related crimes, all kinds of vehicles	Fines
Penal Code Chapter 8	Theft, robbery, other stealing	5	Shoplifting, robbery	Fines to 10 years in prison
Other Penal Code crimes	Fraud and Other Acts of Dishonesty, Crimes Inflicting Damage	4	Fraud, Damage to public property	Up to 6 years in prison
1960:418	Act on Criminal Responsibility for Smuggling	2	Importing/Exporting goods without payment of duty or other taxes	Fines to 6 years in prison
	All other crimes	7		
	<b>Total crime convictions</b>	<b>53</b>		
	Suspected of crimes	7		
	<b>Total convictions/suspicious</b>	<b>60</b>		

\*Notes:

1. Data on auditors' criminal convictions and suspected criminal actions are taken from *Brå* (The Swedish National Council for Crime Prevention), a council within the Swedish judicial system formed by the Swedish government.
2. Data on criminal convictions contain information on individual auditors who have been found guilty by a court of law or received summary punishments by prosecutors since 1974. The data are collected from all Swedish courts and prosecution authorities.
3. Data on suspected criminal actions contains information on auditors who have been suspected of serious crimes, i.e. a police investigation had been launched but the prosecutor later on decided not to pursue the case in court. The database is maintained by the Swedish National Police Board.

**Table 2**  
**Characteristics of Convicted, Suspected and Other Auditors\***

**Panel A: Descriptive statistics for personal characteristics variables (N=482):**

<b>Variable</b>	<b>Mean</b>	<b>Median</b>	<b>Std</b>	<b>Min</b>	<b>Max</b>
<i><b>GENDER</b></i>	0.83	1.00	0.38	0.00	1.00
<i><b>AGE</b></i>	47.30	47.25	8.54	24.00	78.50
<i><b>CLIENTS</b></i>	99.70	72.00	100.18	0.00	458.00
<i><b>BIGN_AUD</b></i>	0.86	1.00	1.10	0.00	1.00
<i><b>LN SALARY</b></i>	13.24	13.37	1.10	0.00	14.76
<i><b>LN WEALTH</b></i>	6.93	5.75	6.77	0.00	17.08

**Panel B: Means/Medians by categories of criminal activity:**

<b>Variable</b>	<b>Convicted/Suspected Auditors</b>			<b>Other Auditors</b>	<b>Difference between 'Total' and 'Other auditors'</b>
	<b>Convicted (N = 53)</b>	<b>Suspected (N = 7)</b>	<b>Total (N = 60)</b>	<b>(N = 422)</b>	
	<b>Mean</b>	<b>Mean</b>	<b>Mean</b>	<b>Mean</b>	<b>t-test Wilcoxon-test</b>
	<b>Median</b>	<b>Median</b>	<b>Median</b>	<b>Median</b>	
<i><b>GENDER</b></i>	0.96	0.86	0.95	0.81	<b>2.69++</b>
	1.00	1.00	1.00	1.00	<b>2.67++</b>
<i><b>AGE</b></i>	50.19	46.89	49.80	46.95	<b>2.44+</b>
	50.50	47.67	50.50	47.00	<b>2.49++</b>
<i><b>CLIENTS</b></i>	133.35	157.71	135.30	94.63	<b>2.97++</b>
	130.00	92.00	130.00	63.50	<b>3.28++</b>
<i><b>BIGN_AUD</b></i>	0.77	0.86	0.78	0.87	<b>-1.95*</b>
	1.00	1.00	1.00	1.00	<b>-2.00+</b>
<i><b>SALARY</b></i>	833.60	833.43	833.58	762.64	-1.23
	775.83	713.71	729.06	660.66	1.50
<i><b>WEALTH</b></i>	1,305.36	3,370.32	1,546.27	1,683.54	1.03
	579.99	147.95	569.17	299.64	0.27

\*Notes:

1. Panel A presents descriptive statistics for variables capturing auditors' personal characteristics. Panel B presents mean and median variables for sub-samples of convicted



auditors (53 observations), suspected auditors (7 observations) and non-convicted/suspected auditors (422 observations). Panel B of the table also presents results for two statistical tests for the difference in means (t-test) and medians (Wilcoxon test) between the sample of convicted/suspected auditors and those auditors not convicted/suspected.

2. For each auditor, we identify key variables that capture personal characteristics. These variables are defined as follows:
  - *GENDER* – An indicator variable that is equal to “1” if the auditor is a male and “0” if a female.
  - *AGE* – The age of the auditor in the middle of the sample period from 1999 to 2007.
  - *CLIENTS* – The average number of clients audited by an auditor at end of the year, the average being calculated over the sample period.
  - *BIGN\_AUD* – An indicator variable that obtains the value of “one” if the auditor is employed by a Big-N audit firms (Ernst & Young, KPMG, PWC, Deloitte and Arthur Andersen) and “zero” for other audit firms. If an auditor has switched between big-N and non-big-N audit firms during the sample period, we take the average of the yearly observations of this variable over the sample period.
  - *SALARY* – The average over the sample period of the auditor’s salary in thousands of Swedish Crowns (SEK). Exchange rate is approximately SEK1 = US\$0.15. Panel A presents this variable after a natural logarithm transformation.
  - *WEALTH* – The average over the sample period of the auditor’s personal wealth in thousands of Swedish Crowns (SEK). Panel A presents this variable after a natural logarithm transformation.
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.

**Table 3**  
**Personal Characteristics of Convicted or Suspected Auditors – A**  
**Multivariate Analysis using Logistic Regression and Auditor-Level Data\***

Variable	Exp. Sign	Coefficient (Chi-Square)
<b>Intercept</b>	?	<b>-4.32</b> (5.46)+
<i><b>GENDER</b></i>	+	<b>1.09</b> (3.06)*
<i><b>AGE</b></i>	+	<b>0.05</b> (4.24)+
<i><b>CLIENTS</b></i>	+	<b>0.00</b> (3.60)*
<i><b>BIGN_AUD</b></i>	–	-0.67 (2.54)
<i><b>LNSALARY</b></i>	?	-0.02 (0.03)
<i><b>LNWEALTH</b></i>	?	-0.03 (1.84)
<b>Convicted/suspected auditors</b>		60
<b>Non-convicted/suspected auditors</b>		422
<b>Observations</b>		482

\*Notes:

1. The Table presents results for estimating Equation (1):

$$\begin{aligned}
 CONV\_AUD_i = & \alpha_0 + \alpha_1 GENDER_i + \alpha_2 AGE_i + \alpha_3 CLIENTS_i + \alpha_4 BIGN\_AUD_i \\
 & + \alpha_5 LNSALARY_i + \alpha_6 LNWEALTH_i + \varepsilon_i
 \end{aligned}$$

The dependent variable is *CONV\_AUD* (an indicator variable that obtains the value "1" if the auditor has been convicted or suspected of a crime during the period 1974-2007, and "0" otherwise). Independent variables include the six variables described in Table 2 above, except for the natural logarithm transformation in the last two variables.

2. The sample includes 60 convicted/suspected auditors and 422 non-convicted/suspected auditors.
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.

**Table 4**  
**Summary Statistics of Client Firms (1,588 firm/year observations)\***

<b>Variable</b>	<b>Mean</b>	<b>Median</b>	<b>Std</b>	<b>Min</b>	<b>Max</b>
<i>CONV_AUD1</i>	0.34	0.00	0.47	0.00	1.00
<i>CONV_AUD2</i>	0.38	0.00	0.57	0.00	3.00
<i>CONV_AUD3</i>	0.19	0.00	0.34	0.00	1.00
<i>CONV_DIR</i>	0.24	0.22	0.18	0.00	1.00
<i>CONV_OWNER</i>	0.38	0.28	0.27	0.00	2.33
<i>OUT_DIR</i>	0.16	0.14	0.16	0.00	1.00
<i>BIGN</i>	0.90	1.00	0.30	1.00	1.00
<i>CURRENT</i>	2.16	1.74	1.61	0.23	11.80
<i>LEVERAGE</i>	0.17	0.15	0.15	0.00	0.60
<i>ROA</i>	0.01	0.06	0.20	-0.99	0.41
<i>PB</i>	2.87	2.15	2.39	0.29	17.06
<i>SIZE</i>	6.80	6.57	2.02	1.35	12.23
<i>FOREIGN</i>	0.25	0.00	0.33	0.00	1.00
<i>EXCEPTION</i>	0.28	0.00	0.45	0.00	1.00
<i>LOSS</i>	1.16	0.00	1.89	-2.54	9.85
<i>HIGH_TECH</i>	0.59	1.00	0.49	0.00	1.00
<i>LNAUFEE</i>	0.35	0.21	1.45	-2.90	4.22

\*Note:

The Table presents descriptive statistics for variables used in the firm-year level empirical analyses. These variables are defines as follows:

- *CONV\_AUD1* – An indicator variable that obtains the value of “1” if at least one auditor for firm *i* in year *t* has been convicted/suspected of a crime, and “0” otherwise;
- *CONV\_AUD2* – The number of convicted auditors in the team auditing a firm. The maximum number of convicted auditors per firm-year is 3, so *CONV\_AUD2* ∈ [0,3];
- *CONV\_AUD3* – The number of convicted auditors divided by the total number of audit team members;
- *CONV\_DIR* – The proportion of board members who have been convicted of a crime;
- *OUT\_DIR* – The proportion of outside directors on the firm's board;
- *CONV\_OWNER* – A indicator variable that obtains the value of “1” if the firm has at least one owner who owns 10% or more of the firm’s equity and that has been convicted of a crime, and “0” otherwise;
- *BIGN* – An indicator variable that obtains the value of “1” if the firm is audited by a Big-N audit firms (Ernst & Young, KPMG, PWC, Deloitte, and Arthur Andersen) and “0” otherwise;
- *CURRENT* – Current ratio = (current assets) / (current liabilities);
- *LEVERAGE* – Financial leverage = Interest Bearing Debt / Total Assets;

- *ROA* – Return-on-assets ratio, earnings before extraordinary and non-recurring items divided by total assets;
- *PB* – Price-to-book ratio = Market Value of Equity / Book Value of Equity;
- *SIZE* – The natural logarithm of total assets;
- *FOREIGN* – The proportion of sales generated by foreign operations;
- *EXCEPTION* – An indicator variable that obtains the value of “1”, if the firm reports exceptional or extraordinary items, and “0” otherwise;
- *LOSS* – The logarithm of the absolute value of earnings if earnings are negative and “0” otherwise;
- *HIGH\_TECH* – An indicator variable that obtains the value of "1" if the firm belongs to a high-tech industry, and "0" otherwise. Classification is based on OECD 2-digit SIC code classification (2-digit codes: 28, 35, 36, 37, 38, 48, 73 and 87, are classified as high-tech).
- *LNAUFEE* – The natural logarithm of the audit fee paid by firm *i* in year *t*;

**Table 5**  
**Characteristics of Firms Appointing Convicted/Suspected Auditors\***

	Number of Convicted/Suspected Auditors Appointed by a Firm				
	Zero (N = 1,048)	One (N = 482)	Two or more (N = 58)	At least one (N = 540)	Difference between 'Zero' and 'At least one'
	Mean Median	Mean Median	Mean Median	Mean Median	t-test Wilcoxon-test
<i>CONV_DIR</i>	0.24	0.25	0.31	0.26	<b>-2.03+</b>
	0.22	0.22	0.29	0.23	<b>-1.94*</b>
<i>CONV_OWNER</i>	0.25	0.32	0.40	0.33	<b>3.50++</b>
	0.00	0.00	0.00	0.00	<b>3.49++</b>
<i>OUT_DIR</i>	0.17	0.15	0.15	0.15	1.51
	0.14	0.14	0.17	0.14	-0.94
<i>CURRENT</i>	2.27	1.98	1.83	1.96	<b>3.60++</b>
	1.77	1.73	1.63	1.72	<b>1.67*</b>
<i>LEVERAGE</i>	0.16	0.19	0.25	0.19	<b>-4.10++</b>
	0.13	0.17	0.25	0.18	<b>-4.05++</b>
<i>ROA</i>	0.00	0.01	0.05	0.01	-0.79
	0.07	0.06	0.06	0.06	-1.29
<i>PB</i>	2.95	2.69	2.79	2.70	<b>1.99+</b>
	2.21	2.01	1.65	2.00	<b>2.69++</b>
<i>SIZE</i>	6.75	6.87	7.30	6.91	-1.57
	6.56	6.46	7.43	6.69	-1.30
<i>LNAUFEE</i>	0.27	0.44	0.88	0.49	<b>-2.78++</b>
	0.14	0.26	0.90	0.34	<b>-2.74++</b>

\*Notes:

1. The Table presents mean and median variables for sub-samples of firms that have not appointed convicted/suspected auditors (1,048 observations), that appointed one convicted auditor (482 observations), that appointed two convicted auditors (58 observations), and that appointed at least one convicted auditor (540 observations).
2. The table also presents results for the difference in means (t-test) and medians (Wilcoxon test) between firms without convicted auditors and firms with at least one convicted auditor.
3. See Table 4 for variable definitions.
4. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.

**Table 6**  
**The Determinants of Appointing Convicted/Suspected Auditors – A**  
**Multivariate Analysis using Logistic Regressions and Pooled Firm/Year**  
**Data\***

Variable	Exp. Sign	Coefficient (chi-sqr)
<b>Intercept</b>		0.67 (1.56)
<i>CONV_DIR</i>	+	0.33 (1.01)
<i>CONV_OWNER</i>	+	<b>0.36</b> <b>(8.06)++</b>
<i>OUT_DIR</i>	–	<b>-1.00</b> <b>(6.74)++</b>
<i>CURRENT</i>	–	-0.07 (2.49)
<i>LEVERAGE</i>	+	<b>0.84</b> <b>(4.21)+</b>
<i>ROA</i>	-	0.16 (0.25)
<i>PB</i>	+	-0.03 (1.36)
<i>SIZE</i>	–	<b>-0.23</b> <b>(8.42)++</b>
<i>LNAUFEE</i>	+	<b>0.37</b> <b>(12.56)++</b>
<b>Industry fixed-effects</b>		Yes
<b>Year fixed-effects</b>		Yes
<b>Observations</b>		1,588

\*Notes:

1. The Table presents results of estimating Equation (2):

$$\begin{aligned}
 CONV\_AUD1_{jt} = & \beta_0 + \beta_1 CONV\_DIR_{jt} + \beta_2 CONV\_OWNER_{jt} + \beta_3 OUT\_DIR_{jt} + \\
 & \beta_4 CURRENT_{jt} + \beta_5 LEVERAGE_{jt} + \beta_6 ROA_{jt} + \beta_7 PB_{jt} + \beta_8 SIZE_{jt} + \beta_9 LNAUFEE_{jt} + \eta_j
 \end{aligned}$$

The dependent variable is *CONV\_AUDI* (an indicator variable that obtains the value "1" if the firm has at least one convicted/suspected auditor, and "0" otherwise. All independent variables are defined in Table 4.

2. The sample includes 1,588 firm-year observations. 558 firm/year observations have at least one convicted/suspected auditor, whereas 1,101 firm/year observations have zero convicted/suspected auditors.
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.

**Table 7**  
**Audit Fees and Convicted/Suspected Auditors\***

Variable	Exp. Sign	Coefficient (t-value)
<i>CONV_AUD2</i>	+	<b>0.08</b> (2.42)+
<i>CURRENT</i>	-	<b>-0.05</b> (-4.37)++
<i>LEVERAGE</i>	+	0.18 (1.36)
<i>ROA</i>	-	<b>-0.24</b> (-2.16)+
<i>PB</i>	+	0.00 (0.19)
<i>SIZE</i>	+	<b>0.59</b> (33.93)++
<i>FOREIGN</i>	+	<b>0.10</b> (1.67)*
<i>EXCEPTION</i>	+	<b>0.10</b> (4.10)++
<i>LOSS</i>	+	0.01 (1.46)
<i>HIGH_TECH</i>	+	<b>0.14</b> (2.39)+
<i>BIGN</i>	+	0.11 (1.64)
<b>Yearly fixed effects</b>		Yes
<b>Firm fixed effects</b>		Yes
<b>Observations</b>		1,588
<b>Adj-R<sup>2</sup></b>		0.89

\*Notes:

1. The Table presents results of estimating Equation (3):

$$LNAUFEE_{jt} = \gamma_0 + \gamma_1 CONV\_AUD2_{jt} + \gamma_2 CURRENT_{jt} + \gamma_3 LEVERAGE_{jt} + \gamma_4 ROA_{jt} + \gamma_5 PB_{jt} + \gamma_6 SIZE_{jt} + \gamma_7 FOREIGN_{jt} + \gamma_8 EXCEPTION_{jt} + \gamma_9 LOSS_{jt} + \gamma_{10} HIGH\_TECH_{jt} + \gamma_{11} BIGN_{jt} + \vartheta_{jt}$$

The dependent variable is the log of total audit fees (*LNAUFEE*). All independent variables are defined in Table 4.

2. All *t*-values are based on heteroskedasticity-adjusted standard errors. The firm-level clustering in standard errors is taken into account as in Petersen (2009).
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.

**Table 8**  
**Conditional Conservatism and Convicted Auditors\***

Variable	Exp. Sign	Coefficient (t-value)
<i>RET</i>	+	0.00 (0.39)
<i>DRET</i>	?	-0.02 (-1.27)
<i>RET</i> × <i>DRET</i>	+	<b>0.30</b> <b>(6.75)++</b>
<i>CONV_AUD2</i>	?	-0.02 (-1.45)
<i>RET</i> × <i>CONV_AUD2</i>	+	<b>0.03</b> <b>(2.37)+</b>
<i>DRET</i> × <i>CONV_AUD2</i>	?	-0.00 (-0.25)
<i>RET</i> × <i>DRET</i> × <i>CONV_AUD2</i>	–	<b>-0.13</b> <b>(-2.83)++</b>
<i>SIZE</i>	?	<b>0.02</b> <b>(8.19)++</b>
<b>Yearly fixed effects</b>		Yes
<b>Firm fixed effects</b>		Yes
<b>Observations</b>		1,588
<b>Adj-R<sup>2</sup></b>		0.30

\*Notes:

1. The Table presents results for estimating Equation (4):

$$EP_{jt} = \delta_0 + \delta_1 RET_{jt} + \delta_2 DRET_{jt} + \delta_3 CONV\_AUD_{jt} + \delta_4 RET_{jt} \times DRET_{jt} + \delta_5 RET_{jt} \times CONV\_AUD_{jt} + \delta_6 DRET_{jt} \times CONV\_AUD_{jt} + \delta_7 RET_{jt} \times DRET_{jt} \times CONV\_AUD_{jt} + v_{jt}$$

The dependent variable (*EP*) is annual earnings per share divided by last year's stock price. Independent variables include *RET* (annual stock return); *DRET* (an indicator variable that obtains the value "1" if *RET* is negative, and "0" otherwise); *CONV\_AUD* (an indicator variable that obtains the value "1" if the auditor has been convicted/suspected of a crime, and "0" otherwise); and *SIZE* (the natural logarithm of total assets).

2. All *t*-values are based on heteroskedasticity-adjusted standard errors. The firm-level clustering in standard errors is taken into account as in Petersen (2009).
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.



**Table 9**  
**Auditors' Salaries and Wealth in Double-sorted Portfolios by**  
**Convicted/Suspected Auditors and Audit Firm\***

<i>SALARY<sub>it</sub></i>	BIGN Auditor		t-test for difference
	Yes [N=428]	No [N=54]	
Convicted/suspected Auditor			
Yes (N=61)	13.39 [48]	12.13 [12]	<b>-2.15++</b>
No (N=428)	13.28 [380]	13.06 [42]	-1.35
t-test for difference	-0.84	1.43	
<hr/>			
<i>WEALTH<sub>it</sub></i>			
Convicted/suspected Auditor			
Yes (N=61)	7.81 [48]	3.40 [12]	<b>-2.28+</b>
No (N=428)	6.90 [380]	7.24 [42]	0.31
t-test for difference	-0.87	<b>1.82*</b>	

\*Notes:

1. The Table presents average personal salary and wealth for convicted/suspected and non-convicted/suspected auditors. We also divide the sample of auditors into Big-N and non-Big-N subsamples.
2. *SALARY* is the average over the sample period of the natural logarithm of the auditor's taxable annual salary. *WEALTH* is the average over the sample period of the natural logarithm of the auditor's personal wealth.
3. ++, +, \* denote significance levels at the 0.01, 0.05 and 0.10 levels respectively.