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The Cost of Sin: The Effect of Social Norms on Audit Pricing

Abstract

In this paper we provide evidence for the effects of social norms on audit pricing by studying companies belonging to the alcohol, firearms, gambling, military, nuclear power, and tobacco industries, which are often described as "sin" companies. We hypothesize that the disparities between "sin" firms operations and prevailing social norms create an adverse context which heightens the client's business risk assessment by auditors and is, thereby, reflected in the pricing decisions for audit and consulting services. Having controlled for the impact of variables relating to client attributes, auditor attributes and engagement attributes, we demonstrate that audit firms charge significantly higher audit and consulting fees to companies that deviate from prevailing social norms. Additionally, we show that audit pricing levels within the "sin" group depend both on prevailing political views and on the level of "vice" exhibited by "sin" companies.

Keywords: Social norms, audit pricing, controversial industries, sin companies.

JEL Classification: G21, G30, G34, G38, M41.

1. Introduction

Social scientists have long argued that social norms govern a wide range of economic behavior including work effort, consumption, bargains, contracts, and countless others (Durlauf & Blume, 2008; Elster, 1989). Whilst the idea that social norms affect economic behavior has been discussed since Adam Smith (Smith [1759] 1976, p. 110-116), social norm theory has only gained momentum during the last decade due to a twofold trend (Festre, 2010). Firstly, experimental economists have provided overwhelming evidence that people exhibit social preferences in economic decision making, thus deviating from the material self-interest hypothesis (Fehr & Gachter, 2000). Secondly, there is strong evidence to believe that these deviations have a fundamental impact on core economic matters (Fehr & Gachter, 1999). It is, therefore, unsurprising that many recent studies have demonstrated that social norms influence investment decisions.

Socially responsible investment (SRI) has gained momentum during the last 20 years, and in 2009 socially responsible funds managed about $3 trillion in assets from an overall pool of $25 trillion in U.S. investments (Social Investment Forum, 2011). The stated goal of SRI funds is the promotion of companies sound in ethical and moral values and discrimination against companies that promote vice, such as those companies involved in the alcohol, firearms, gambling, military, nuclear power, and tobacco industries (Heal, 2008). Prior literature has demonstrated an attitude that is hardly explainable by modern portfolio theory: namely, that "sin" stocks tend to be neglected by a considerable part of the investment community for the reasons of non-compliance with societal norms, despite offering excellent investment opportunities (Hong & Kacperczyk, 2009; Chong, Her, & Phillips, 2006; Salaber, 2009). In turn this results in "sin" companies

bearing a higher cost of equity capital (Ghoul Guedhami, Kwok, & Mista, 2011; Hong & Kacperczyk, 2009).

One wonders as a result of this literature whether social norms play any role in accounting or auditing decisions, and, although such an investigation has been considered vital (Sunder, 2005), relevant research is nevertheless in its infancy (Dyreng, Mayew, & Williams, 2012). However, the limited research conducted thus far has provided strong evidence of the influential role of social norms in financial reporting decisions. McGuire, Omer, and Sharp (2012) present evidence that social norms reduce financial reporting irregularities. Dyreng et al. (2012) demonstrate that social norms stemming from religious adherence are negatively associated with financial reporting aggressiveness and tax avoidance. Moreover, they find that capital market participants respond to reported good news on earnings in a manner that is consistent with investors acknowledging the role of religious social norms in curbing aggressive financial reporting. Kim and Venkatachalam (2011) find that "sin" companies benefit from superior financial reporting quality – in terms of predictability of earnings for future cash flows and timely loss recognition – as a response to a higher litigation risk, regulatory scrutiny and as a policy to attract investors. However, investors choose to neglect "sin" stocks and instead bear a greater financial cost in order to comply with societal norms. Finally, Omer, Sharp, and Wang (2012) provide evidence that social norms influence audit decisions. Specifically, they find that local audit offices that conform to stronger religious social norms tend to be associated with more conservative going concern decisions.

Against this background we explore the association between social norms and audit pricing. We examine whether pricing policies are differentiated when audit clients belong to "sin" industries such as alcohol, firearms, gambling, military, nuclear power, and tobacco. "Sin" firms would constitute a favorable context for auditors for a battery of reasons. They outperform the market (Hong & Kacperczyk, 2009) and they offer excellent dividends (Berman, 2002; Ahrens, 2004). Moreover, they are stable over time (Chong et al., 2006) partly because the sales for several "sin" industries are based on addiction (Salaber, 2009) and partly because their finance is predominantly based on bank debt (Braun & Larrain, 2005). Additionally, "sin" firms are cash-rich (Beneish, Jansen, Lewis, & Stuart, 2008), recession proof (Salaber, 2009), and benefit from superior financial reporting quality (Berman, 2002; Kim & Venkatachalam, 2011). However, "sin" firms operate within adverse contexts due to the disparity between their activities and prevailing social norms. If social norms play a role in influencing auditing decisions (Omer et al., 2012), auditors would have to make greater efforts and set higher billing rates to respond to the heightened risk associated with potential litigation, regulatory scrutiny and intervention, negative media exposure, and the broader unpopularity of "sin" firms' corporate image.

To test the above, we employ a sample of 117 US listed "sin" companies for a seven-year estimation window (2003-2009) and test these against a control sample of 1,600 US listed "non-sin" firms for the same time period. We find that audit firm prices are significantly higher for those clients that belong to "sin" industries in terms of audit fees, consulting fees, and total fees. Additionally, we provide evidence that "sin" companies are charged based on their relative levels of "sinfulness" and on the prevailing political ideology.

This study offers several important contributions. The primary contribution of this paper is the finding that audit firms charge significantly higher fees for auditing and consulting services to companies that do not comply with broadly accepted social norms. This suggests that social norms may influence decisions on differential audit pricing, which could be a factor to consider in relevant attempts to regulate or increase levels of accounting quality (see Guiso, Sapienza, & Zingales, 2006). Secondly, we extend prior research on the determinants of audit pricing. While previous literature has investigated primarily company- and audit-specific variables (e.g., Beattie, Goodacre, Pratt, & Stevenson, 2001; Bierstaker, Houston, & Wright, 2006; Cobbin, 2002; Hay, Knechel, & Wong, 2006; Walker & Johnson, 1996), we show that audit pricing is influenced by factors not entirely within managerial or auditor control. Additionally, we demonstrate that the financial costs of "sinful" operations presented by prior literature (Hong & Kacperczyk, 2009) can be extended to include audit-specific costs. Finally, this study complements ongoing research that investigates the association between social norms and financial reporting decisions (Dyreng et al., 2012; Kim & Venkatachalam 2011; McGuire et al., 2012; Omer et al., 2012) by focusing on an audit dimension, specifically audit pricing.

The rest of the paper is organized as follows: In the next section we develop the hypothesis. In section three we explain the data collection procedure and the empirical model. The results and sensitivity tests are demonstrated in section four. Finally, we conclude the study in the last section.

2. Social norms and audit pricing in "sin" industries

Previous studies have either implicitly or explicitly drawn upon the model of discrimination (Arrow, 1972; Becker, 1957) and the economics of social norms (Akerlof, 1980; Festre, 2010; Romer, 1984) to explain the existence of discriminatory attitudes towards "sin" firms (Dyreng et al., 2012; Hong & Kacperczyk, 2009; Kim & Venkatachalam 2011). The focus of these frameworks has primarily been on providing insights into how endorsed patterns of behavior affect individual attitudes (Cialdini, 1993; Kohlberg, 1984; Sunstein, 1996). At the heart of these theoretical underpinnings lies the belief that social norms embody everyday codes of conduct which guide behavior (Elster, 1989; Festre, 2010). Festre defines social norms as the external rules "shared by a group, sustained both by sanctions and by emotions of guilt and shame, whose primary characteristic is that it enjoins its followers to forgo selfish benefits in the name of group benefits" (ibid., p. 514). Thus, individuals may tend to comply with the understandings and expectations of their peer groups in order to avoid sanctions associated with non-adherence to prevailing values and beliefs. Moreover, accepted attitudes are usually rewarded with social approval and strong community support.

Akerlof (1980) suggests that social norms play an important role in the economic realm. The economic behavior is actually dependent on the beliefs or actions of the community (Romer, 1984). In this sense, social norms are believed to constitute the main driving forces or motivational mechanisms for market participants (Dyreng et al., 2012; Hong & Kacperczyk, 2009; Kim & Venkatachalam, 2011). Social norms may be so internalized by individuals that conformity is seen as a moral or ethical obligation which may override the profit motive (Suder, 2005). During the last decade, corporate social responsibility has emerged as the prevailing code

of endorsed corporate attitudes and is perceived as an important aspect and expression of modern business ethics within the context of capital markets (Durand, Koh, & Tan, 2013; Dyreng et al., 2012; Hong & Kacperczyk, 2009; Kim & Venkatachalam 2011).

Certain industries, including those involved in the business of alcohol, tobacco, gambling, nuclear energy and firearms, have been identified as deviants from the endorsed corporate attitudes due to their severe social and/or environmental impacts (Cai, Jo & Pan, 2012; Fabozzi, Ma, & Oliphant, 2008; Ghoul et al., 2011; Hong & Kacperczyk, 2009; Lindorff, Jonson, & McGuire, 2012; Salaber, 2007). These industries are often referred to as "sins" in the relevant literature (Chong et al., 2006; Fabozzi et al., 2008; Ghoul et al., 2011; Hong & Kacperczyk, 2009; Kim & Venkatachalam, 2011; Statman & Glushkov, 2009). For instance, the alcohol, tobacco and gambling industries have long been denounced due to the "pathological" or "compulsive" addictive effects of their products and services and the resulting devastating impacts on families and communities (Anielski & Braaten, 2008; Banks, 2007; Gerstein, Volberg, Harwood, & Christiansen, 2004; Grinols, 2004; Grinols & Mustard, 2000; 2001a; 2001b; Hall, 2006; Hancock, Schellinck, & Schrans, 2008; Harrison, 2007; New Focus Research, 2006; SACES, 2005). The firearms industry has also been stigmatized as a result of its externalities (see Goldberg, 2001; Hopkins, 2003; Hopkins & Hopkins, 2002; Zwetsloot, 2003). Arms manufacturers and retailers are increasingly seen as facilitators of tragedies related to the misuse of small firearms and environmental damages from artillery testing and chemical and biological weapons (see Brauer, 2000; Byrne 2007; Peluso & Watts, 2001; Wagner, 2003). The nuclear industry has also been seen to be responsible for major environmental and social catastrophes (Beelitz & Merkl-Davies, 2011; Coplan, 2008; Janofsky, 2005; Rostvik, 1992) due

to nuclear testing activity, the effects of radiation release from accidental reactor failures and nuclear waste.

The disparity between "sin" firm activities and prevailing social norms creates an adverse context which is further aggravated by the restrictive legislative state interventions encountered by "sin" firms (see, for instance, Janofsky, 2005; NHTSA, 2009) and by successful litigation processes instigated by third parties against them (see Lytton, 2009). Such developments and occurrences are often echoed in the press and have the tendency to overflow from the organizational boundaries of the entities involved and affect public perceptions of the industries they belong to (Yu, Sengul & Lester, 2008). Hence, media coverage of "sin" firm practices is almost always interpreted by the public as bad. In this way, "sin" industries permanently live with a "negative headline risk" (Fabozzi et al., 2008, p. 86).

These industries' peculiarities and adversities related to broader social conditions are an integral part of the client's business risk, which is an essential component of an auditing firm's engagement risk[1] assessment process (Bedard, Deis, Curtis & Jenkins, 2008; Colbert, Luehlfing & Alderman, 1996; Ethridge, Marsh & Revelt, 2007; Kerr, Grupe, Jooste & Vreeland, 2007; Venuti, Holtzman & Basile, 2002). In particular, the propensity of the client for litigation, controversies and the reputational effects from the association of the audit firm with particular industries and clients, leads to a higher assessment of audit risk (Colbert et al., 1996; also SAS No. 109, AU Section 314: Understanding the Entity and Its Environment[2]). Taken at an audit partner level, and according to specific audit firm policies (Danziger, 1999; Kerr et al., 2007; Thomas, 1992), such engagement decisions are often accompanied by an adjustment of the

nature, timing and extent of audit procedures, which consequently leads to higher audit effort and pricing (Bell, Landsman & Shackelford, 2001; Houston, Peters, & Pratt, 1999; Karla & Johnstone, 2000).

Against this background, we argue that the negative attitudes towards "sin" firms, which are attributed to their deviations from social norms, affect audit pricing policies in certain ways. "Sin" companies experience monitoring particularities for two reasons. Whilst they are confronted with high levels of scrutiny and intervention by regulators (Kim & Venkatachalam, 2011), at the same time they are discriminated against in capital markets and, thereby, experience less analyst coverage, less institutional shareholding and less interest from the wider investment community (Hong & Kacperczyk, 2009). Accordingly, social norms may result in "sin" companies being subjected to higher monitoring costs by regulators and higher agency costs by shareholders and debtors due to reduced market monitoring. Thus, whilst facing an increased client's business risk inflamed by the possibility of regulatory intervention, litigation and negative press coverage, auditors cannot rely on capital market institutional monitoring to assess it. In this vein, it is possible that auditors may respond to these adverse circumstances by resorting to additional efforts to conduct the audit of "sin" firms. Alternatively, or probably additionally, in keeping with the supply-side argument suggested by Kim and Venkatachalam (2011), if "sin" companies are neglected by the investment community due to social preferences, then these companies have incentives to obtain superior audit quality in order to attract more "sophisticated" market participants, i.e., institutional investors and analysts (ibid.). Demands for increased levels of audit quality will increase the audit effort and costs. The arguments laid out in this section lead to this formal testable hypothesis:

H: *Ceteris paribus*, audit and consulting fees are higher for companies that belong to "sin" industries.

3. Research design

3.1 Data collection procedure

The first objective in data collection is the identification of "sin" companies. Prior studies emphasize the inherent difficulties in identifying "sin" companies, with the exception of tobacco (Fabozzi et al, 2008; Hong & Kacperczyk, 2009). Moreover, it has been empirically demonstrated that "sin" companies strategically diversify into "non-sin" operations to reduce negative exposure (Beneish et al., 2008), which represents further limitations regarding data selection. We therefore rely on KLD STATS to identify "sin" companies, similar to Statman and Glushkov (2009). The KLD[3] database is widely used in CSR research (Ghoul et al., 2011), and it is characterized as "the de facto CSR research standard at the moment" (see Waddock, 2003). KLD assigns as "sinful" those companies that relate to the manufacturing, licensing, retailing, supporting, and ownership of alcohol, firearms, gambling, military, nuclear power, and tobacco activities (see Table 1).

[Insert Table 1 about here]

We gather 117 "sin" companies that have full data in the KLD, Datastream, and Audit Analytics databases for 2003-2009. We then obtain a sample of benchmark firms ("non-sin" control firms) representing firms with available data in the same two-digit SIC codes as the "sin" firms, similar

to Hong and Kacperczyk (2009). We end up with 1,600 control firms that have full data in the KLD, Datastream, and Audit Analytics databases for 2003-2009. Table 2 demonstrates the industry representation of "sin" and control samples at the two-digit SIC[4] code level. It appears that "sin" firms are spread over several industries, except tobacco production where, due to the particularities of this industry, there is no control sample. Overall, the 117 "sin" companies and 1,600 control companies result in 12,019 firm-year observations.

[Insert Table 2 about here]

3.2 Empirical model

We employ OLS regression models to examine the association between "sinful" operations and audit pricing. Similar to prior studies, (non)audit fees are measured by the natural logarithm of (non)audit fees (Hay et al., 2006) and total fees are measured by the natural logarithm of total fees (Kanagaretnam, Krishnan, & Lobo, 2010). We identify the control variables by drawing upon prior studies. Beginning from Simunic's seminal paper (1980), prior literature examines the impact of diverse variables on audit fees. The variables investigated could be classified into three categories: client attributes, auditor attributes and engagement attributes (Bierstaker et al., 2006; Causholli, DeMartinis, Hay, & Knechel, 2010; Cobbin, 2002; Hay et al., 2006; Walker & Johnson, 1996).

Firstly, we focus on client variables which have been found to have the most substantial impact on fees, with size being the most significant in nearly all previous studies (Hay et al., 2006). Complexity measures and inherent risk are also found to be important drivers (Causholli et al.,

2010) and are therefore incorporated into our model. Secondly, prior literature draws attention to auditor attributes which generally relate to audit quality. Audits performed by the largest international firms (Big-4) are associated with higher audit fees (Hay et al., 2006). Moreover, auditor specialization is also found to have a significant positive effect, although there is still no consensus as to whether specialization leads to superior audit quality or to a less competitive market (ibid.). Thirdly, extant studies suggest that engagement attributes, i.e., difficulties facing auditors, tend to increase audit fees (Causholli et al., 2010). Prior research on non-audit (consultancy) fees refers mainly to client attributes since auditor attributes and engagement attributes are more relevant to audit fees (ibid.).

Thus, following the literature we incorporate the following client variables into our model: SIZE, is measured by the natural logarithm of total assets (Cobbin, 2002; Francis, 1984). Here we expect a positive association. Current ratio (CUR) proxies for asset mix and is considered influential (Hay et al., 2006). It is measured as current assets to current liabilities and we expect a positive association. Return on assets (ROA) and LOSS are found to be significant and so they are both included (Cobbin, 2002). However, whilst we expect a negative association for ROA, we predict a positive association for LOSS (Causholli et al., 2010). Leverage (LEV) is employed since prior literature indicates that it requires consideration (Cobbin, 2002). LEV is measured as total debt to total assets (Hay et al., 2006) and we expect a positive association due to additional audit work on debt covenants and related assurance (Causholli et al., 2010). Organizational complexity is also controlled for through international sales to turnover (FOR), research and development to turnover (R&D), and number of business segments (SEG) (Gul & Goodwin, 2010). We expect a positive association for all three (Hay et al., 2006). BETA and growth (MB)

are suggested as influential in prior literature (Cobbin, 2002). However, the research is not consistent in terms of their relative sign. Finally, we include litigation risk (LIT), since it is found to be of significance in prior studies (Venkataraman, Weber & Willenborg et al., 2008). We measure LIT by a dummy variable to indicate the existence/non-existence of a major federal legal proceeding under the SEC regulation S-K §229.103 and we expect a positive association.

In terms of auditor attributes we include the type of auditor (AUD) which has been suggested as a proxy for audit quality (DeAngelo, 1981; Francis & Wilson, 1988). AUD is measured by the dummy variable Big-4/non-Big-4 and we expect a positive association (Causholli et al., 2010). Prior literature also suggests that an auditor's industry specialization influences levels of audit and non-audit pricing (Francis, Reichelt, & Wang, 2005). Consistent with prior literature, an audit firm is considered to be an industry leader if its market share for audit, non-audit or total fees is ranked number one in a particular two-digit SIC code category (Chung & Kallapur, 2003). We expect a positive association (ibid.).

Regarding engagement attributes, we examine the following variables: Restatements of financial statements (RES) and going concern qualification in the audit report (GCON), which both proxy for audit risk (Cobbin, 2002; Hay et al., 2006; Simmunic, 1980). RES is measured by the dummy variable restatement/non-restatement and GCON by the dummy variable of going concern/non-going concern qualification. We expect a positive association (Causholli et al., 2010). Audit engagement in the busy season is also taken into account (Antle, Gordon, Narayanamoorthy, & Zhou, 2006). We include month of the year (FIS) through a dummy variable indicating December/non-December year end and we expect a positive association. Auditor change has also

been found to be influential, therefore we include it as a variable. However, the sign of this significance remains inconsistent in the literature (Huang, Raghunandan, & Rama, 2009). Auditor change (AUDC) is a dummy variable to signify auditor change/no auditor change. This operationalization is in line with prior studies (Antle et al., 2006). Finally, we control for time and industry.

We check whether the coefficients (except for the constant) are jointly zero. A Wald test rejects the null hypothesis at 1%. Moreover, we test whether the equation models suffer from any omitted variable problems. A Ramsey (1969) test is performed and the results suggest that there is no serious problem of omitted variables. The functional form of the model is specified by an OLS regression estimated on robust standard errors – White's (1980) correction. We develop two equations to test the hypothesis. The first refers to audit (total) fees and the second to non-audit fees:

$$AF(TF)_{ij} = \alpha_o + \alpha_1 SIN_j + \alpha_2 LIT_j + \alpha_3 SIZE_j + \alpha_4 EXP_{AF(TF)j} + \alpha_5 CUR_j + \alpha_6 ROA_j + \alpha_7 LEV_j + \alpha_8 FOR_j + \alpha_9 BETA_j + \alpha_{10} LOSS_j + \alpha_{11} R\&D_j + \alpha_{12} MB_j + \alpha_{13} SEG_j + \alpha_{14} GCON_j + \alpha_{15} FIS_j + \alpha_{16} AUDC_J + \alpha_{17} RES + \alpha_{18} AUD_J + \sum \alpha_j YEARS_j + \sum \alpha_j INDUSTRIES_j + u_j \quad (1)$$

$$NAF_{ij} = \alpha_o + \alpha_1 SIN_j + \alpha_2 LIT_j + \alpha_3 SIZE_j + \alpha_4 EXP_{NAFj} + \alpha_5 CUR_j + \alpha_6 ROA_j + \alpha_7 LEV_j$$

$$+\alpha_8 FOR_j + \alpha_9 BETA_j + \alpha_{10} LOSS_j + \alpha_{11} R\&D_j + \alpha_{12} MB_j + \alpha_{13} SEG_j + \sum \alpha_j YEARS_j +$$

$$\sum \alpha_j INDUSTRIES_j + u_j \qquad (2)$$

Where:

AF	=	Natural logarithm of audit fees,
NAF	=	Natural logarithm of non-audit fees,
TF	=	Natural logarithm of total fees,
SIN	=	Dummy coded 1 if a firm is involved in alcohol, firearms, gambling, military, nuclear power or tobacco operations, 0 otherwise,
LIT	=	Dummy coded 1 if a firm has material legal proceedings, 0 otherwise,
SIZE	=	Natural logarithm of total assets,
$EXP_{AF(NAF;TF)}$	=	Dummy coded 1 if an auditor's industry share for audit (AF), non-audit (NAF) and total fees (TF) is ranked number one, 0 otherwise,
CUR	=	Current ratio, measured as the ratio of current assets to current liabilities,
ROA	=	Return on assets, measured as the ratio of income before extraordinary items over total assets,
LEV	=	Total debt to total assets,
FOR	=	Foreign activity, percent of international sales to total sales,
BETA	=	Market risk, relationship between stock volatility and the market volatility,
LOSS	=	Dummy coded 1 if a firm's net income in prior year is < 0, or 0 otherwise,
R&D	=	Research and development costs to turnover,
MB	=	Market to book value of equity,
SEG	=	Natural logarithm of number of business segments,
CGON	=	Dummy coded 1 if a firm has a going concern qualification, 0 otherwise,
FIS	=	Dummy coded 1 if fiscal year end is in December, 0 otherwise,
AUDC	=	Dummy coded 1 if the auditor changed compared to prior year, 0 otherwise,
RES	=	Dummy coded 1 if there is a financial statement restatement, 0 otherwise,
AUD	=	Dummy coded 1 if a firm is a client of a Big-4 audit firm or 0 otherwise.

Table 3 presents the summary statistics of the variables used, separated into "non-sin" and "sin" corporations. To reduce the effect of possible outliers, we winsorise all continuous model variables at the 1st and 99th percentiles of their respective distributions. The mean(median) of the dependent variable is 14.92(14.87) for the "sin" group and 13.25(13.30) for the control companies, overall similar to prior studies (see Gul & Goodwin, 2010). It appears that "sin"

firms have a higher litigation risk (.218) when compared to the control firms (.071). Moreover, they are better performers. ROA is considerably higher for "sin" firms (5.93%), while LOSS (.111) and GCON occurrence (.002) are much lower when compared to the control firms (1.17%, .383 and .072 respectively). Additionally, "sin" firms are more leveraged (39.43 vs "non-sin" 31.22). These initial empirics confirm prior studies on the characteristics of "sins" (Grinols, 2004; Hong & Kacperczyk, 2009; Kim & Venkatachalam, 2011). Finally, "sins" enjoy higher audit-industry expertise, probably due to the substantial employment of Big-4 audit firms (.802) when compared to control firms (.294). One issue raised that leads us to consider additional sensitivities is the difference between the size of "sin" firms (8.34) and the control group (5.39) (see section 5 for elaboration).

Table 4 presents the two-tailed p-values of the Pearson correlations tests between the regression variables. AF, NAF and TF are significantly correlated with SIN with a positive sign. In fact, almost all variables appear to be correlated significantly with AF, NAF and TF. SIZE, however, exhibits the highest p-values in every model. Other inferences suggest that multicollinearity is not a serious problem (Gujarati, 1995). In addition to the Pearson pairwise correlation coefficients for the independent variables, we also compute the variance inflation factor (VIF) for each independent variable in the models. None of the VIFs are more than four, suggesting that multicollinearity is not a serious problem in our data. Overall, none of the pairwise correlation coefficients, or the VIF measures, are above their theoretical thresholds, suggesting that our results and interpretations are not biased by multicollinearity problems (Gujarati, 1995).

[Insert Table 3 about here]

[Insert Table 4 about here]

4. Empirical findings

4.1 Results of the full model

The regression results are summarized in Table 5. Separate OLS results are presented for the AF, NAF and TF models. Model AF is significant, with an explanatory power of around 86.50% ($_{adj}R^2$ = 86.49). The coefficient of SIN is positive and significant at 1%, suggesting that "sin" companies are charged significantly higher audit fees compared to the "non-sin" control group. If we interpret the coefficients as elasticities, a company will pay a premium of around 20% higher audit fees ($e^{0.181}$-1 = 19.84%) for being "sinful," i.e., $376.000 per year extra on average. Many control variables are significant with the expected sign, similar to prior literature. Specifically, the significance for client variables suggests that SIZE, complexity (CUR, FOR, SEG) and risk (BETA, LEV) all have a positive association with audit pricing (similar to Hay et al., 2006). Additionally, audit-related variables such as audit expertise (EXP_{AF}) and type of audit firm (AUD) influence audit fees upwards (similar to Causholli et al., 2010). Finally, difficulties related to audit engagements as suggested by the significance of FIS, GCON, RES and AUDC, increase the levels of audit fees (similar to Hay et al., 2006). The negative coefficient of AUDC requires some further investigation to verify whether low-balling takes place, i.e., whether auditors provide fee discounts in initial engagements to attract new clients, followed by fee recovery in the future while still retaining the client (DeAngelo, 1981). Overall, our results support prior literature and demonstrate that audit pricing is affected by client, auditor and audit engagement characteristics. They also indicate, however, that audit fee models previously developed (e.g., Bierstaker et al., 2006), require additional attention to social norms.

The model NAF is significant, with an explanatory power of around 59% ($_{adj}R^2$ = 58.68). The coefficient of SIN is positive and significant at 1%, suggesting that "sin" companies bear significantly higher non-audit (consulting) charges. "Sin" firms pay a premium of 22% for consulting services, around $120,000 per year extra on average. Significant control variables include LIT, SIZE, EXP_{NAF}, CUR, ROA, LEV, FOR, MB, and SEG, similar to prior literature. Results suggest that non-audit fees in the post- Sarbanes Oxley Act (SOX) era are still dependant on risk, size, and complexity. Thus, larger (SIZE) and more complex firms (CUR, FOR, SEG) pay significantly higher non-audit fees (similar to Zaman, Hudaib & Haniffa, 2011). Moreover, companies with higher risk levels (LIT, ROA, LEV, MB) are associated with significantly higher non-audit fees, suggesting that consultants consider corporate risk influential regarding fee determination (similar to Defond, Raghunandan, & Subramanyam, 2002). Additionally, when consulting firms command industry expertise they tend to charge higher consulting fees, i.e., demand and possibly receive, premiums for their expertise. Finally, model TF is significant, with an explanatory power of around 87% ($_{adj}R^2$ = 87.25). The coefficient of SIN is again positive and significant at 1%, suggesting that audit firms set higher total fees for "sin" companies at an average of 19% ($460,000 extra per year on average). Significant control variables are SIZE, EXP_{TF}, CUR, ROA, LEV, AUD, CUR, FOR, BETA, LOSS, SEG, FIS, GCON, AUDC, RES, and AUD, all with the expected sign and similar to the AF model. Results collectively suggest that pricing for "sin" companies reflects two elements: the economic costs of auditors (consultants), as suggested by prior studies, and an additional cost attributable to their belonging to controversial business sectors – which we interpret as the cost of "sin."

[Insert Table 5 about here]

4.2 Investigating "sin" industries

In the light of results which suggest that differentiations in audit pricing policies can be attributed to prevailing social norms working against "sin" industries, we further our investigation by exclusively focusing on the "sin" group sample. In particular, we examine whether audit fees for "sin" companies are associated with: firstly, the level of "sinfulness" (i.e., degree of unethical performance); secondly, the level of "religiosity" (i.e., religious adherence) in a geographical region where the company is headquartered; and, thirdly, the prevailing political views as incorporated within, and expressed by, the ideological platforms of that region's political leadership.

Thus, we first employ KLD STATS to construct a "sinfulness" measure (VICE). Following Strike, Gao and Bansal (2006), we focus on the number of social and environmental concerns as a proxy for "sinful" performance (see Table 6). The overall measure of "sinful" performance (VICE) is calculated by concentrating on the six main KLD categories: community, diversity, employee, environment, human rights, and product concerns. For each category, KLD assigns a binary (0/1) rating to a set of concerns (see Table 6). Similar to previous studies (e.g., Benson & Davidson, 2010; Ghoul et al., 2011) we exclude from the definition and measurement of VICE corporate governance practices which are strictly regulated following the passage of SOX. We calculate a score for each company by totaling the negative (concerns) indicators in a given year. We add the scores of each category together to obtain an overall VICE score, similar to the method of prior studies (e.g., Hillman & Keim, 2001). We interpret a higher VICE score as an

indication of a more "sinful" performance. Since we demonstrate that auditors charge higher audit fees based on social norms, we expect charges to depend on the level of "sin" engaged in by the "sinful" company. Therefore, we examine VICE, focusing solely on "sin" firms and "sinful" performance.[5]

Secondly, we test for the impact of "religiosity"[6] on our "sin" sample. Religious adherence operates as a mechanism through which social norms critical of social and environmental externalities are reinforced (Angelidis & Ibrahim, 2004; Brammer, Williams & Zinkin. 2007; Dyreng et al., 2012). Organized religions, including Christianity, Islam and Judaism, have established the "Interfaith Centre on Corporate Responsibility" (www.iccr.org) through which action against controversial operations is instigated (Interfaith Declaration, 1993). Furthermore, prior literature suggests that religious adherence is associated with higher levels of risk adversity (Hillary & Hui, 2009; Miller & Hoffman, 1995). Intense religious adherence is also associated with a considerably reduced tolerance for financial reporting irregularities which signifies severe pressure on auditors (McGuire et al., 2012). Additionally, due to stricter religious norms discouraging accounting irregularities, auditors are more likely to resist client demands to withhold going concern opinions (Omer et al., 2012). Consequently, in more religious areas, auditors would be more likely to conduct more thorough audits when it comes to "sin" firms, in order to protect themselves against the higher risk associated with the increase in negative attitudes regarding externalities and financial reporting irregularities. To operationalize a measure of "religiosity", we rely on the 2000 Religious Congregations and Membership Study (RCMS), published by Glenmary Research Center and distributed by the American Religion Data Archive (www.thearda.com), similar to Dyreng et al. (2012). Our proxy of religiosity[7]

($REL_{j,t}$) is a measure of religious group[8] adherence and equals: the number of churches reported by all denominations in the RCMS in the county (*j*) where the firm was headquartered in year (*t*), divided by the population of the county (*j*), times 1,000. We employ REL as adjusted by Finke and Sheitle (2005). Similar to prior studies (e.g., Rubbin, 2008), we focus on the location of the firm's headquarters, since this is where corporate decision making usually takes place. Additionally, auditors and other stakeholders tend to reside in the same area as the corporate headquarters (see Omer et al., 2012).

Thirdly, we test whether political geography has an impact upon audit pricing. Prior literature suggests that political values have an impact on economic outcomes (Giuli & Kostovetsky, 2011; Kaustia & Torstila, 2011). In comparison with the Republicans, who may to some extent support "sin" firm operations (see Jeffrey, 2011), the Democratic Party has placed considerably more emphasis on corporate social responsibility and has taken a public stance against social and environmental externalities. For instance, the Democratic Party has, *inter alia*, favored stricter gun control, higher taxes on tobacco products and smoking bans, as well as stronger environmental protection[9] (Giouli & Kostovetsky, 2011; Hong & Kostovetsky, 2010; Kaustia & Torstila, 2011; Rubin, 2008). Hence, in areas where the Democratic Party is the dominant political force, "sin" firms are expected to encounter intense hostility (i.e., restrictive state interventions, litigations and negative press coverage) which may further increase the risks associated with their audits, leading auditors to devote more time and resources to completing audits. We operationalize politics ($POL_{j,t}$) through a dummy coded 1 where election results favour Republican candidates, and 0 where the election results favour Democratic candidates in a county (*j*) where "sin" companies are headquartered in year (*t*).

[Insert Table 6 about here]

The regression results are presented in Table 7. GCON is excluded from the model since there were only two observations. Separate OLS results are presented for the AF, NAF, and TF models. Model AF is significant, with an explanatory power of around 90% ($_{adj}R^2$ = 89.58). VICE is positive and significant at 5%, consistent with our expectations, suggesting that audit firms price their services higher according to levels of "sinful" performance. POL is also significant at 5% with a negative coefficient, consistent with our expectations, suggesting that "sin" companies are charged significantly higher audit fees in "blue" (Democrat-led) counties. REL has a positive but not significant coefficient. This would suggest that religious norms have no significant effect on auditors when auditing "sin" companies or, probably, that norms based on ethical performance and political values are stronger factors in explaining pricing variation. Significant control variables include LIT, SIZE, CUR, FOR, BETA, LOSS, MB, and SEG. Results suggest that the group of "sin" companies differs from the overall group, particularly regarding the non-significance of audit-related control variables. This may be due to the overall higher audit quality of "sin" firms (Kim & Venkatachalam, 2011). An alternative explanation might be due to common pricing policies for audit risk, since the vast majority (80%) of the "sin" market is dominated by Big-four auditing firms. Model NAF is significant, with an explanatory power of around 65% ($_{adj}R^2$ = 65.44). Again, the coefficient of VICE is significant at 1%, suggesting that consulting firms charge significantly higher fees for non-audit services based on "sinful" performance. However, consulting firms appear indifferent to religiosity or politics when pricing services to "sin" companies. Significant control variables are SIZE and BETA.

Finally, model TF is significant, with an explanatory power of around 89% ($_{adj}R^2$ = 89.33). Once again the coefficient of VICE is significant at 1%, providing evidence that audit firms set higher total fees for "sinful performance". POL and REL do not have significant coefficients. Significant control variables include AUD, CUR, LEV, R&D, and MB. Our results collectively suggest that social norms can contribute to further explaining pricing decisions for "sin" companies. Auditors and consultants appear to closely monitor deviations from acceptable social performance (VICE) and adjust pricing levels accordingly. Additionally, audit firms respond to the prevailing political ideology by adjusting audit effort and pricing.

[Insert Table 7 about here]

5. Sensitivity testing

The results are robust to a battery of sensitivity analyses. For sensitivity reasons, we test a number of variables that are argued to be influential by the prior literature but, for data and/or specification reasons, are not included in our full model. In this vein, we test the auditors' assessment of internal controls efficiency (Gul & Goodwin, 2010) through a dummy to indicate efficient/inefficient internal controls. We obtain data from Audit Analytics though, unfortunately, relevant data only exists from 2004 onwards. We find that the inefficiency of internal controls significantly increases audit fees (at 1%), probably due to increased audit risk and/or because auditors undertake some extra relevant tasks. We test corporate governance (CGOV), since it is found to be influential with regard to audit pricing, although the sign of this relation is still debated (see Carcello, Hermanson, Neal, & Riley, 2002; Felix, Gramling, & Maletta, 2001; Tsui, Jaggi, & Gul, 2001; Vafeas & Waegelein, 2007). We use two different

measures of corporate governance activity – KLD STATS and CGQ[10] ratings by Risk Metrics – since they have both been used widely in prior research. Interestingly we find that both measures result in a significant coefficient, but with a different sign. The KLD measure (see Table 6, Panel B) provides a negative sign, while the CGQ measure produces a positive sign, probably due to differences in operationalization. This should serve as a warning to researchers regarding the sensitivity of corporate governance metrics. Other inferences, however, remain stable at the same level of significance. Prior literature has suggested that the healthy performance (Chong et al., 2006; Kim & Vankatachalam, 2011) and "deep pockets" (Beneish et al., 2008) of "sin" companies attract attention (Geyelin, 1998). We therefore test whether auditors enjoy greater compensation simply because "sin" clients can afford it. To this end, we employ a cash and cash equivalent to the total assets ratio to test whether it could explain some variation of the fees structure. The results do not provide evidence for such an explanation. We also include the NAF variable in the AF model and, correspondingly, the AF variable in the AF model. In both variations of the model the coefficient of SIN remains significant at 1%. Additionally, we include a (commercially developed) measure of audit quality developed by GMI (www.gmiratings.com). Specifically, we rely on Audit Integrity's Accounting Risk (AR) measure, which has been used by prior studies (McGuire et al., 2012) and has been argued to offer many advantages (see Price, Sharp, & Wood, 2011). Nevertheless, with the application of this alternative proxy for audit quality our results remain similar.

The "sin" firms which comprise our sample, however, may be affected by different social norms since some firms exploit addictive tendencies (alcohol, gambling and tobacco), some exploit human conflict by supplying arms (firearms and military), whilst some operate in sectors that

could cause major catastrophes (nuclear power). We therefore test the sensitivity of our results by splitting our sample into three separate groups and running the regressions again, including "non-sin" control firms belonging to the same two-digit SIC code level. The SIN coefficient appears significantly positive (at 1%) in all three "sin" subcategories. In addition, we test alternative definitions of size, leverage, liquidity and profitability for overall and "sin" models. Additionally, we include an alternative proxy for "religiosity". Specifically, we test $REL2_{j,t}$ defined as the total number of adherents in the county (*j*) reported by all denominations in year (*t*), divided by the total county population as provided by the US Census in year (*t*) (similar to Dyreng et al., 2012). We employ this measure as adjusted by Finke and Sheitle (2005). However, the coefficients of all alternative definitions exhibit similar levels of significance. To test the sensitivity of size we employ a matched sample of 117 "sin" companies against 117 similar-sized control firms. Results remain similar. Additionally, we perform an F-test (see Chow, 1960) to determine whether the estimates of the overall and "sin" samples are consistent across the upper and lower divisions of size. The results suggest that size has no disproportionate effect on results.

Considering that our tests are cross-sectional in nature, endogeneity is a potential concern. However, the nature of endogeneity may be limited to correlated omitted variables, rather than reverse causality. It is unlikely that levels of audit fees would cause "sin" companies to establish or change operations, since industry sectors tend to remain sticky over time (Rubbin, 2008). Given that companies change industry sector very rarely, which is probably also the case for "sin" industries (e.g., due to the costs involved in heavy investment in PPE for military firms and advertising for alcohol firms or the challenges inherent in obtaining licenses etc.), it would be difficult to model a company's industry sector choice as part of this analysis or to conduct an analysis of changes. Thus, we view the "sin" variable as exogenous to audit pricing.

Nevertheless, we do take into account variables that could conceptually be correlated to both "sin" industries' variables and audit pricing. As such, we examine product market competition and ownership structure. Prior literature suggests that product market competition reduces audit fees since competitive forces within industries reduce the need for shareholders to bear the costs of monitoring agents (see Leventis, Weetman, & Caramanis, 2011). We measure product market competition (COMP) using the Herfindahl-Hirschman index (H-index), which is defined as the sum of the square fractions of the sales of the 50 largest firms in any given industry. Industries are defined on the basis of the two-digit SIC codes. In cases where there are fewer than 50 firms in an industry, we use all firms in the industry to calculate market shares, similar to Dhaliwal, Li, and Tsang (2011). Untabulated results suggest that product market competition does not change our inferences. Ownership structure has been found to be influential in prior studies of audit pricing (Khalil, Magnan, & Cohen, 2008). Hong and Kacperczyk (2009) demonstrate empirically that "sin" companies share particular characteristics in terms of ownership structure. We therefore include two additional variables in order to measure institutional and insider ownership. We measure institutional ownership as the percentage of total shares outstanding held by organizations, companies, universities and other groups that have greater than $100 million of equity assets. We measure insider ownership as the percentage of the total number of common stock outstanding held by corporate insiders. Officers, directors, and beneficial owners are only included if they hold at least 1,000 shares. We also examine the interaction between SIN and ownership structure variables. In all the above mentioned tests, the coefficient of SIN remains significant at 1%, while the interactions are not significant.

Finally, we assume that audit fees are sticky over time and that our coefficients might be inflated due to repeated observations. We test the sensitivity of our results by clustering standard errors by audit firm, similar to Numan and Willekens (2012). We thus apply the procedure suggested by Roger (1993) which considers standard errors adjusted for heteroskedasticity and possible correlation within a cluster. The coefficients do not affect the levels of significance. We also estimate a median regression (minimizing the sum of absolute errors instead of squared errors) to ensure that our results are not driven by outliers. However, the SIN coefficient remains significant at 1%.

6. Conclusions

In this paper we provide evidence of the significant effects of social norms on audit pricing by studying charges for audit and consulting services for "sin" firms. We empirically demonstrate that audit and consulting services are considerably higher when client firms belong to controversial industries such as alcohol, firearms, gambling, military, nuclear power, and tobacco. Based on the social norms literature, we argue that industries which promote "vice" and are stigmatized due to their social and environmental externalities encounter considerable adversity, exemplified by restrictive state interventions, litigation processes, negative press coverage and capital market discrimination. This adversity increases the client's business risk level assessed by auditors who, in response, extend their auditing procedures and consequently charge higher fees. Results also provide evidence that auditors adjust audit pricing based on the level of "sinfulness" of the company. Additionally, we demonstrate the existence of significant pricing discrimination against "sin" companies headquartered in counties where the Democratic Party is in power. Our

collective evidence suggests that the significant financial costs suggested by prior literature due to deviations from prevailing social norms can be extended to include audit services pricing.

This study offers several contributions. The primary contribution of this paper is the finding that audit firms charge significantly higher fees for audit and consulting services to companies that do not comply with broadly accepted social norms. This extends the literature on audit pricing by providing evidence that discrimination, due to disparities between corporate activities and prevailing values, attitudes and understandings, plays a significant role in the making of audit pricing decisions. We also draw attention to the fact that audit pricing is not only determined by company- and audit-specific characteristics, as suggested by most prior research (e.g., Bierstaker et al., 2006; Hay et al., 2006), but also by external factors beyond managerial or auditor control.

The implications of our findings are very important for "sin" firms' managers, shareholders, investors and market participants. "Sin" firms' managers should be aware that the audit services premium they are confronted with is the outcome of a broader adverse context. This price policy differentiation may be an indication of the additional procedures and effort undertaken by auditors, who may, consequently, be in position to offer professional services of better quality. Shareholders, potential investors and market participants should also be aware that the increased agency costs, and considerably less institutional monitoring, associated with the broader hostility to "sin" firm operations may be alleviated by auditors' extra endeavors.

We note some limitations. Firstly, we cannot rule out the possibility that our results may be partially driven by auditors' personal attitudes, religious beliefs and/or political views regarding

deviant firms. Secondly, following prior literature, we assume that "sin" firms are primarily influenced by the political and religious norms prevailing in the geographical areas where those companies are headquartered. Whether this assumption holds true for firms not necessarily belonging to the "sin" industries group remains an open question. Thirdly, the present study is restricted to the US and our findings are therefore limited to specific geographical borders.

Future research could extend the current study in a number of ways. Firstly, it would be worth examining whether "sin" companies bear any additional financial costs due to social discrimination. Considering that "sin" companies are predominantly financed by debt capital, an interesting investigation could involve the examination of the effects of social norms on the cost of debt. Secondly, we measure "sinfulness" based on CSR concerns. Another potentially rewarding measure to employ would be the change of sales related to "sinful" operations. Thirdly, it would be interesting to test whether our results hold for firms which might not be classified as "sinful" but which inherently entail persistent or emerging environmental and/or social issues. Industries such as oil, cement, biotech and pharmaceuticals might be included here. Finally, our results suggest that "sin" companies might reduce audit costs by engaging in activities which promote corporate citizenship (Ahrens, 2004). A growing number of "sin" companies donate millions of dollars to charities and spend heavily to publicize their environmental policies and to promote informational campaigns on the dangers of their products and services (Arhens, 2004). Thus, it would be interesting to explore whether such activities are rewarded somehow within the context of financial and auditing markets.

Notes

[1] According to the American Institute of Certified Public Auditors' auditing standards and relevant interpretations, the three components of engagement risk are: client's business risk, audit risk and auditor's business risk (Colbert et al., 1996).

[2] Available online at: http://www.aicpa.org/Research/Standards/AuditAttest/Pages/SAS.aspx.

[3] Kinder, Lydenberg, Domini & Co. (KLD) dataset is the leading database providing data on CSR and social issues (Waddock, 2003). KLD data are based on multiple data sources, including annual surveys sent to firms' investor relations offices, firm SEC filings, annual reports, government surveys, general press releases, and academic journal research (Luo, Wieseke & Homburg, 2012). It covers historical data for the Russell-3000 (the 3,000 largest firms in the USA, which represent approximately 98% of the investable US market) since 1991. KLD includes multiple indicators in seven stakeholder or social issue areas including: Community relations, corporate governance, diversity, employee relations, environment, human rights, as well as issues related to a company's products and core business. The data set also include indicators regarding the following controversial business issues: alcohol, firearms, gambling, military, nuclear power, and tobacco. More details of the specific items of KLD can be found in the Wharton Research Data Services (WRDS) data source from the Wharton School or directly from the KLD (see http://www.msci.com/products/esg/stats/). The validity and reliability of KLD has been established (see Coombs & Gilley, 2005; Kacperczyk, 2009). KLD data have gained momentum in CSR and management literature, but also in accounting and finance literature (see Benson & Davidson 2010; Coombs & Gilley, 2005; Garcia-Castro, Arino & Canela, 2010; Ghoul et al., 2011; Hillman & Keim, 2001; Kacperczyk, 2009; Verwijmeren & Derwall, 2010).

[4] All inferences remain the same when GICS coding or Fama-French 48 industry classifications are employed.

[5] Summary statistics are: mean = 2.97; median = 2; st.dev. = 2.56; min = 0; max =12.

[6] Although the term "religiousness" could be a more appropriate term, we use the term "religiosity" for consistency with the growing branch of literature on accounting and finance (see, for instance, Dyreng et al., 2012; Hilary & Hui, 2009).

[7] In 2000, each of the 285 US domiciled denominations listed in the Yearbook of American Churches was approached and asked to self-report the number of churches, members and adherents by county. Of all the denominations approached, 149 responded, reporting adherents across all counties totalling 141.372 million (Dyreng et al., 2012). Although the response rate (52%) appears low, the survey achieved coverage of the larger congregations and the total reported adherents across all counties represented 89.3% of the total adherents listed in the Yearbook of American Churches (ibid.).

[8] The following religious groups are taken into account: Baha'i, Buddhism, Christianity, Hinduism, Jainism, Judaism, Islam, Sikhism, Taoism and Zoroastrianism.

[9] For further information please see the appendix by Hong and Kostovetsky (2010).

[10] This is an index based on information derived from publicly available disclosure documents (i.e., proxy statement, form 10-K, form 8-K, etc.), press releases and corporate websites, which are then reviewed and verified by corporate governance analysts from the Institutional Shareholder Services. The index is comprised of 67 different issues within four broad categories of disclosures mandated by SOX and the US Securities and Exchanges Commission (SEC). Thus, it consists of governance provisions relating to the board of directors, audit, anti-takeover, and executive and director compensation and ownership.

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Table 1: KLD Ratings of Controversial Business Issues

ALCOHOL	
Licensing.	The company licenses its company or brand name to alcohol products.
Manufacturers.	Companies that are involved in the manufacture of alcoholic beverages including beer, distilled spirits, or wine.
Manufacturers of Products Necessary for Production of Alcoholic Beverages.	Companies that derive 15% or more of total revenues from the supply of raw materials and other products necessary for the production of alcoholic beverages.
Retailers.	Companies that derive 15% or more of total revenues from the distribution (wholesale or retail) of alcoholic beverages.
Ownership by an Alcohol Company.	The company is more than 50% owned by a company with alcohol involvement.
Ownership of an Alcohol Company.	The company owns more than 20% of another company with alcohol involvement. (When a company owns more than 50% of company with alcohol involvement, KLD treats the alcohol company as a consolidated subsidiary.)
GAMBLING	
Licensing.	The company licenses its company or brand name to gambling products.
Manufacturers.	Companies that produce goods used exclusively for gambling, such as slot machines, roulette wheels, or lottery terminals.
Owners and Operators.	Companies that own and/or operate casinos, racetracks, bingo parlors, or other betting establishments, including casinos; horse, dog, or other race tracks that permit wagering; lottery operations; on-line gambling; pari-mutuel wagering facilities; bingo; Jai-alai; and other sporting events that permit wagering.
Supporting Products or Services.	Companies that provide services in casinos that are fundamental to gambling operations, such as credit lines, consulting services, or gambling technology and technology support.
Ownership by a Gambling Company.	The company is more than 50% owned by a company with gambling involvement.
Ownership of a Gambling Company.	The company owns more than 20% of another company with gambling involvement. (When a company owns more than 50% of company with gambling involvement, KLD treats the gambling company as a consolidated subsidiary.)
TOBACCO	
Licensing.	The company licenses its company name or brand name to tobacco products.
Manufacturers.	The company produces tobacco products, including cigarettes, cigars, pipe tobacco, and smokeless tobacco products.
Manufacturers of Products Necessary for Production of Tobacco Products.	The company derives 15% or more of total revenues from the production and supply of raw materials and other products necessary for the production of tobacco products.
Retailers.	The company derives 15% or more of total revenues from the distribution (wholesale or retail) of tobacco products.
Ownership by a Tobacco Company.	The company is more than 50% owned by a company with tobacco involvement.
Ownership of a Tobacco Company.	The company owns more than 20% of another company with tobacco involvement. (When a company owns more than 50% of company with tobacco involvement, KLD treats the tobacco company as a

	consolidated subsidiary.)
	FIREARMS
Manufacturers.	The company is engaged in the production of small arms ammunition or firearms, including, pistols, revolvers, rifles, shotguns, or sub-machine guns.
Retailers.	The company derives 15% or more of total revenues from the distribution (wholesale or retail) of firearms and small arms ammunition.
Ownership by a Firearms Company.	The company is more than 50% owned by a company with firearms involvement.
Ownership of a Firearms Company.	The company owns more than 20% of another company with firearms involvement. (When a company owns more than 50% of company with firearms involvement, KLD treats the firearms company as a consolidated subsidiary.)
	MILITARY
Manufacturers of Weapons or Weapons Systems.	Companies that derive more than 2% of revenues from the sale of conventional weapons or weapons systems, or earned $50 million or more from the sale of conventional weapons or weapons systems, or earned $10 million or more from the sale of nuclear weapons or weapons systems.
Manufacturers of Components for Weapons or Weapons Systems.	Companies that derive more than 2% of revenues from the sale of customized components for conventional weapons or weapons systems, or earned $50 million or more from the sale of customized components for conventional weapons or weapons systems, or earned $10 million or more from the sale of customized components for nuclear weapons or weapons systems.
Ownership by a Military Company.	The company is more than 50% owned by a company with military involvement.
Ownership of a Military Company.	The company owns more than 20% of another company with military involvement. (When a company owns more than 50% of company with military involvement, KLD treats the military company as a consolidated subsidiary.)
	NUCLEAR POWER[a]
Construction & Design of Nuclear Power Plants.	The company designs, engineers, and constructs nuclear power plants and nuclear reactors for use in nuclear power plants; including companies that design nuclear reactors and engineer and/or construct nuclear power plants.
Nuclear Power Fuel and Key Parts.	The company supplies nuclear fuel material and key parts used in nuclear plants and reactors. Fuel includes mining of uranium and conversion, enrichment, and fabrication of uranium. Key parts include manufacture or sale of specialized parts for use in nuclear power plants including but not exclusive to steam generators, control rod drive mechanisms, reactor vessels, cooling systems, containment structures, fuel assemblies, and digital instrumentation & controls.
Nuclear Power Service Provider.	The company is involved in the transport of nuclear power materials and nuclear plant maintenance.
Ownership of Nuclear Power Plants.	The company has an ownership interest or operates nuclear power plant(s). Does not include publicly traded companies that are an owner or operator of a nuclear plant that has shut down and is being decommissioned.
Ownership by a Nuclear Power Company.	The company is more than 50% owned by a company with nuclear power involvement.

Ownership of a Nuclear Power Company.	The company owns more than 20% of another company with nuclear power involvement. If company ownership of company with nuclear power involvement is greater than 50%, KLD treats subsidiary as a consolidated subsidiary.
Construction & Design of Nuclear Power Plants	The company derives identifiable revenues from the design of nuclear power plants. This category does not include companies providing construction or maintenance services for nuclear power plants. This was instated in 2005.
Nuclear Power Fuel and Key Parts	The company mines, processes, or enriches uranium, or is otherwise involved in the nuclear fuel cycle. Or, the company derives substantial revenues from the sale of key parts or equipment for generating power through using nuclear fuels. This was instated in 2005.

Source: RiskMetrics Group, Inc. (2010) *How to use KLD STATS and ESG ratings definitions*.

[a] The rating does not include companies that store, dispose of, or reprocess nuclear fuel waste, nor does it include manufacturers of general power plant parts unless the part is specifically and uniquely made for the production of nuclear power.

Table 2: Firm Representation by "Sinful" Activity and Industry

KLD Sin Firms	KLD No	SIC Code	SIC Industries	Sin Firms	Control Firms
Alcohol	9	12	Coal Mining	1	8
Gambling	19	16	Heavy Construction	1	9
Tobacco	8	20	Food	4	59
Firearms	4	21	Tobacco	6	0
Military	53	26	Paper	1	16
Nuclear Power	24	28	Chemicals	3	249
		30	Rubber and Plastics	2	24
		33	Metal	3	31
		34	Fabricated Metal	4	36
		35	Industrial and Commercial Machinery	6	134
		36	Electronics	11	230
		37	Transportation Equipment	11	49
		38	Measuring, Analyzing and Controlling Instruments	10	193
		39	Miscellaneous Manufacturing	5	21
		44	Water Transportation	1	6
		49	Electric, Gas and Sanitary Services	27	74
		50	Wholesale Trade and Durable Goods	1	47
		51	Wholesale Trade and non-Durable Goods	2	27
		55	Automotive Dealers and Service Stations	1	16
		58	Eating and Drinking Places	1	38
		70	Hotels, Rooming Houses and Lodging	2	7
		73	Business Services	3	254
		79	Amusement and Recreation Services	9	18
		87	Engineering and Management Services	2	54
	117			117	1,600

Table 3: Summary Statistics

	Sin Firms					Control Firms				
Variable	**Mean**	**Median**	**Std. Dev.**	**Min**	**Max**	**Mean**	**Median**	**Std. Dev.**	**Min**	**Max**
AF	14.92	14.87	1.15	11.25	18.36	13.25	13.30	1.46	6.90	18.23
NAF	13.23	13.28	1.68	7.28	17.53	11.62	11.60	1.79	6.90	17.82
TF	15.16	15.12	1.15	11.63	18.70	13.46	13.52	1.49	7.69	18.34
LIT	.218	0	.413	0	1	.071	0	.257	0	1
SIZE	8.34	8.40	1.73	3.98	13.58	5.39	5.43	2.32	3.22	12.62
EXP_{AF}	.481	0	.499	0	1	.206	0	.404	0	1
EXP_{NAF}	.449	0	.497	0	1	.201	0	.401	0	1
EXP_{TAF}	.479	0	.499	0	1	.205	0	.403	0	1
CUR	1.90	1.52	1.58	.27	18.65	3.38	2.22	4.72	0.07	14.63
ROA (%)	5.93	5.56	6.14	-29.41	47.48	1.17	3.96	33.21	-63.37	89.92
LEV (%)	39.43	28.37	17.86	14.73	142.02	31.22	12.97	30.09	.987	103.23
FOR (%)	20.51	11.70	23.53	0	100	20.56	5.21	25.91	0	96.5
BETA	1.16	1.12	.727	.16	2.18	1.72	1.03	.926	0.14	2.31
LOSS	.111	0	.314	0	1	.383	0	.486	0	1
R&D (%)	2.31	.24	4.22	0	26.15	6.43	2.01	10.91	0	34.18
MB	2.05	2.16	12.70	-21.35	57.17	2.26	2.31	12.99	-45.89	86.26
SEG	1.10	1.09	.588	0	2.30	.552	.693	.598	0	2.30
CGON	.002	0	.049	0	1	.072	0	.259	0	1
FIS	.697	1	.459	0	1	.658	1	.474	0	1
AUDC	.063	0	.243	0	1	.081	0	.273	0	1
RES	.125	0	.331	0	1	.150	0	.357	0	1
AUD	.802	1	.398	0	1	.294	0	.455	0	1

Variable definition:

Dependent Variables

AF = Natural logarithm of audit fees,

NAF = Natural logarithm of non-audit fees,

TF = Natural logarithm of total fees,

Main Variable

SIN = Dummy coded 1 if a firm is involved in alcohol, firearms, gambling, military, nuclear power or tobacco operations, 0 otherwise,

Control Variables

LIT = Dummy coded 1 if a firm has material legal proceedings, 0 otherwise,

SIZE = Natural logarithm of total assets,

$EXP_{AF(NAF;TF)}$ = Dummy coded 1 if an auditor's industry share for audit (AF), non-audit (NAF) and total fees

(TF) is ranked number one, 0 otherwise,

CUR = Current ratio, measured as the ratio of current assets to current liabilities,

ROA = Return on assets, measured as the ratio of income before extraordinary items over total assets,

LEV = Total debt to total assets,

FOR = Foreign activity, percent of international sales to total sales,

BETA = Market risk, relationship between stock volatility and the market volatility,

LOSS = Dummy coded 1 if a firm's net income in prior year is < 0, or 0 otherwise,

R&D = Research and development costs to turnover,

MB = Market to book value of equity,

SEG = Natural logarithm of number of business segments,

CGON = Dummy coded 1 if a firm has a going concern qualification, 0 otherwise,

FIS = Dummy coded 1 if fiscal year end is in December, 0 otherwise,

AUDC = Dummy coded 1 if the auditor changed compared to prior year, 0 otherwise,

RES = Dummy coded 1 if there is a financial statement restatement, 0 otherwise,

AUD = Dummy coded 1 if a firm is a client of a Big-4 audit firm or 0 otherwise.

Table 4: Pearson Correlation Matrix

VAR	AF	NAF	TF	SIN	LIT	SIZE	EXP_{AF}	EXP_{NAF}	EXP_{TF}	CUR	ROA	LEV	FOR	BETA	LOSS	R&D	MB	SEG	CGON	FIS	AUDC	RES
AF	1.000																					
NAF	.719	1.000																				
	(.000)																					
TF	.988	.798	1.000																			
	(.000)	(.000)																				
SIN	.273	.237	.276	1.000																		
	(.000)	(.000)	(.000)																			
LIT	.292	.247	.294	.124	1.000																	
	(.000)	(.000)	(.000)	(.000)																		
SIZE	.889	.724	.901	.302	.312	1.000																
	(.000)	(.000)	(.000)	(.000)	(.000)																	
EXP_{AF}	.261	.199	.267	.158	.079	.273	1.000															
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)																
EXP_{NAF}	.257	.209	.264	.142	.093	.270	.771	1.000														
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)															
EXP_{TF}	.264	.202	.269	.159	.082	.276	.913	.858	1.000													
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)														
CUR	.166	-.178	-.167	-.076	-.054	-.159	-.041	-.036	-.041	1.000												
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.001)	(.000)													
ROA	.101	.059	.106	.019	.021	.333	.029	.029	.030	.021	1.000											
	(.000)	(.000)	(.000)	(.036)	(.020)	(.000)	(.001)	(.001)	(.000)	(.019)												
LEV	-.039	-.008	-.039	-.001	-.005	-.035	-.009	-.009	-.009	-.022	-.411	1.000										
	(.000)	(.400)	(.000)	(.860)	(.542)	(.000)	(.312)	(.300)	(.303)	(.014)	(.000)											
FOR	.436	.340	.438	.000	.127	.332	.094	.095	.097	-.021	.043	-.016	1.000									
	(.000)	(.000)	(.000)	(.969)	(.000)	(.000)	(.000)	(.000)	(.000)	(.016)	(.000)	(.064)										
BETA	.024	.022	.027	-.007	-.008	.035	.010	.002	.018	-.014	.000	.001	-.012	1.000								
	(.007)	(.020)	(.002)	(.434)	(.379)	(.000)	(.272)	(.794)	(.045)	(.116)	(.950)	(.889)	(.160)									
LOSS	-.339	-.283	-.352	-.140	-.119	-.436	-.118	-.119	-.116	.111	-.099	.026	-.117	.010	1.000							
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.003)	(.000)	(.262)								
R&D	-.022	-.033	-.025	-.009	-.004	-.035	-.011	-.010	-.010	.023	-.016	.002	-.028	-.000	.048	1.000						
	(.013)	(.000)	(.004)	(.284)	(.596)	(.000)	(.210)	(.000)	(.000)	(.008)	(.076)	(.796)	(.001)	(.942)	(.000)							
MB	-.008	.004	-.005	-.006	.000	-.002	.008	.009	.009	-.002	.011	-.001	-.012	.001	-.005	-.000	1.000					
	(.388)	(.638)	(.522)	(.488)	(.977)	(.831)	(.334)	(.251)	(.234)	(.798)	(.201)	(.902)	(.169)	(.901)	(.562)	(.964)						
SEG	.443	.403	.454	.219	.138	.475	.129	.134	.130	-.203	.120	-.005	.118	-.018	-.259	-.037	.014	1.000				
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.588)	(.000)	(.051)	(.000)	(.000)	(.110)					
CGON	-.313	-.195	-.324	-.068	-.070	-.357	-.102	-.095	-.098	-.099	-.177	.080	-.132	.005	.311	.047	-.015	-.133	1.000			
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)	(.546)	(.000)	(.000)	(.094)	(.000)				
FIS	.092	.035	.077	.012	.013	.066	.016	.018	.014	-.017	-.005	.014	-.037	.014	.046	.020	.004	-.006	.031	1.000		
	(.000)	(.000)	(.000)	(.177)	(.155)	(.000)	(.065)	(.041)	(.101)	(.057)	(.579)	(.103)	(.000)	(.125)	(.000)	(.026)	(.626)	(.464)	(.000)			
AUDC	-.141	-.112	-.149	-.016	-.029	-.135	-.059	-.059	-.060	.003	-.029	.000	-.044	.004	.062	.001	.025	-.046	.078	-.015	1.000	
	(.000)	(.000)	(.000)	(.074)	(.001)	(.000)	(.000)	(.000)	(.000)	(.690)	(.001)	(.980)	(.000)	(.652)	(.000)	(.880)	(.005)	(.000)	(.000)	(.089)		
RES	-.015	-.043	-.017	-.018	-.021	-.027	.001	-.008	.000	-.001	.008	-.006	-.018	-.011	.006	-.010	-.004	-.005	-.023	-.000	.046	.046
	(.081)	(.000)	(.059)	(.046)	(.020)	(.002)	(.863)	(.327)	(.937)	(.902)	(.367)	(.451)	(.040)	(.204)	(.472)	(.262)	(.621)	(.588)	(.011)	(.935)	(.000)	(.000)
AUD	.572	.482	.580	.268	.178	.535	.215	.214	.212	-.185	.050	-.006	.156	.040	-.330	-.026	.004	.415	-.159	.093	-.063	-.063
	(.081)	(.000)	(.059)	(.046)	(.020)	(.002)	(.863)	(.000)	(.000)	(.000)	(.000)	(.475)	(.000)	(.000)	(.000)	(.004)	(.652)	(.000)	(.000)	(.000)	(.000)	(.000)

Numbers in brackets denote p-values associated with a two-sided t-test of the null hypothesis that the correlation coefficient is zero.

Variable definition:

Dependent Variables

AF = Natural logarithm of audit fees,

NAF = Natural logarithm of non-audit fees,
TF = Natural logarithm of total fees,

Main Variable

SIN = Dummy coded 1 if a firm is involved in alcohol, firearms, gambling, military, nuclear power or tobacco operations, 0 otherwise,

Control Variables

LIT = Dummy coded 1 if a firm has material legal proceedings, 0 otherwise,
SIZE = Natural logarithm of total assets,
$EXP_{AF(NAF;TF)}$ = Dummy coded 1 if an auditor's industry share for audit (AF), non-audit (NAF) and total fees (TF) is ranked number one, 0 otherwise,
CUR = Current ratio, measured as the ratio of current assets to current liabilities,
ROA = Return on assets, measured as the ratio of income before extraordinary items over total assets,
LEV = Total debt to total assets,
FOR = Foreign activity, percent of international sales to total sales,
BETA = Market risk, relationship between stock volatility and the market volatility,
LOSS = Dummy coded 1 if a firm's net income in prior year is < 0, or 0 otherwise,
R&D = Research and development costs to turnover,
MB = Market to book value of equity,
SEG = Natural logarithm of number of business segments,
CGON = Dummy coded 1 if a firm has a going concern qualification, 0 otherwise,
FIS = Dummy coded 1 if fiscal year end is in December, 0 otherwise,
AUDC = Dummy coded 1 if the auditor changed compared to prior year, 0 otherwise,
RES = Dummy coded 1 if there is a financial statement restatement, 0 otherwise,
AUD = Dummy coded 1 if a firm is a client of a Big-4 audit firm or 0 otherwise.

Table 5: Results of OLS Regression Analysis of Audit Fees, Non-Audit Fees and Total Fees on the Full Sample (*n = 12,019*)

Variables		**AF**		**NAF**		**TF**	
	Exp. Sign	coef	VIF	coef	VIF	coef	VIF
(Constant)		10.17***		8.14***		10.29***	
SIN	+	.185***	1.23	.196***	1.23	.175***	1.23
LIT	+	.013	1.14	.082**	1.14	.011	1.14
SIZE	+	.494***	3.74	.556***	3.02	.512***	3.74
EXP_{AF}	+	.029**	1.16				
EXP_{NAF}	+			.084***	1.14		
EXP_{TF}	+					.034***	1.16
CUR	-	-.016***	1.18	-.026***	1.17	-.016***	1.18
ROA	-	-.001***	1.33	-.001***	1.35	-.001***	1.33
LEV	+	.000***	1.14	.001**	1.14	.001***	1.14
FOR	+	.006***	1.47	.005***	1.47	.005***	1.47
BETA	+/-	-.001***	1.01	-.001	1.01	-.001***	1.01
LOSS	+	.212***	1.41	.012	1.38	.179***	1.41
R&D	+	.001	1.01	-.001	1.02	.001	1.01
MB	+/-	-.001	1.01	.001**	1.01	-.001	1.01
SEG	+	.100***	1.45	.177***	1.42	.102***	1.45
GCON	+	.155***	1.38			.128***	1.38
FIS	+	.142***	1.08			.098***	1.08
AUDC	+/-	-.066***	1.05			-.111***	1.05
RES	+	.077***	1.02			.054***	1.02
AUD	+	.116***	1.96			.109***	1.96
Industry dummies		included		included		included	
Year dummies		included		included		included	
F		1629.82		387.17		1656.27	
Prob > F		.000		.000		.000	
Adj R^2		86.49		58.68		87.25	

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level respectively (2-tailed).

Variable definition:

Dependent Variables

AF = Natural logarithm of audit fees,

NAF = Natural logarithm of non-audit fees,

TF = Natural logarithm of total fees,

Main Variable

SIN = Dummy coded 1 if a firm is involved in alcohol, firearms, gambling, military, nuclear power or tobacco operations, 0 otherwise,

Control Variables

LIT = Dummy coded 1 if a firm has material legal proceedings, 0 otherwise,

SIZE = Natural logarithm of total assets,

$EXP_{AF(NAF;TF)}$ = Dummy coded 1 if an auditor's industry share for audit (AF), non-audit (NAF) and total fees (TF) is ranked number one, 0 otherwise,

CUR = Current ratio, measured as the ratio of current assets to current liabilities,

ROA = Return on assets, measured as the ratio of income before extraordinary items over total assets,

LEV = Total debt to total assets,

FOR = Foreign activity, percent of international sales to total sales,

BETA	=	Market risk, relationship between stock volatility and the market volatility,
LOSS	=	Dummy coded 1 if a firm's net income in prior year is < 0, or 0 otherwise,
R&D	=	Research and development costs to turnover,
MB	=	Market to book value of equity,
SEG	=	Natural logarithm of number of business segments,
CGON	=	Dummy coded 1 if a firm has a going concern qualification, 0 otherwise,
FIS	=	Dummy coded 1 if fiscal year end is in December, 0 otherwise,
AUDC	=	Dummy coded 1 if the auditor changed compared to prior year, 0 otherwise,
RES	=	Dummy coded 1 if there is a financial statement restatement, 0 otherwise,
AUD	=	Dummy coded 1 if a firm is a client of a Big-4 audit firm or 0 otherwise.

Table 6: KLD Ratings Indicators

Panel A: CSR Concerns

Community	**Diversity**
Investment Controversies	Controversies
Negative Economic Impact	Non-Representation
Tax Disputes	Other
Other	
Employee Relations	**Environment**
Union relations	Hazardous Waste
Health and Safety	Regulatory Problems
Workforce Reductions	Ozone Depleting Chemicals
Retirement benefit	Substantial Emissions
Other	Agricultural Chemicals
	Climate Change
	Other
Human Rights	**Product**
Burma	Safety
Labor Rights	Marketing/Contracting Concern
Indigenous Peoples Relations	Antitrust
Other	Other

Panel B: Corporate Governance

Strengths	**Concerns**
Limited compensation	High compensation
Ownership	Ownership
Transparency	Accounting concern
Political accountability	Transparency
Other	Political accountability
	Other

Table 7: Results of OLS Regression Analysis of Audit Fees, Non-Audit Fees and Total Fees on Sin Companies (*n = 819*)

Variables		**AF**		**NAF**		**TF**	
	Exp. Sign	Coef	VIF	Coef	VIF	Coef	VIF
(Constant)		10.95***		7.82***		10.84***	
VICE	+	.018**	2.79	079***	2.83	.018**	2.79
POL	-	-.085**	1.49	.011	1.50	-.055	1.49
REL	+	.159	1.64	-.075	1.53	.164	1.64
LIT	+	.099**	1.30	.001	1.29	.091**	1.30
SIZE	+	.525***	3.52	.681***	3.30	.559***	3.53
EXP_{AF}	+	.023	1.39				
EXP_{NAF}	+			.082	1.45		
EXP_{TF}	+					.030	1.41
CUR	-	-.094***	2.03	-.015	2.03	-.080***	2.03
ROA	-	-.006*	1.45	.001	1.43	-.004	1.45
LEV	+	-.001	1.61	.001	1.58	-.000	1.60
FOR	+	.004***	2.31	.002	2.30	.004***	2.32
BETA	+/-	-.175***	2.27	-.260***	2.22	-.176***	2.27
LOSS	+	.140**	1.49	-.056	1.49	.114	1.49
R&D	+	.000	2.05	.018	2.07	.002	2.05
MB	+/-	-.002**	1.18	.001	1.18	-.000	1.18
SEG	+	.150***	1.67	.123	1.63	.142***	1.67
FIS	+	.097*	2.21			.061	2.21
AUDC	+/-	.002	1.49			-.027	1.49
RES	+	.019	1.19			-.004	1.19
AUD	+	-.093	2.42	-.122	2.56	-.145**	2.42
Industry dummies		included		included		included	
Year dummies		included		included		included	
F			167.78		36.64		162.67
Prob > F			.000		.000		.000
Adj R^2			89.58		65.44		89.33

Note: *, ** and *** indicate significance at the 10%, 5% and 1% level respectively (2-tailed).

Variable definition:

Dependent Variables

AF = Natural logarithm of audit fees,

NAF = Natural logarithm of non-audit fees,

TF = Natural logarithm of total fees,

Main Variables

VICE = Sinful social and environmental performance measure, defined based on CSR concerns derived by KLD STATS,

POL = Political norms measure. Dummy variable equal to 1 if the firm's headquarters is located in a county where Republicans won the popular vote, and 0 otherwise,

REL = Religiosity measure. Number of congregations in the county in which the firm is headquartered, as reported by the Religious Congregations and Membership Study (RCMS), divided by the total county population as per the US Census, times 1,000,

Control Variables

LIT = Dummy coded 1 if a firm has material legal proceedings, 0 otherwise,

SIZE = Natural logarithm of total assets,

$EXP_{AF(NAF;TF)}$ = Dummy coded 1 if an auditor's industry share for audit (AF), non-audit (NAF) and total fees (TF) is ranked number one, 0 otherwise,

CUR = Current ratio, measured as the ratio of current assets to current liabilities,

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MB = Market to book value of equity,

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FIS = Dummy coded 1 if fiscal year end is in December, 0 otherwise,

AUDC = Dummy coded 1 if the auditor changed compared to prior year, 0 otherwise,

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