

CEO 聲譽與審計費用

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摘要：過去文獻建議聲譽效應有助於減少代理問題，促使公司維持高財報品質。本文進一步探討 CEO 聲譽與審計費用之關聯性。研究結果顯示，CEO 的聲譽與審計公費呈現負相關。此發現與會計師對 CEO 聲譽的認知會影響其風險評估進而調整審計程序的觀點一致。本文實證分析顯示 CEO 的聲譽可能為審計定價決策的相關因素之一，此發現增加了我們對 CEO 聲譽的經濟意義的瞭解。與先前文獻一致，本研究顯示 CEO 聲譽能做為公司治理機制的輔助，更進而影響審計費用。整體而言，我們的發現對管理階層、董事會、會計師及所有利益相關者提供了實務上的啟發。

關鍵詞：CEO 聲譽、審計費用

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CEO Reputation and Audit Fees

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Abstract: Prior research suggests that the reputation helps reduce agency problems so as to motivate companies to maintain high quality of their financial reports. Thus, this study is attempted to examine the association between CEO reputation and audit fees. The research results show that CEO reputation is negatively associated with audit fees, which is consistent with the notion that the auditor's perception of CEO reputation affects their assessments of the audit risk and accordingly they make audit procedures adjustments. The finding suggest that CEO reputation is perhaps one of the determinants of audit pricing decisions, and help us understand the economic significance of CEO reputation. The research is consistent with the prior studies which suggest CEO reputation as a complement of corporate governance mechanisms, has an effect on audit fees.

Keywords: CEO reputation, audit fees

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I. Introduction

A number of researchers have investigated various determinants of audit fees, which are expected to affect either the auditor's effort or litigation risk (e.g., Simunic, 1980; Hay, Knechel, and Wong, 2006; Causholli, De Martinis, Hay, and Knechel, 2010; Jha and Chen, 2015). A stream of the literature on audit fees examines the possible impact of characteristics of top management on audit fees. In the current study, we examine whether CEO reputation is associated with audit fees.¹ Prior studies demonstrate that reputation effect, at the company level, helps to reduce agency problems and motivate companies to provide high reporting quality (Cao, Myers, and Omer, 2012). At the individual level, reputation concerns exert a significant influence on CEOs' financial reporting decisions (Graham, Harvey, and Rajgopal, 2005). Some argue that more reputed CEOs are more likely to be associated with better discretionary earnings quality because they have more to lose (i.e., in consideration of credibility and future wages), and others argue that those CEOs may reply on earnings management to maintain their reputation. While numerous studies investigate the effects of reputation on the actions of various parties (i.e., including mixed results on the association between company/CEO reputation and financial reporting quality), there is little evidence about the perceived value of CEO reputation to external auditors in terms of pricing. Our study fill that void by examining whether and how individual CEO reputation affect auditors' decision process of audit fees.

Prior research investigates whether and how managerial characteristics (i.e., personal traits, tenure, financial expertise, social capital, credibility) affect earnings quality and the reliability of financial reporting (e.g., Butz and Lewis, 1996; Sundaram and Yermack, 2007; Francis, Huang, Rajgopal, and Zang, 2008; Matsunaga, Wang, and Yeung, 2013; Jha and Chen, 2015; Liang, Marinovic, and Varas, 2018). Those studies are mostly based on upper echelons theory that suggests that CEOs have a strong influence on ethical cultures in organizations, which affect the firms' earnings management (Hambrick and Mason, 1984). Expanding the literature, the current study examines the association between CEO reputation and audit fees based on the following arguments. A reputation perspective suggests that a reputed CEO is likely to strategically protect his or her established reputation and has less incentive to engage in

¹ We examine the reputation of the chief executive officers (CEOs) based on Francis et al. (2008) assumption that the CEO position is the top ranking position in the firm.

misconduct. Studies also find that perceived management integrity influences auditor's audit planning and preliminary risk assessments (Kizirian, Mayhew, and Sneathen, 2005; Okoye, Okafor, and Ijeoma, 2009; Kassem, 2018). As management integrity is difficult to observe, auditors may base on their perception of CEO reputation to assess the audit engagement risk and adjust their audit procedures accordingly. Therefore, when the CEO has a higher reputation and is perceived to provide more credible financial reports, the auditor is more likely to place greater reliance on internal controls and perform fewer substantive tests to reduce their effort, which subsequently leads to a lower audit fee. Alternatively, some studies suggest a positive association between CEO reputation and audit fees by arguing that reputed CEOs rely on earnings management to maintain their reputation (Malmendier and Tate, 2007), which could possibly result in higher audit risk and, consequently, higher audit fees. As a result, this study aims to investigate and provide empirical evidence on the link between CEO reputation and audit fees.

We construct our sample by first identifying the CEO of S&P 500 companies over the five-year period 2012-2016. Next, for each CEO-year, we hand-collect the news articles containing the CEO's name and company affiliation to create our proxy for CEO reputation, which is measured as the tone of the news about each CEO in a given year. After we eliminate observations with CEO changes during the sample year and observations with missing data, the final sample consists of 115 CEO-year observations. The result of the multivariate regression indicates that CEO reputation is negatively associated with audit fees, i.e., an increase in news tone of one standard deviation leads to a decrease in audit fees by 5.2 per cent, *ceteris paribus*. The finding is consistent with an efficient contracting perspective, suggesting that a firm managed by a more-reputed CEO, presumptively through an improvement in the auditor's perception of trustworthiness of financial reporting process, pays lower audit fees.

It is worth to note that our paper is different from two related studies. Cao et al. (2012) examine and find a positive association between *company* reputation and financial reporting quality. They also note that *company* reputation is positively associated with audit fees, suggesting that a firm's reputation concerns drive its demand for a high quality audit. Our results are not comparable with theirs because they measure *company* reputation using the scores from Fortune's Most Admired Companies List, rather than *CEO* reputation using the tone of the press articles. The second study is Francis et al. (2008) that examines the association between earnings quality and CEO reputation, as proxied for by media coverage. They find that more reputed CEOs are associated with poorer earnings quality, which can be explained by a matching

hypothesis suggesting that a firm with inherently poor earnings quality is likely to select a reputed CEO. The inferences drawn from their results may not apply to our study due to the following two reasons. First, we use media tone, rather than media coverage, to proxy for CEO reputation. In particular, the result from our univariate analysis indicates that media coverage is negatively correlated with media tone, which is inconsistent with that of Francis et al. (2008, p.120) indicating that “media coverage is overwhelmingly neutral to positive with respect to the CEO.” Jensen (1979) argues that the media is expected to report news stories that are more sensational and interesting to the public. Therefore, our finding might be more consistent with the intuition that negative news is more pervasive than good ones, and echoes the newsroom adage “If it bleeds, it leads.” Second, our sample excludes all company observations with CEO turnover during the sample period. The exclusion of these companies from our study could, to some degree, help to mitigate the endogenous concern that a firm selects a more-reputed CEO due to its poor earnings quality.

Our study contributes to the literature on the impacts of CEO reputation and the determinants of audit fees. We explicitly examine the economic effect of a managerial human capital dimension. Specifically, the result suggests that high CEO reputation may lead to lower engagement risk, as perceived by auditors, and thus create value for a firm through savings in audit fees. Our finding enhances the understanding of the economically meaningful aspects of the CEO’s reputation in terms of audit pricing. Moreover, this study extends prior research regarding the assessment of management integrity. Prior studies suggest that management integrity is associated with financial reporting aggressiveness (Patelli and Pedrini, 2015) and influences the auditor’s risk assessment and audit planning (Kizirian et al., 2005). Our finding complements theirs by providing empirical evidence that the CEO reputation assessment affects auditors’ audit planning (i.e., increasing audit fees). Finally, while the majority of the studies employing content analysis examine financial narrative disclosures, we investigate the tone of the press articles. Our finding echoes Debreceny’s (2015) argument that exploration of social media would provide auditors with meaningful insights on corporations for engagement planning and risk management. Overall, the study enhances the understanding that auditors consider CEOs’ reputation a relevant factor in audit pricing decisions and provides relevant practical implications for auditors, management, board of directors, and stakeholders. Auditors have widely used textual analysis in the auditing process, and our study further suggests that the auditors employ lexical methodologies to assess tone at the top in the pre-engagement activities, given that it could be difficult for auditors to assess management integrity when accepting a

new client. CEOs should be aware of the impact of social media on their managerial human capital and career development, and a firm's board of directors should consider the reputation of candidates a critical factor in its CEO hiring decision as the new CEO's appointment is likely to be a signal to the auditor and the market. As for investors, our results may provide new insight to help them incorporate audit fee information into their assessments of the firm. Moreover, a practical implication is that investors and other market participants could use social media, in addition to mandatory or discretionary financial disclosure, as a possible source of differential information regarding top management attributes that are relevant to their investment decisions.

The paper proceeds as follows. Section 2 provides a literature review and develops our research hypothesis. Section 3 describes the research design, measurement choices, and the sample selection. The empirical finding on the link between CEO reputation and audit fees is presented in Section 4. Section 5 concludes.

II. Literature Review and Hypothesis Development

The Impact of CEO Characteristics

Literatures on organizational theory, finance, and economics have examined the effects of managerial characteristics on firms' decisions, behavior, and performance (e.g., Bertrand and Schoar, 2003; Richardson, Tuna, and Wysocki, 2005; Malmendier and Tate, 2007). The accounting literature also investigates whether managerial characteristics have an impact on financial reporting quality. For example, studies find a significant association between firms' earnings quality and characteristics of CEOs, such as age (e.g., Sundaram and Yermack, 2007), gender (e.g., Butz and Lewis, 1996), tenure with the firm and prior position (Francis et al., 2008), functional expertise (Matsunaga et al., 2013), external connections (Bhandari, Mammadov, Shelton, and Thevenot, 2018), and narcissism (Bamber, Jiang, and Wang, 2010). Given that managerial characteristics are possible determinants of reporting and earnings quality that in turns affects audit risk, the auditing literature examines how CEO characteristics influence auditors' pricing decisions. For example, Kalelkar and Khan (2016) argue that the financial background of CEOs mitigates the risk of firm failure (i.e., reduces business risk) and improves the quality of financial reporting (i.e., reduces audit engagement risk). They predict and find that the financial expertise of a CEO is negatively associated with audit fees. Judd, Olsen, and Stekelberg (2017), examining personal traits of CEOs, propose that a narcissistic CEO is likely to pose greater inherent risk and control risk and thus reflects greater audit risk. As an auditor should

expend more effort to reduce this risk to an acceptable level, the authors predict and find a positive association between CEO narcissism and external audit fees. Similarly, studies find that CEO's overconfidence (Hribar, Kim, Wilson, and Yang, 2012) and gender and ethnicity (Harjoto, Laksmana, and Lee, 2015) are associated with audit fees. From a social-capital perspective, Bhandari et al. (2018) suggest that CEOs with high social capital have strong incentives to produce high-quality financial reports and are willing to pay more for high-quality audit services. Their results indicate that a CEO with more social network connections engages in less earnings management (as measured by discretionary accruals), has lower probabilities of financial statement restatements and material internal control weaknesses, and purchases more audit services that lead to higher audit fees and higher audit quality. An implication from their findings is the importance of CEOs' reputational capital in the labor market. In the same vein, a number of studies investigate the effect of reputation. As the focal point of our study is CEO reputation, a brief review of the literature on reputation is provided below.

Reputation

Reputation effect refers to the notion that reputation-building behavior affects players' actions (Weigelt and Camerer, 1988). Research on reputation effect suggests that business professionals concern about their own reputation because their past actions (perceived reputation) may influence other people's decision making process. Some studies in this stream indicate that financial analysts, corporate directors, and auditors behave in ways protecting their reputations and aiming for long-term benefits (e.g., Larcker and Richardson, 2004; Jackson, 2005; Cowen, Groysberg, and Healy, 2006; Jo, Kim, and Park, 2007; Fang and Yasuda, 2009). Other studies investigate the reputation effect for corporations and executives. At the organizational level, researchers examine the effect of company reputation on company valuation (Anderson and Smith, 2006), debt and equity costs (Siegel, 2005), and financial reporting (Cao et al., 2012). For example, Cao et al. (2012) find that higher-reputation companies, as measured by scores obtained from *Fortune's* Most Admired Companies List, report less extreme discretionary accruals on average and are less likely to misstate their financial statements. More closely related to our study is that they also find companies with higher-reputation pay higher audit fees. The authors suggest that those companies are willing to pay for more audit services in order to protect their financial reporting quality and reputations.

At the executive level, Fich (2005) suggests that CEOs with strong performance (i.e., better perceived reputation) are more likely to obtain additional directorships from firms with growth opportunities. In addition, Milbourn (2003) investigates the relationship between stock-based compensation and CEO reputation, using four reputation proxies, including CEO tenure, the number of business articles containing the CEO's name, outside CEO appointment, and CEO performance (i.e., industry-adjusted stock price) during the tenure. His results suggest that CEO reputation, as a signal of the executive's ability, is a critical determinant of the stock-based pay-sensitivities awarded to CEOs. Similarly, Rajgopal, Shevlin, and Zamora (2006), using the number of press articles citing CEOs as a proxy for their talent (i.e., perceived reputation), find that compensation of talented CEOs is subject to less relative performance evaluation. In addition, Francis et al. (2008) examine the relationship between CEO reputation and earnings quality. Specifically, the authors use the number of press coverage as a measure of the CEO's reputation and find that reputed CEOs are associated with lower discretionary earnings quality and poorer total earnings quality. They further provide a 'matching' explanation, suggesting that companies with poor earnings quality seek out more reputed CEOs for their superior skills and talents in an effort to improve the companies' financial reporting quality.

A number of studies using data from Taiwan or China examine the association between corporate behavior (i.e., earnings management, corporate social responsibility, corporate misconduct, financial performance, R&D investments) and the CEO characteristics, including compensation structure (Duh, Chen, and Huang, 2019), duality (Lee and Liao, 2004), career horizon (Lee, Wu, and Lee, 2018), overconfidence (Hung, Wang, Li, Chen, and Chang, 2013), and dominance (Hsu, Chan, and Huang, 2016). The most relevant study is the one conducted by Yeh and Lin (2018) examining the association between CEO reputation and financial reporting credibility by using a sample of 303 incumbent CEOs from Taiwanese listed electronics firms.² They find that reputed CEOs produce higher earnings quality and that such positive effect persists in family firms as the CEOs of those firms usually have close ties with the controlling family and thus have strong incentive to protect the longevity and reputation of the family.

Development of Hypothesis

² We note that there are several Taiwanese masters' theses examining the impact of CEO reputation on firm performance and market consequences (e.g., Hsu, 2012; Lin, 2016).

Upper echelons theory predicts that the individual characteristics of the top management of a firm affect its organizational choices and performance. Consistent with this notion, many believe that CEOs have a strong influence on ethical climate in organizations, which can consequently affect the firms' earnings management and the auditors' assessments of audit engagement risk and the possibility of litigation. As previously discussed, studies provide empirical evidence that CEO characteristics, including reputation - the focus of our study, are associated with firms' performance and financial reporting quality. Economic theory also suggests that reputation effect can help to reduce agency problems (e.g., Fama, 1980; Schwartz, Young, and Zvinakis, 2000). A CEO with reputation concerns, due to the fear of negative labor market consequences associated with low-quality financial reports, is more likely to act strategically to protect his or her reputation, less likely to engage in misconduct, and has a stronger incentive to maintain a better accounting system. This argument is consistent with an efficient contracting perspective that suggests that the manager will choose accounting methods to minimize agency costs amongst the various parties to the firm, which, as a result, maximize the value of the firm (Holthausen, 1990). In a reputation context, this perspective implies that firms managed by reputed CEOs are more likely to have better discretionary quality reporting (Francis et al., 2008). Following this stream of argument and consistent with prior studies, we predict that the CEO's reputation concern is a driver of the credibility of financial reports (Cao et al., 2012; Liang et al., 2018).

Audit fees are a function of the auditor's effort and litigation risk (Simunic, 1980); that is, auditors will charge a higher fee when they expend more effort to reduce audit risk or perceive a higher probability of lawsuit. The auditing standards (SAS 99, AICPA, 2002; ISA 240, IAASB 2009) require auditors to evaluate management integrity as part of their audit planning process (Kassem, 2018). As assessing management integrity is an integral part of audits, the credibility of management should affect auditors' decision in exerting effort in auditing and thus influence audit fees (e.g., Beaulieu, 2001; Jha and Chen, 2015). Okoye et al. (2009) indicate that the evaluation of management integrity is a critical part of developing an opinion on the fair presentation of financial statements. As a result, auditors should consider the assessment of management integrity the most important factor in evaluating engagement risk (Ethridge, Marsh, and Canfield, 2007) and in making budget decisions (Blaskovich and Mintchik, 2007). However, management integrity is difficult to observe or measure. Auditors' perceptions of CEO integrity and reputation thus play an important role in

determining the nature and extent of their audit procedures. It is expected that when the CEO has a higher reputation, the auditor is more likely to trust the client and thus place greater reliance on internal controls and perform fewer substantive tests to reduce their effort that subsequently leads to a lower audit fee. Likewise, less-reputed CEOs are perceived to provide lower credibility of financial reporting and thus the auditor may exert more effort in performing substantive procedures for those companies than companies with highly-reputed CEOs. An alternative matching perspective proposed by Francis et al. (2008) suggests that a CEO with lower reputation may seek out a high-quality auditor, with an expectation that the auditor can help the company to establish or restore the credibility of financial statements. Taken together, the above arguments suggest a negative relationship between CEOs' reputation and audit fees because firms with less-reputed CEOs pay higher audit fees as (1) their auditors exert more effort to reduce audit engagement risk or charge more fees to cover expected losses due to litigations or (2) the firms hire high-quality auditors with the expectation that those auditors can help to provide higher reporting quality and to increase the credibility of financial statements. This expectation is consistent with the argument of Chen, Lin, and Yang (2015) that corporate governance is associated with audit fees. Using the data from Taiwan, the authors find that firms with poor corporate governance are likely to pay higher audit fees.

Nevertheless, some studies propose a positive relationship based on different perspectives. A rent extraction perspective suggests that reputed CEOs who emphasize on career enhancement are more likely to manipulate earnings (Francis et al., 2008) because they are motivated to meet performance expectations (Malmendier and Tate, 2007). As those CEOs might become entrenched and more risk seeking (e.g., more discretions in financial reporting), auditors are likely to charge higher fees to compensate for the increased engagement risk. A matching perspective suggests that a firm that has poor earnings quality requires superior skills and talents of managers and thus will seek out more reputed CEOs. Similarly, Chakravarthy, DeHaan, and Rajgopal (2014) find evidence that companies adopt reputation repair strategies after a significant loss of reputation (i.e., accounting restatements). Those arguments suggest that a higher audit fee could still be observed even when the CEO has higher reputation. Alternatively, Cao et al. (2012) suggest that companies with higher-reputation are willing to pay for more audit services in order to protect their financial reporting quality and reputations. Based on the same notion, it is likely that reputed CEOs have greater incentives to protect their reputations and are thus willing to pay for more audit

services. Collectively, those arguments contradictorily suggest a positive relationship between CEO reputation and audit fees. Therefore, it is still an empirical question how CEO reputation is associated with audit fees, and we state our non-directional hypothesis as follows:

H: CEO reputation is associated with audit fees, all else equal.

III. Research Design

Empirical Model

We test our hypothesis using the following multivariate regression in which the dependent variable is the natural logarithm of the audit fees, $LNAF$, charged by the auditor for a subsequent year, $t+1$. All other variables are as defined below and in the appendix.

$$\begin{aligned}
 LNAF_{it+1} = & \mu_0 + \mu_1 TONE_{it} + \mu_2 NEWS_{it} + \mu_3 TONE_IND_{it} + \mu_4 NEWS_IND_{it} \\
 & + \mu_5 SIZE_{it+1} + \mu_6 INVREC_{it+1} + \mu_7 SUBS_{it+1} + \mu_8 RET_{it+1} + \mu_9 LEV_{it+1} \\
 & + \mu_{10} LOSS_{it+1} + \mu_{11} MERGER_{it+1} + \mu_{12} INDDIR_{it+1} + \mu_{13} BODMEET_{it+1} \\
 & + \mu_{14} INSTOWN_{it+1} + \mu_{15} INDSPEC_{it+1} + \mu_{16} NEWAUD_{it+1} \\
 & + \mu_{17} LNNAF_{it+1} + \varepsilon_{it}
 \end{aligned} \tag{1}$$

The key variable of interest is $TONE$, a proxy for CEO reputation, measured as the tone of the news about each CEO for a given year. A number of accounting and finance studies have examined the economic impact of tone of 10-Q and 10-K filings, quarterly earnings releases, conference calls, and equity analysts' reports (e.g., Li, 2010; Davis and Tama-Sweet, 2012; Mayew, Sethuraman, and Venkatachalam, 2014; De Franco, Hope, Vyas, and Zhou, 2015; Law and Mills, 2015; Frankel, Jennings, and Lee, 2016; Henry and Leone, 2016). Following a similar approach, the current study measures the tone of news using a form of content analysis that relies on pre-specified positive and negative emotion word lists (Pennebaker, Boyd, Jordan, and Blackburn, 2015). The tone of the news can be used as a proxy for CEO reputation for two reasons. First, the media, as a type of intermediary, credibly disseminates aggregated information to the public. It can play a key role in the diffusion of information and thus shapes the reputation of CEOs (e.g., Dyck and Zingales, 2002). Second, the media is likely to fill the watchdog role for firms with a large public following and a rich information environment (Miller, 2006). The readers reply on this reporting to form opinions and perceptions, particularly when the information sources deem to be accurate and reliable. Therefore, we believe that it is appropriate to proxy for the reputation of S&P 500

CEOs using a media tone measure, which is calculated based on several major U.S. and international newspapers as listed in the next section. Our measure of news tone is a composite variable including both positive and negative emotion dimensions, which is calculated based on the algorithms within Linguistic Inquiry and Word Count (LIWC).³ Specifically, LIWC counts the number of positive and negative emotion words using built-in dictionaries and then calculates the emotional positivity index as the difference between the scores for positive and negative words, i.e., (positive words – negative words) / total words (Cohn, Mehl, and Pennebaker, 2004). Studies validate that LIWC ratings of positive and negative emotion words correspond with human ratings of the writing excerpts (Alpers, Winzelberg, Classen, Roberts, Dev, Koopman, and Taylor, 2005; Kahn, Tobin, Massey, and Anderson, 2007; Tausczik and Pennebaker, 2010) – positive (negative) emotion words are used in writing about a positive (negative) event. Our variable, *TONE*, represents a standardized score that is converted from the emotional positivity score into percentiles ranging from 0 to 100: the higher the score, the more positive the tone.⁴ We expect that a positive tone in media articles reflects high CEO reputation and thus is negatively associated audit fees.

We further include *NEWS* in the model as Francis et al. (2008) suggest that greater media coverage is associated with earnings quality, which then possibly affects audit fees. *NEWS* is measured as the natural logarithm of the number of press articles citing the CEO. In addition, we control for the industry and year fixed effects of tone and news by including *TONE_IND* and *NEWS_IND* in the model. *TONE_IND* (*NEWS_IND*) is measured as the median tone (the natural logarithm of the median news counts plus one) within a firm's industry for a given year, where industry is defined by 2-digit SIC. We do not make predictions for these control variables.

Based on prior studies, we include several controls for firm and auditor characteristics that potentially influence audit fees (e.g., Simunic, 1980; Ashton, Willingham, and Elliott, 1987; Summers and Sweeney, 1998; Chang and Tsao, 2005; Abbott, Parker, and Peters, 2006; Hay et al., 2006; Jha and Chen, 2015; Kalelkar and

³ The LIWC program includes a text analysis module created in the Java programming language, which reads and counts the occurrences of words in a computer-readable text against a user-defined dictionary. Because evidence suggests that the Diction software word lists inaccurately assess the tone of financial documents (Loughran and McDonald, 2016), we do not use the Diction software or word lists in our analysis.

⁴ Based on published findings from clinical lab research, *TONE* is calculated as a single summary variable converted into percentiles after standardizing the scores from larger samples of texts. A score of 100 in emotional tone would mean the tone is maximally upbeat and positive; a score below 50 suggests a more negative emotional tone (Cohn et al., 2004; Pennebaker et al., 2015).

Khan, 2016; Mitra, Jaggi, and Al-Hayale, 2019). Company size and complexity increase audit effort and are expected to be positively associated with audit fees. We control for company size (*SIZE*; measured as a logarithm of total assets) and two complexity variables, including the ratio of accounts receivable and inventories to total assets (*INVREC*) and the number of business segments (*SUBS*; measured as the square root of the number of consolidated subsidiaries). A number of studies also suggest that the firms' financial condition, performance, and stock price return affect audit fees. We expect that stock returns (*RET*) is negatively related to audit fees (e.g., Huang, Parker, Yan, and Lin, 2014) and include this variable in the model. In addition, more profitable companies are less risky and thus are expected to pay less audit fees (e.g., Seetharaman, Gul, and Lynn, 2002; Ashbaugh, LaFond, and Mayhew, 2003). As a result, we predict a positive relationship between audit fees and business risk (e.g., O'Keefe, Simunic, and Stein, 1994; Simunic and Stein, 1996) and control for leverage (*LEV*) and loss (*LOSS*). *LEV* represents a firm's financial structure and debt level and is measured as total debt divided by total assets, and *LOSS* is an indicator variable equal to 1 if the client has experienced a loss in at least two of the prior three years, and 0 otherwise. Following Ashbaugh et al. (2003) and Kinney, Palmrose, and Scholz (2004), we expect a positive association between audit fees and mergers and acquisitions (*MERGER*), which is measured as an indicator variable that equals 1 if the firm has engaged in a merger or acquisition in year *t*, and 0 otherwise. Prior studies also suggest the association between audit fees and corporate governance mechanisms but provide mixed results (e.g., Klein, 2002; Velury, Reisch, and O'reilly, 2003; Hay et al., 2006; Bliss, 2011). Therefore, we control for board independence (*INDDIR*) and number of meeting (*BODMEET*) with no prediction on the sign of the variable coefficient. *INDDIR* is measured as the percentage of independent directors on the board, and *BODMEET* is measured as the number of board meeting. We further control for institutional ownership (*INSTOWN*), which is measured as the percentage of shares owned by institutional investors. While studies suggest that the level of institutional ownership is positively associated with audit quality and thus negatively associated with audit fees (e.g., Chen, Dong, and Lin, 2017), institutional shareholders may demand for stronger monitoring of executive management (Sharma, 2004) and require greater audit effort, which leads to higher audit fees (e.g., Mitra, Hossain, and Deis, 2007). Therefore, we make no prediction on the coefficient of *INSTOWN*. Moreover, we include auditor industry specialization (*INDSPEC*) and new auditor (*NEWAUD*) to control for the effect of auditor characteristics on audit fees. *INDSPEC*, measured as audit firm's industry market share

based on total sales audited, is expected to be positively associated with audit fees (e.g., Craswell, Francis, and Taylor, 1995; Ferguson, Francis, and Stokes, 2003; Mayhew and Wilkins, 2003). *NEWAUD* is an indicator variable set to 1 if the auditor is within the first three years of tenure with the client, and 0 otherwise. We make no prediction for *NEWAUD* because while some studies support a ‘low-balling’ model of behavior (e.g., Charles, Glover, and Sharp, 2010; Huang et al., 2014), others suggest that fee reductions (i.e., initial discount) varies according to the type of auditor change (voluntary vs. involuntary) and whether the switch is between big six audit firms (Gregory and Collier, 1996). Lastly, we control for non-audit fees, *LNNAF*, measured as the natural logarithm of non-audit fees. Based on the findings in prior literature (e.g., Craswell and Francis, 1999; Francis, Reichelt, and Wang, 2005), we expect a positive coefficient on *LNNAF*.

Sample Selection

Following Francis et al. (2008), we construct our sample by employing the ExecuComp database to identify the CEO of all S&P 500 companies over the five-year period 2012-2016. As the CEO position is assumed to be the top ranking position in the firm, we exclude individuals holding the positions as president, chief operating officer, or chair of the board when a CEO is identified;⁵ we further remove CEOs of subsidiaries and divisions from the sample. Huang et al. (2014) indicate that CEO turnover could lead to higher audit prices; as a result, we use the Audit Analytics database and the ExecuComp databases to identify and then eliminate firms with CEO changes during the sample period. For CEO turnover not covered by ExecuComp, we hand collect this information from firm disclosures filed with the Securities and Exchange Commission (SEC) through the EDGAR system. Lastly, we exclude financial firms (SIC code = 6000-6999) because of their unique characteristics and relatively unclear motivation for earnings management (Reitenga, Buchheit, Yin, and Baker, 2002). Our CEO sample consists of 820 firm-year observations, representing 164 firms.⁶

For each CEO-year, we hand-collect the news articles containing the CEO’s name and company affiliation. We limit our news search to several major U.S. and

⁵ If a CEO holds one or more of those positions, we still retain the named CEO in the sample.

⁶ Kaplan and Minton (2012) indicate that CEO turnover that has been increasing since 1992 is about 16.8% in 2000s, implying an average tenure of less than 6 years. In the current study, we exclude a firm from our sample if it has CEO turnover in any given year during the sample period. Given that CEO turnover rate is high, our sample size, while relatively small as compared to that of prior studies, is reasonable.

international newspapers, including *Wall Street Journal*, *New York Times*, *Washington Post*, *USA Today*, and *Financial Times*. To identify news articles related to the CEOs in our sample, we search the full text of articles on the U.S. Newstream database. Following Milbourn (2003) and Francis et al. (2008), our text search uses both the CEO's full name and company name, and we only include an article once, regardless of how many times the CEO's name appears in the article.⁷ We eliminate 490 observations for firms without any news articles regarding CEOs for five consecutive years and 90 observations with year-end other than December 31. Finally, we eliminate 125 observations that lack Audit Analytics, Compustat, and Datastream data items necessary to calculate variables in our audit fee model. Our final sample consists of 115 CEO-year observations for our main analysis. Panel A, Table 1 describes our sample selection procedures, and Panel B provides an industry breakdown of the sample. The majority of our sample is from the chemical products industry (21 percent), followed by the industries of business services (11 percent) and scientific instruments (10 percent).

IV. Empirical Results

Descriptive Statistics and Correlation Analyses

Table 2 presents descriptive statistics. The mean audit fee (non-audit fees) for firm-year observations is \$15.14 (\$3.89) million. Tone scores average 48.11 and range from 17.23 to 92.71 (untabulated), suggesting considerable variation in the CEO reputation measure. Average *NEWS* equals 0.98, indicating that CEOs averagely received 2.7 mentions in the press. The summary statistics of the firm-level variables suggest that the sample firms are large (average total assets is \$54,921 million and average square root of the number of consolidated subsidiaries is 11.45) and only five percent of observations report a loss in at least two of the prior three years. During the sample period, the companies averagely have 21 percent of total assets in receivables and inventory, a stock return of 16 percent, and a leverage ratio of 24 percent. About 22 percent of companies engage in mergers and acquisitions and 12 percent of companies change auditors in the year of observation. Regarding corporate governance variables, 87 percent of board members are independent and the board averagely meets 8.21 times. In addition, 43 percent of company shares are owned by institutional investors.

⁷ As suggested by Francis et al. (2008), we use the CEO names reported in ExecuComp as a starting point. In the subsequent search, we search for shortened names and common nicknames (e.g., Bill for William; Jack for John) to avoid understating the press coverage variables and also require a concurrent reference to the company name to avoid overstating the press coverage counts potentially associated with common names, such as Smith.

All the continuous variables in the model are winsorized at the 1st and the 99th percentiles to mitigate the possible effects from outliers. Table 3 reports the pairwise correlations between the variables in our model. The correlation of -0.042 between *LNAF* and *TONE* is negative but not significant. In addition, audit fees (*LNAF*) are positively correlated with nine of our control variables. The results are partially consistent with the expectation that company size, complexity, leverage, and mergers and acquisitions increase audit effort and thus audit fees. We also note that *TONE* is negatively correlated with *NEWS* ($r=-0.251$) at the significance level of 1%, suggesting that media coverage is likely to be negative with respect to the CEO. This finding is consistent with the saying - “no news is good news.”

Test of Hypothesis

We examine whether CEO reputation is associated with audit fees. Table 4 presents the results from the multivariate regression analysis summarized in Equation (1). The dependent variable is the natural logarithm of the audit fees, and the independent variable of interest is *TONE* with a higher score indicating greater overall emotional positivity. The coefficient on *TONE* is -0.005 and significant ($p < 0.05$), consistent with our hypothesis that firms with CEO of higher reputation pay lower audit fees, *ceteris paribus*.⁸ We further note that the coefficient on *NEWS* is negative but not significant, suggesting that while controlling for *NEWS*, *TONE* is a more significant factor in our model in predicting audit fees. In addition, the coefficient signs of several control variables are consistent with our prediction. Specifically, company size (*SIZE*), business complexity (*INVREC* and *SUBS*), business risk as measured by a firm's debt level (*LEV*), and mergers and acquisitions (*MERGER*) are positively associated with audit fees. Lastly, non-audit fees (*LNNAF*) are, as expected, positively associated with audit fees. In an untabulated analysis, we note that our results remain unchanged when the industry and year fixed variables, instead of *TONE_IND* and *NEWS_IND*, are included in the model. Our audit fee model has an adjusted R^2 value of 86 percent, which is consistent with the R^2 range of 70-90 percent documented in the literature on the determinants of audit fees (Abbott, Parker, Peters, and Raghunandan, 2003; Abbott et al., 2006; Huang et al., 2014; Jha and Chen, 2015; Kalelkar and Khan, 2016).

⁸ In terms of the economic significance of the results, we calculate and note that a firm with a reputed CEO in the 75th percentile pays 4 percent less of the audit fees than does a firm with a reputed CEO in the 25th percentile and that an increase in news tone of one standard deviation leads to a decrease in audit fees by 5.2 percent.

TABLE 1 Sample Selection and Industry Distribution

Panel A: Sample selection process			
		Firm-Year Observation	
Available S&P 500 observations without CEO changes over the period 2012-2016, excluding banking and financial institutions (SIC 6000)		820	
Less: Observations missing news articles regarding CEOs		(490)	
Less: Observations with year-end other than December 31		(90)	
Less: Observations missing Audit Analytics /Compustat/ Datastream data		(125)	
Final Sample		115	
Panel B: Industry distribution			
Industry	Two-digit SIC codes	Frequency	Percentage
Metal mining	10	4	3.48
Oil and gas	13, 29	9	7.83
Heavy construction	16	4	3.48
Food products	20	8	6.96
Paper and allied products	26	4	3.48
Chemical products	28	24	20.87
Manufacturing	33	1	0.87
Electronic equipment	36	8	6.96
Transportation	37, 39, 45,47	10	8.70
Scientific instruments	38	12	10.43
Communications	48	4	3.48
Electric, gas, and sanitary services	49	4	3.48
Retail	59	4	3.48
Entertainment services	70, 78	6	5.22
Business services	73	13	11.30
Total		115	100.00

Panel A shows information on the sample selection criteria, and their effect on the sample size. Screens are presented in the order in which they are applied to the data. Panel B shows the industry breakdown by SIC codes.

TABLE 2 Descriptive Statistics

Variable	Mean	Std Dev	Q1	Median	Q3
<i>LNAF</i>	16.20	0.85	15.94	16.34	16.64
<i>Audit Fees (millions)</i>	15.14	14.36	8.34	12.53	16.88
<i>TONE</i>	48.11	10.63	41.88	50.00	50.00
<i>NEWS</i>	0.98	1.14	0.00	0.69	1.61
<i>TONE_IND</i>	48.93	2.61	50.00	50.00	50.00
<i>NEWS_IND</i>	0.58	0.73	0.00	0.41	0.92
<i>SIZE</i>	10.19	1.14	9.47	10.24	10.94
<i>Assets (millions)</i>	54,921	102,512	12,985	27,899	56,650
<i>INVREC</i>	0.21	0.11	0.13	0.20	0.27
<i>SUBS</i>	11.45	7.67	5.48	9.75	15.92
<i>RET</i>	0.16	0.44	-0.01	0.13	0.28
<i>LEV</i>	0.24	0.13	0.15	0.22	0.32
<i>LOSS</i>	0.05	0.22	0.00	0.00	0.00
<i>MERGER</i>	0.22	0.41	0.00	0.00	0.00
<i>INDDIR</i>	0.87	0.08	0.84	0.90	0.92
<i>BODMEET</i>	8.21	4.32	6.00	7.00	9.00
<i>INSTOWN</i>	0.43	1.41	0.06	0.10	0.22
<i>INDSPEC</i>	0.38	0.18	0.23	0.37	0.49
<i>NEWAUD</i>	0.12	0.33	0.00	0.00	0.00
<i>LNNAF</i>	14.55	1.51	14.02	14.91	15.37
<i>Non-Audit Fees (millions)</i>	3.89	4.08	1.22	2.98	4.72

This table reports descriptive statistics for the full sample of 115 firm-year observations for 2012–2016. All the variables are defined in Appendix.

TABLE 3 Pearson Correlations

Variable	LNAF	NEWS	TONE	NEWS_IND	TONE_IND	SIZE	LOSS	INVREC	SUBS	LEV	RET	INDDIR	BODMEET	NEWAUD	MERGER	INSTOWN	INSPEC		
NEWS	0.247 ^{***}																		
TONE	-0.042	-0.251 ^{***}																	
NEWS_IND	-0.008	0.476 ^{***}	-0.188 ^{**}																
TONE_IND	-0.029	-0.216 ^{**}	0.169 [*]	-0.599 ^{***}															
SIZE	0.785 ^{***}	0.406 ^{***}	-0.064	0.138	-0.113														
LOSS	-0.216 ^{**}	0.019	-0.038	0.142	-0.151	-0.117													
INVREC	0.211 ^{**}	-0.170	0.076	-0.017	-0.077	-0.236 ^{**}	-0.157												
SUBS	0.336 ^{***}	0.017	0.184 ^{**}	-0.148	0.201 ^{**}	0.130	-0.173 [*]	0.133											
LEV	0.263 ^{***}	0.008	-0.084	-0.028	-0.006	0.213 ^{**}	0.163 [*]	-0.122	0.078										
RET	-0.310 ^{***}	0.100	-0.009	0.115	0.122	-0.208 ^{**}	0.035	0.001	-0.159	-0.203 ^{**}									
INDDIR	0.374 ^{***}	-0.052	0.029	0.003	-0.108	0.263 ^{***}	-0.231 ^{**}	0.185 ^{**}	0.083	0.027	-0.210 ^{**}								
BODMEET	0.201 ^{**}	-0.133	0.005	-0.133	0.109	0.168 [*]	0.007	-0.026	0.073	0.341 ^{***}	-0.070	0.095							
NEWAUD	-0.023	-0.135	0.032	-0.040	0.133	-0.010	-0.087	-0.150	-0.035	0.296 ^{***}	0.154	-0.047	0.328 ^{***}						
MERGER	0.208 ^{**}	0.028	0.067	0.146	-0.075	0.105	0.066	0.161 [*]	0.008	0.041	-0.072	0.076	0.019	-0.003					
INSTOWN	0.084	0.082	0.177 [*]	-0.136	0.089	0.017	-0.026	0.043	0.038	0.101	-0.016	0.054	0.017	0.044	-0.006				
INSPEC	0.009	0.131	0.069	0.100	-0.215 ^{**}	0.206 ^{**}	0.084	-0.211 ^{**}	-0.279 ^{***}	-0.02	0.061	0.128	0.022	-0.154	-0.122	-0.061			
LNAF	0.645 ^{***}	0.181 [*]	-0.016	-0.115	0.075	0.503 ^{***}	-0.245 ^{***}	-0.031	0.317 ^{***}	0.125	-0.361 ^{***}	0.427 ^{***}	0.163 [*]	0.005	0.078	0.034	-0.092		

***, **, * denote significance at the 0.01, 0.05, and 0.10 level, respectively. All the variables are defined in Appendix.

TABLE 4 Audit Fees and CEO Reputation

Variable	Predicted Sign	Coefficient	<i>t</i> -stat	<i>p</i> -value
Intercept	?	7.675	8.211***	0.000
<i>TONE</i>	—	-0.005	-1.678**	0.048
<i>NEWS</i>	—	-0.013	-0.361	0.360
<i>TONE_IND</i>	?	0.012	0.734	0.768
<i>NEWS_IND</i>	?	-0.047	-0.772	0.221
<i>SIZE</i>	+	0.540	14.869***	0.000
<i>INVREC</i>	+	2.975	9.460***	0.000
<i>SUBS</i>	+	0.012	2.739***	0.004
<i>RET</i>	—	-0.082	-1.009	0.158
<i>LEV</i>	+	0.653	2.361***	0.010
<i>LOSS</i>	+	-0.028	-0.185	0.427
<i>MERGER</i>	+	0.131	1.704**	0.046
<i>INDDIR</i>	?	-0.126	-0.281	0.779
<i>BODMEET</i>	?	-0.002	-0.291	0.772
<i>INSTOWN</i>	?	0.024	1.040	0.301
<i>INSPEC</i>	+	0.166	0.806	0.211
<i>NEWAUD</i>	?	0.060	0.548	0.707
<i>LNNAF</i>	+	0.129	4.582***	0.000
<i>n</i>	115			
<i>R</i> ²	0.881			
Adj. <i>R</i> ²	0.860			
F-stat	42.144***			

***, **, * denote significance at the 0.01, 0.05, and 0.10 level, respectively, based on one (two)-tailed tests when a prediction is (is not) made. All the variables are defined in Appendix.

Additional Tests

Loughran and McDonald (2011) argue that word lists developed for other disciplines (i.e., Harvard Dictionary) substantially misclassify words when assessing tone in financial text. They thus create positive and negative word categories to assess tone in 10-Ks and believe their word lists better reflect tone in financial text. Specifically, their findings indicate significant relations between the word lists and numerous financial performance measures including 10K filing returns, trading volume, return volatility, and unexpected earnings. Nevertheless, the authors note that the nature of word usage is different across financial contexts and that whether their word categories hold for samples beyond 10-Ks is

a pending question. Therefore, we employ their dictionaries to explore and gauge the tone of the news articles as an additional supplemental analysis. Untabulated results indicated that the tone measure based on Loughran and McDonald (2011) is negatively, but not significantly, associated with audit fees. A possible explanation for the non-significant result is that "...a word categorization scheme derived for one discipline might not translate effectively into a discipline with its own dialect" (Loughran and McDonald, 2011, p. 35). That is, the Loughran and McDonald word lists are developed for the context of financial reporting, not that of news reporting, and thus may not be applicable for our news corpus. The potential measurement error may lead to a weak statistical power and an attenuation bias in parameter estimates. In addition, to lessen the concern for the potential effect of new auditor on audit fees, we re-estimate Equation (1) by dropping the observations where the firm has a new auditor ($NEWAUD = 1$). The untabulated results mainly remain unchanged and consistently suggest a significant, negative association between CEO reputation and audit fees (coefficient = -0.007; $t = -2.203$).

V. Discussions and Conclusion

The literature on audit fees widely supports the argument that auditors consider the risks of an audit in determining the audit price. From the supply side, we argue that perceived engagement risk is likely to be higher when auditors have less trust in management due to lower CEO reputation. The lack of trust can increase audit fees as the auditors may need to exert more effort to reduce potential audit risk. From the demand side, firms with less-reputed CEOs have motivation to hire high-quality auditors to signal for the reliability of financial statements. Therefore, those firms are likely to pay higher audit fees. In this study, we investigate the effect of CEO reputation on audit fees and find a negative association between CEO reputation and audit fees, suggesting that a firm with a reputed CEO, presumptively through an improved trustworthiness of financial reporting process as perceived by auditors, pays lower audit fees. Our finding is consistent with an efficient contracting perspective predicting that a firm managed by a reputed CEO produces good earnings quality, which reduces audit engagement risk and then audit fees. Furthermore, this study suggests that auditors may take CEO reputation into accounts in their pricing decisions. Understanding the determinants of audit fees is important as the pricing of audit services should reflect the auditor's assessments of the auditee, which can be informative to market participants.

Nevertheless, our study is subject to the several limitations. First, the result is susceptible to a concern about the validity of our reputation measure. The construct of

CEO reputation is multidimensional, and a direct empirical measure is less observable. While researchers have used various reputation proxies, including CEO tenure, media coverage, outside appointments, and stockholder returns (Milbourn, 2003; Francis et al., 2008), we use the tone of news to proxy for CEO reputation. An advantage of the tone measure is that it allows us to distinguish between news with positive tone (good news) and those with negative tone (bad news), which thus could be a more effective proxy to capture reputation as compared to the count of news articles. Still, as the accuracy of using a unidimensional measure to quantify CEO reputation is likely low, our findings are contingent upon the ability of the reputation proxy to capture the effects. Future studies might consider creating an aggregate or compound measure that is able to capture more dimensions of the construct of reputation. Second, the press media could engage in some degree of sensationalism in selecting CEOs to cover (Core, Guay, and Larcker, 2008) and is likely to tailor news stories to take a negative tone about CEOs that are out of favor with public opinion (Jensen, 1979). While the bias is toward negative tone, we do not believe that this bias would affect the inferences drawn from our analysis. Third, our inferences rely on a presumption that text analysis can capture linguistic tone through carefully developed dictionaries. Our measurement of tone is calculated by an automated text analysis tool using a ‘bag of words’ approach, in which automated counts of positive and negative words do not categorize combinations of words or phrases that may imply different meanings depending on context (Loughran and McDonald, 2016). While the LIWC dictionaries are generally considered well-developed and validated, future studies can employ other linguistic techniques (e.g., artificial intelligence and machine learning) in analyzing textual data. A related concern is that the noise of misclassification in the LIWC dictionaries might increase measurement error and thus reduce the explanatory power. To address this concern, we employ the Loughran and McDonald word lists in an additional test. However, we do not find evidence that the Loughran and McDonald measures outperform in the LIWC dictionaries. Lastly, the sample used in the study is relatively small and comprises relatively large firms. We exclude small firms due to their lack of media coverage (i.e., we are not able to generate the tone measures without press articles). We are aware that this exclusion may lead to a potential selection bias issue; thus our results should be interpreted with caution, and the findings may not be generalizable to a broader population. Future studies might examine all publicly traded companies, not limited to S&P 500, and expand their news search to include various social media platforms. Researchers in Taiwan could also examine whether CEO reputation affects the auditor’s perception of management integrity and what influences the auditor’s assessments of CEO reputation. Moreover, the current paper employs LIWC

investigating the tone of press articles in English, future studies could use different content analysis tools assessing syntactic, semantic, and textual features of financial disclosure, discretionary narrative disclosure, or news release in Chinese.

References

- Abbott, L. J., S. Parker, and G. F. Peters. 2006. Earnings management, litigation risk, and asymmetric audit fee responses. *Auditing: A Journal of Practice & Theory* 25 (1): 85-98.
- Abbott, L. J., S. Parker, G. F. Peters, and K. Raghunandan. 2003. The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory* 22 (2): 17-32.
- Alpers, G. W., A. J. Winzelberg, C. Classen, H. Roberts, P. Dev, C. Koopman, and C. B. Taylor. 2005. Evaluation of computerized text analysis in an internet breast cancer support group. *Computers in Human Behavior* 21 (2): 361-376.
- American Institute of Certified Public Accountants (AICPA). 2002. Consideration of fraud in a financial statement audit. *Statement on Auditing Standards No. 99 (SAS 99)*. New York, NY: AICPA.
- Anderson, J., and G. Smith. 2006. A great company can be a great investment. *Financial Analysts Journal* 62 (4): 86-93.
- Ashbaugh, H., R. LaFond, and B. W. Mayhew. 2003. Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review* 78 (3): 611-639.
- Ashton, R. H., J. J. Willingham, and R. K. Elliott. 1987. An empirical analysis of audit delay. *Journal of Accounting Research* 25 (2): 275-292.
- Bamber, L. S., J. Jiang, and I. Y. Wang. 2010. What's my style? The influence of top managers on voluntary corporate financial disclosure. *The Accounting Review* 85 (4): 1131-1162.
- Beaulieu, P. R. 2001. The effects of judgments of new clients' integrity upon risk judgments, audit evidence, and fees. *Auditing: A Journal of Practice & Theory* 20 (2): 85-99.
- Bertrand, M., and A. Schoar. 2003. Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics* 118 (4): 1169-1208.
- Bhandari, A., B. Mammadov, A. Shelton, and M. Thevenot. 2018. It is not only what you know, it is also who you know: CEO network connections and financial reporting quality. *Auditing: A Journal of Practice & Theory* 37 (2): 27-50.
- Blaskovich, J., and N. Mintchik. 2007. Post-Sarbanes-Oxley audit planning. *The CPA Journal* 77 (10): 30-33.
- Bliss, M. A. 2011. Does CEO duality constrain board independence? Some evidence from audit pricing. *Accounting & Finance* 51 (2): 361-380.

- Butz, C. E., and P. V. Lewis. 1996. Correlation of gender-related values of independence and relationship and leadership orientation. *Journal of Business Ethics* 15 (11): 1141-1149.
- Cao, Y., L. A. Myers, and T. C. Omer. 2012. Does company reputation matter for financial reporting quality? Evidence from restatements. *Contemporary Accounting Research* 29 (3): 956-990.
- Causholli, M., M. De Martinis, D. Hay, and W. R. Knechel. 2010. Audit markets, fees and production: Towards an integrated view of empirical audit research. *Journal of Accounting Literature* 29: 167-215.
- Chakravarthy, J., E. DeHaan, and S. Rajgopal. 2014. Reputation repair after a serious restatement. *The Accounting Review* 89 (4): 1329-1363.
- Chang, C. C., and M. C. Tsao. 2005. The determinants of audit fees for Taiwanese listed firms. *Journal of Contemporary Accounting* 6 (2): 125-152.
- Charles, S. L., S. M. Glover, and N. Y. Sharp. 2010. The association between financial reporting risk and audit fees before and after the historic events surrounding SOX. *Auditing: A Journal of Practice & Theory* 29 (1): 15-39.
- Chen, C. S., F. C. Lin, and T. C. Yang. 2015. The determinants of audit fee decreases: The perspective of corporate governance. *Taiwan Accounting Review* 11 (2): 241-290.
- Chen, T., H. Dong, and C. Lin. 2017. Institutional ownership and audit quality: Evidence from Russell index reconstitutions. Available at <http://dx.doi.org/10.2139/ssrn.2849685>. (Accessed 15 Dec 2018).
- Cohn, M. A., M. R. Mehl, and J. W. Pennebaker. 2004. Linguistic markers of psychological change surrounding September 11, 2001. *Psychological Science* 15 (10): 687-693.
- Core, J. E., W. Guay, and D. F. Larcker. 2008. The power of the pen and executive compensation. *Journal of Financial Economics* 88 (1): 1-25.
- Cowen, A., B. Groyberg, and P. Healy. 2006. Which types of analyst firms are more optimistic? *Journal of Accounting and Economics* 41 (1-2): 119-146.
- Craswell, A. T., and J. R. Francis. 1999. Pricing initial audit engagements: A test of competing theories. *The Accounting Review* 74 (2): 201-216.
- Craswell, A. T., J. R. Francis, and S. L. Taylor. 1995. Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics* 20 (3): 297-322.
- Davis, A. K., and I. Tama-Sweet. 2012. Managers' use of language across alternative disclosure outlets: Earnings press releases versus MD&A. *Contemporary Accounting Research* 29 (3): 804-837.

- De Franco, G., O. K. Hope, D. Vyas, and Y. Zhou. 2015. Analyst report readability. *Contemporary Accounting Research* 32 (1): 76-104.
- Debreceeny, R. S. 2015. Social media, social networks, and accounting. *Journal of Information Systems* 29 (2): 1-4.
- Duh, R. R., Y. Y. Chen, and H. Y. Huang. 2019. The relationship between corporate social responsibility performance and CEO compensation. *Journal of Contemporary Accounting* 20 (1): 1-28.
- Dyck, A., and L. Zingales. 2002. The corporate governance role of the media. Working Paper, Harvard University.
- Ethridge, J. R., T. L. Marsh, and K. Canfield. 2007. Engagement risk: A preliminary analysis of audit firms' client acceptance decisions. *Academy of Accounting and Financial Studies Journal* 11 (1): 1-8.
- Fama, E. F. 1980. Agency problems and the theory of the firm. *Journal of Political Economy* 88 (2): 288-307.
- Fang, L., and A. Yasuda. 2009. The effectiveness of reputation as a disciplinary mechanism in sell-side research. *Review of Financial Studies* 22 (9): 3735-3777.
- Ferguson, A., J. R. Francis, and D. J. Stokes. 2003. The effects of firm-wide and office-level industry expertise on audit pricing. *The Accounting Review* 78 (2): 429-448.
- Fich, E. M. 2005. Are some outside directors better than others? Evidence from director appointments by fortune 1000 firms. *The Journal of Business* 78 (5): 1943-1972.
- Francis, J. R., A. H. Huang, S. Rajgopal, and A. Y. Zang. 2008. CEO reputation and earnings quality. *Contemporary Accounting Research* 25 (1): 109-147.
- Francis, J. R., K. Reichelt, and D. Wang. 2005. The pricing of national and city-specific reputations for industry expertise in the U.S. audit market. *The Accounting Review* 80 (1): 113-136.
- Frankel, R., J. Jennings, and J. Lee. 2016. Using unstructured and qualitative disclosures to explain accruals. *Journal of Accounting and Economics* 62 (2-3): 209-227.
- Graham, J. R., C. R. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40 (1-3): 3-73.
- Gregory, A., and P. Collier. 1996. Audit fees and auditor change; an investigation of the persistence of fee reduction by type of change. *Journal of Business Finance & Accounting* 23 (1): 13-28.
- Hambrick, D. C., and P. A. Mason. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review* 9 (2): 193-206.

- Harjoto, M. A., I. Laksmana, and R. Lee. 2015. The impact of demographic characteristics of CEOs and directors on audit fees and audit delay. *Managerial Auditing Journal* 30(8/9): 963-997.
- Hay, D. C., W. R. Knechel, and N. Wong. 2006. Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research* 23 (1): 141-191.
- Henry, E., and A. J. Leone. 2016. Measuring qualitative information in capital markets research: Comparison of alternative methodologies to measure disclosure tone. *The Accounting Review* 91 (1): 153-178.
- Holthausen, R. W. 1990. Accounting method choice: Opportunistic behavior, efficient contracting, and information perspectives. *Journal of Accounting and Economics* 12 (1-3): 207-218.
- Hribar, P., J. Kim, R. Wilson, and H. I. Yang. 2012. Counterparty responses to managerial overconfidence. Working Paper, University of Iowa and University of Pennsylvania.
- Hsu, H. J. 2012. CEO reputation, future earnings, and market mispricing. Masters' Thesis, National Chung Cheng University.
- Hsu, Y. S., Y. H. Chan, and W. T. Huang. 2016. CEO compensation structure, dominance and R&D expenditures. *Journal of Contemporary Accounting* 17 (1): 35-62.
- Huang, H. W., R. J. Parker, Y. C. A. Yan, and Y. H. Lin. 2014. CEO turnover and audit pricing. *Accounting Horizons* 28 (2): 297-312.
- Hung, J. H., W. S. Wang, I. C. Li, H. J. Chen, and W. S. Chang. 2013. The impact of managerial overconfidence on financial distress and moderating effect of family business characteristics. *NTU Management Review* 23 (2): 65-96.
- International Auditing and Assurance Standards Board (IAASB). 2009. The auditor's responsibilities relating to fraud in an audit of financial statements. ISA 240.
- Jackson, A. R. 2005. Trade generation, reputation and sell-side analysts. *The Journal of Finance* 60 (2): 673-717.
- Jensen, M. C. 1979. Toward a theory of the press. In *Economics and Social Institutions*, edited by Brunner, K., 267-287. Leiden, The Netherlands: Martinus Nijhoff Publishing.
- Jha, A., and Y. Chen. 2015. Audit fees and social capital. *The Accounting Review* 90 (2): 611-639.
- Jo, H., Y. Kim, and M. S. Park. 2007. Underwriter choice and earnings management: Evidence from seasoned equity offerings. *Review of Accounting Studies* 12 (1): 23-59.
- Judd, J. S., K. J. Olsen, and J. Stekelberg. 2017. How do auditors respond to CEO narcissism? Evidence from external audit fees. *Accounting Horizons* 31 (4): 33-52.

- Kahn, J. H., R. M. Tobin, A. E. Massey, and J. A. Anderson. 2007. Measuring emotional expression with the Linguistic Inquiry and Word Count. *The American Journal of Psychology* 120 (2): 263-286.
- Kalelkar, R., and S. Khan. 2016. CEO financial background and audit pricing. *Accounting Horizons* 30 (3): 325-339.
- Kaplan, S. N., and B. A. Minton. 2012. How has CEO turnover changed? *International Review of Finance* 12 (1): 57-87.
- Kassem, R. 2018. Assessing management integrity: Insights from Big 4 auditors in Egypt. *Current Issue in Auditing* 12 (1): A29-A39.
- Kinney Jr, W. R., Z. V. Palmrose, and S. Scholz. 2004. Auditor independence, non-audit services, and restatements: Was the U.S. government right? *Journal of Accounting Research* 42 (3): 561-588.
- Kizirian, T. G., B. W. Mayhew, and L. D. Sneathen Jr. 2005. The impact of management integrity on audit planning and evidence. *Auditing: A Journal of Practice & Theory* 24 (2): 49-67.
- Klein, A. 2002. Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics* 33 (3): 375-400.
- Larcker, D. F., and S. A. Richardson. 2004. Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research* 42 (3): 625-658.
- Law, K. K. F., and L. F. Mills. 2015. Taxes and financial constraints: Evidence from linguistic cues. *Journal of Accounting Research* 53 (4): 777-819.
- Lee, C. Y., H. L. Wu, and C. J. Lee. 2018. Does CEO career horizon lead to corporate misconduct? Evidence of Taiwanese semiconductor firms. *NTU Management Review* 28 (3): 145-176.
- Lee, J. Z., and Y. H. Liao. 2004. Board of director characteristics and earnings management-Evidence from the effect of family-controlling on Taiwan corporations. *Taiwan Accounting Review* 5 (1): 1-39.
- Li, F. 2010. The information content of forward-looking statements in corporate filings - A naïve Bayesian machine learning approach. *Journal of Accounting Research* 48 (5): 1049-1102.
- Liang, Y., I. Marinovic, and F. Varas. 2018. The credibility of financial reporting: A reputation-based approach. *The Accounting Review* 93 (1): 317-333.
- Lin, G. Y. 2016. The relationship between CEO reputation and earnings response coefficient. Masters' Thesis, National Dong Hwa University.
- Loughran, T., and B. McDonald. 2011. When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance* 66 (1): 35-65.

- Loughran, T., and B. McDonald. 2016. Textual analysis in accounting and finance: A survey. *Journal of Accounting Research* 54 (4): 1187-1230.
- Malmendier, U., and G. Tate. 2007. *Superstar CEOs*. Working Paper, University of California.
- Matsunaga, S. R., S. Wang, and P. E. Yeung. 2013. Does appointing a former CFO as CEO influence a firm's accounting policies? Working Paper, University of Oregon.
- Mayew, W. J., M. Sethuraman, and M. Venkatachalam. 2015. MD&A disclosure and the firm's ability to continue as a going concern. *The Accounting Review* 90 (4): 1621-1651.
- Mayhew, B. W., and M. S. Wilkins. 2003. Audit firm industry specialization as a differentiation strategy: Evidence from fees charged to firms going public. *Auditing: A Journal of Practice and Theory* 22 (2): 33-52.
- Milbourn, T. T. 2003. CEO reputation and stock-based compensation. *Journal of Financial Economics* 68 (2): 233-262.
- Miller, G. S. 2006. The press as a watchdog for accounting fraud. *Journal of Accounting Research* 44 (5): 1001-1033.
- Mitra, S., B. Jaggi, and T. Al-Hayale. 2019. Managerial overconfidence, ability, firm-governance and audit fees. *Review of Quantitative Finance and Accounting* 52 (3): 841-870.
- Mitra, S., M. Hossain, and D. R. Deis. 2007. The empirical relationship between ownership characteristics and audit fees. *Review of Quantitative Finance and Accounting* 28 (3): 257-285.
- O'Keefe, T. B., D. A. Simunic, and M. T. Stein. 1994. The production of audit services: Evidence from a major public accounting firm. *Journal of Accounting Research* 32 (2): 241-261.
- Okoye, E. I., T. A. Okafor, and N. Ijeoma. 2009. Impact of the fraud triangle on audit process: The Nigerian accountant's view. *University Advanced Research Journal* (1): 130.
- Patelli, L., and M. Pedrini. 2015. Is tone at the top associated with financial reporting aggressiveness? *Journal of Business Ethics* 126 (1): 3-19.
- Pennebaker, J. W., R. L. Boyd, K. Jordan, and K. Blackburn. 2015. *The Development and Psychometric Properties of LIWC2015*. Austin, TX: University of Texas at Austin.
- Rajgopal, S., T. Shevlin, and V. Zamora. 2006. CEOs' outside employment opportunities and the lack of relative performance evaluation in compensation contracts. *The Journal of Finance* 61 (4): 1813-1844.

- Reitenga, A., S. Buchheit, Q. J. Yin, and T. Baker. 2002. CEO bonus pay, tax policy, and earnings management. *Journal of the American Taxation Association* 24 (s-1): 1-23.
- Richardson, S. A., A. I. Tuna, and P. D. Wysocki. 2005. Accounting for taste: Board member preferences and corporate policy choices. Working Paper, MIT Sloan School of Management.
- Schwartz, S. T., R. A. Young, and K. Zvinakis. 2000. Reputation without repeated interaction: A role for public disclosures. *Review of Accounting Studies* 5 (4): 351-375.
- Seetharaman, A., F. A. Gul, and S. G. Lynn. 2002. Litigation risk and audit fees: Evidence from UK firms cross-listed on US markets. *Journal of Accounting and Economics* 33 (1): 91-115.
- Sharma, V. D. 2004. Board of director characteristics, institutional ownership, and fraud: Evidence from Australia. *Auditing: A Journal of Practice & Theory* 23 (2): 105-117.
- Siegel, J. 2005. Can foreign firms bond themselves effectively by renting U.S. securities laws? *Journal of Financial Economics* 75 (2): 319-359.
- Simunic, D. A. 1980. The pricing of audit services: Theory and evidence. *Journal of Accounting Research* 18 (1): 161-190.
- Simunic, D. A., and M. T. Stein. 1996. Impact of litigation risk on audit pricing: A review of the economics and the evidence. *Auditing: A Journal of Practice and Theory* 15 (2): 119-134.
- Summers, S. L., and J. T. Sweeney. 1998. Fraudulently misstated financial statements and insider trading: An empirical analysis. *The Accounting Review* 73 (1): 131-146.
- Sundaram, R. K., and D. L. Yermack. 2007. Pay me later: Inside debt and its role in managerial compensation. *The Journal of Finance* 62 (4): 1551-1587.
- Tausczik, Y. R., and J. W. Pennebaker. 2010. The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology* 29 (1): 24-54.
- Velury, U., J. T. Reisch, and D. M. O'reilly. 2003. Institutional ownership and the selection of industry specialist auditors. *Review of Quantitative Finance and Accounting* 21 (1): 35-48.
- Weigelt, K., and C. Camerer. 1988. Reputation and corporate strategy: A review of recent theory and applications. *Strategic Management Journal* 9 (5): 443-454.
- Yeh, Y. M. C., and P. S. Lin. 2018. Does CEO reputation matter to financial reporting quality? *NTU Management Review* 28 (3): 1-45.

Appendix - Definition of Variables

Variable Name	Definition
<i>LNAF</i>	= The natural logarithm of audit fees;
<i>TONE</i>	= Language-tone measure calculated by LIWC, representing a standardized score that is converted into percentiles ranging from 0 to 100. The higher the score, the more positive the tone is;
<i>NEWS</i>	= The natural logarithm of the media counts of articles citing the CEO from <i>Wall Street Journal</i> , <i>New York Times</i> , <i>Washington Post</i> , <i>Financial Times</i> , and <i>USA Today</i> ;
<i>TONE_IND</i>	= The median <i>TONE</i> by year and industry, where industry is defined by 2 digit SIC;
<i>NEWS_IND</i>	= The natural logarithm of the median news counts plus 1 by year and industry, where industry is defined by 2-digit SIC;
<i>SIZE</i>	= The natural logarithm of total assets;
<i>INVREC</i>	= The proportion of total assets in inventory and accounts receivable;
<i>SUBS</i>	= The square root of the number of consolidated subsidiaries;
<i>RET</i>	= Stock price return;
<i>LEV</i>	= Total debt divided by total assets;
<i>LOSS</i>	= An indicator variable equal to 1 if the client has experienced a loss in at least two of the prior three years, and 0 otherwise;
<i>MERGER</i>	= An indicator variable that equals 1 if the firm has engaged in a merger or acquisition in year t, and 0 otherwise;
<i>INDDIR</i>	= The percentage of independent directors on the board;
<i>BODMEET</i>	= The number of full board meeting;
<i>INSTOWN</i>	= The percentage of shares owned by institutional investors;
<i>INDSPEC</i>	= Audit firm's industry market share based on total sales audited within 2-digit SIC code;
<i>NEWAUD</i>	= An indicator variable set to 1 if the auditor is within the first three years of tenure with the client, and 0 otherwise;
<i>LNAF</i>	= The natural logarithm of non-audit fees.

