The Importance of Partner Narcissism to Audit Quality

Abstract

Relying on the size of partner signatures in audit reports to measure their narcissism, we find that actual and perceived audit quality rises with partner narcissism. Reinforcing causal inference, we show that changes in audit quality are positively associated with changes in partner narcissism stemming from mandatory auditor rotation, and that audit quality does not reversely affect partner signature size. We also find that the impact of auditor narcissism on audit quality is more pronounced when the client is larger and when the auditor shares school ties with client executives, although it does not vary with engagement complexity. Collectively, this evidence implies that partner narcissism improves audit quality mainly through increased auditor independence, rather than auditor competence. In additional results consistent with expectations, we generally find that the role that partner narcissism plays in audit quality is smaller in Big Four audit firms known to have robust quality control structures and more standardized audit methodologies, which narrows the scope for partner-level characteristics to matter. We also document that although partner narcissism has no perceptible impact on the incidence of Type I going concern reporting errors, it reduces the probability of making a Type II error, corroborating that more narcissistic partners are less likely to sacrifice their independence.

Key words: audit partner; narcissism; audit quality; auditor personality.

JEL Classifications: M40, M42

Data Availability: Data are available from public sources as identified in the text.

1 Introduction

We analyze the importance of partner narcissism to audit quality. Recent research at the individual auditor level documents associations between audit quality and certain acquired personal characteristics such as education and experience (e.g., Gul, Wu, and Yang, 2013; Aobdia, Lin, and Petacchi, 2015; Cameran, Campa, and Francis, 2018). However, DeFond and Zhang (2014) and Lennox and Wu (2018) call for more evidence on the impact of individual partner characteristics on audit quality. In particular, prior work seldom examines whether auditors' personality traits shape audit outcomes (Church, Davis, and McCracken, 2008; DeFond and Zhang, 2014), although research in management, finance, and accounting has shown that corporate executives' personalities influence their behavior (e.g., Hayward and Hambrick, 1997; Malmendier and Tate, 2008; Jia, van Lent, and Zeng, 2014). We focus on narcissism given that this specific personality trait affects individual decision making and organization outcomes (e.g., Chatterjee and Hambrick, 2007; Ham, Lang, Seybert, and Wang, 2017). Although it is difficult to directly measure personality traits, recent research reliably measures narcissism with the size of personal signatures in official filings (e.g., Davidson, Dey, and Smith, 2015; Ham et al., 2017; Zhou, 2017; Bushman, Davidson, Dey, and Smith, 2018; Ham, Seybert, and Wang, 2018).

In examining economic outcomes stemming from narcissism in CEOs and CFOs, recent research implies that narcissism significantly affects the choices made by these executives (e.g., Aktas, de Bodt, Bollaert, and Roll, 2016; Ham et al., 2017, 2018). As a common personality trait, narcissism is naturally neither localized to any specific country nor peculiar to CEOs or CFOs (e.g., Kwan, Hui, and McGee, 2010; Young, Du, Dworkis, and Olson, 2016).[1]

[1] Narcissism is a personality trait that may exhibit rich within-region or within-culture variation. Although some argue that perceived narcissism tends to be stronger within individualistic cultures such as the U.S. (e.g., Miller et al. 2015), others find that Chinese, as a culture, region, and ethnic group identified with our sample of auditors in Taiwan, have high levels of narcissism. Indeed, prior research implies that some Chinese are more narcissistic than their American counterparts (Kwan, Kuang, and Hui, 2009; Cai, Kwan, and Sedikides, 2012).

Auditors, like any other individuals, have varying personalities, including different degrees of narcissism that may well become imprinted in their audit work. DeAngelo (1981) formulates audit quality as the market-assessed joint probability that an auditor will discover accounting errors (i.e., auditor competence) and resist client pressure to waive their correction (i.e., auditor independence). It follows that partner narcissism may shape audit quality with its impact potentially coming through the auditor competence and auditor independence channels.

From a cognitive perspective, narcissism entails a belief in, and an exhibition of, one's superior intelligence and competence (Farwell and Wohlwend-Lloyd, 1998). Narcissists are self-centered and devalue others (Nevicka, Ten Velden, De Hoogh, and Van Vianen, 2011). This suggests that narcissistic partners are more likely to discount the value of important clients because they tend to view themselves as the focal point in all settings. For more narcissistic auditors, attracting respect and praise from their peers as a tough and independent gatekeeper may dominate striving to keep clients happy. Further, Maccoby (2003) argues that narcissists resist succumbing to a herd mentality and social pressure to conform. If retaining important clients by compromising independence to some degree is fairly routine in managing engagements (e.g., Krishnan, 1994; Hopwood, McKeown, and Mutchler, 1989), then more narcissistic auditors are less likely to exhibit this behavior. Indeed, narcissists typically chart their own course such that they are more apt to take risks in pursuing their vision without serious fear of failure (Maccoby, 2003). This implies that although narcissistic auditors risk losing important clients by not acquiescing to any pressure to waive corrections, such a risk or "failure" matters less to them. Finally, from a motivation perspective, the need for constant recognition suggests that more narcissistic auditors are eager to develop a reputation as the best in the profession (Raskin and Howard, 1988), which they presumably understand requires them to be independent. Taken together, more narcissistic partners are more likely to protect their independence from clients, which, in turn, translates into higher audit quality.

However, the impact of narcissism on auditor competence is less clear. On one hand, there may be a positive effect on competence through independent audit judgements and motivation. Narcissistic individuals tend to arrive at their judgements independently as they typically focus on their own thoughts and impressions at the expense of those of others (Byrne and Worthy, 2013). Accordingly, once narcissistic auditors form their own opinions on the appropriateness of accounting policies and estimates as well as other audit evidence, they tend to resolutely stick to that opinion and are less likely to be persuaded to accept clients' potentially opportunistic financial reporting preferences. By making independent judgments (a quality labelled "field independence" in psychology) thus remaining vigilant against client deception, narcissistic auditors are in a better position to identify accounting errors, implying higher auditor competence. From a motivational standpoint, narcissism is associated with an unrelenting need to have one's superior self-perception affirmed by others and to display one's superiority. Acquiring a reputation for conducting higher-quality audits provides affirmation of a narcissist's superiority. Given that a narcissistic partner is eager to deliver high-quality audits, they expend more effort in order to detect financial reporting problems, which, in turn, increases auditor competence.

On the other hand, narcissism is a double-edged sword that may actually undermine audit quality. Prior research suggests that narcissists are self-centered, devalue others, react aggressively to criticism, dominate the decision process, and inhibit information exchange among group members (Nevicka et al., 2011). Consequently, even if other members of the audit engagement team have insights that could help to identify any accounting problems, those views may be taken lightly or dismissed outright by the narcissistic partner. As a result, more narcissistic auditors are less informed to the detriment of their competence. Additionally, a narcissistic partner's inflated self-image can be associated with excessive optimism about their ability to uncover financial reporting problems, leading to the undersupply of necessary audit effort. Altogether, while we expect narcissism to improve partner independence, its

impact on auditor competence could run in either direction. In short, the link between auditor narcissism and their performance remains an empirical issue.

We examine data from Taiwan in conducting our analysis. We follow extensive prior research by measuring narcissism with an individual's signature size. Data constraints prevent us from examining U.S. firms since there is no signature requirement there, although the identity of the signing audit partner recently became publicly available.[2] The names of the signing audit partners of publicly listed firms in Taiwan have been mandatorily disclosed since 1983. Importantly, the annual reports of listed companies in Taiwan display the signatures of the partners who sign the audit reports.[3] After Ham et al. (2017, 2018), we measure auditor narcissism with partner signature size. We focus on narcissism of the lead auditor partner as the review partner is much less involved in the auditing process according to extensive prior work (e.g., Chen, Lin, and Lin, 2008; Chin and Chi, 2009; Aobdia et al., 2015).

Using multiple measures, including absolute abnormal accruals, accrual quality, restatements, and perceived audit quality evident in firms' earnings response coefficients (ERCs) and borrowing costs, we find robust evidence implying that clients with partners exhibiting narcissistic tendencies enjoy higher audit quality. To confront the endogeneity threat to reliable inference that more narcissistic auditors are drawn to high-quality clients,

[2] Another option would involve relying on U.K. data in analyzing our research questions since the engagement partner must sign the audit report in this country. However, at a practical level, this would be exceedingly difficult given that although the engagement partner must sign the audit report in the U.K., copies of the audit reports that are filed with the U.K. Companies House—where the general public can observe filings similar to the SEC's EDGAR system—do not have to be signed; i.e., audit reports that are included in the annual report frequently simply identify the engagement partner by name (e.g., Carcello and Li, 2013).

[3] DeFond and Francis (2005) suggest focusing on non-U.S. settings where audit partners' names are disclosed to study audit behavior at the individual auditor level. There have been a growing number of studies using individual auditor data in various countries to address interesting research questions. For example, Gul et al. (2013), Goodwin and Wu (2014), and Kallunki, Mikkonen, Niemi, and Nilsson (2017) rely on data from China, Australia, and Sweden, respectively. More relevant to our analysis, extensive prior research on audit partners examines data from Taiwan (e.g., Chen et al., 2008; Chin and Chi, 2009; Aobdia et al., 2015; and Chi et al., 2017). Although any single-country study involves some external validity threats, Chi et al. (2017), among others, stress the similarities between the audit and capital markets in Taiwan and the U.S., implying that we focus on an opportune testing ground for providing evidence relevant to other countries.

we estimate changes specifications in the context of *mandatory* partner rotation. Reinforcing our core evidence, we find that a change in auditor narcissism stemming from mandatory audit partner rotation is positively associated with changes in audit quality. Moreover, we do not find any discernible difference in signature size between high- and low-quality clients assigned to the same partner. This helps dispel the concern that reverse causality in the form of the quality of the audit work affecting signature size is spuriously responsible for our main evidence. It also helps empirically validate that narcissism is a stable, enduring personality trait.[4]

Next, we deepen the analysis to explore the channel through which auditor narcissism shapes audit quality. This involves examining whether partner narcissism plays a larger role when auditor independence or auditor competence is particularly salient. We find that the positive impact of auditor narcissism on audit quality is concentrated in situations where auditor independence is more likely to be threatened. For starters, we provide evidence that the positive effect of auditor narcissism on audit quality is stronger for large clients that are presumably more important than others. Second, we find that the impact of partner narcissism on audit quality intensifies when auditors and client executives have school ties. Additionally, we document that the importance of auditor narcissism to audit quality does not vary systematically with engagement complexity. Altogether, these results suggest that although more narcissistic partners have similar competence as their less narcissistic peers, they tend to be more independent, which engenders higher audit quality.

We undertake extensive additional analysis, which corroborates our main evidence. Since Big Four firms have developed more sophisticated quality control structures and more

[4] Untabulated analyses reveal that our core results generally hold if we control for client CEO narcissism using their signature size, despite the ensuing severe sample attrition stemming from poor data availability. Similarly, our results are virtually identical when we restrict the samples to firms with the same CFO, the same CEO, or both, in the years surrounding auditor rotation to hold executive-level narcissism constant. This evidence helps dispel the possibility that client narcissism affects both auditor narcissism and audit quality, improving identification.

standardized audit procedures (El Ghoul, Guedhami, and Pittman, 2016), we expect to observe that partner narcissism matters more to audit quality in non-Big Four firms where there are fewer constraints on personality characteristics playing a role. Lending support to this intuition, we generally find that partner narcissism has a larger impact in non-Big Four audit firms. We also find that while narcissism is irrelevant to the likelihood that the partner renders a going concern opinion or makes a Type I (false positive) going concern reporting error, partner narcissism does lower the incidence of Type II (false negative) errors. These results suggest that overly conservative reporting by more narcissistic partners is not behind their higher audit quality.[5] Instead, their outperformance likely stems from resisting client pressure to issue an overly optimistic opinion. Finally, we find that more narcissistic auditors are less likely to be sanctioned by regulators, and in the rare occasions that they are, the sanctions tend to be less serious.

We contribute to extant evidence in several ways. First, in initiating empirical research on intrinsic personality characteristics of individual auditors, we report large-sample evidence that the degree of partner narcissism shapes audit quality. Prior studies focusing on abstract auditor fixed effects or observed demographic characteristics naturally struggle to establish causality (Bertrand and Schoar, 2003). Many of the personal characteristics under study in prior work such as education and experience are acquired by the auditors, and decisions to acquire these characteristics may correlate with audit quality as well as the pairing between auditors and clients.[6] In this respect, examining a stable personality trait as opposed to acquired characteristics facilitates drawing causal inferences. Moreover, our evidence is constructive given that Gul et al. (2013) and Cameran et al. (2018) find that although some auditor demographic characteristics matter, the variation in audit outcomes

[5] Both audit partners (e.g., Christensen, Glover, Omer, and Shelley, 2016) and the PCAOB (2015) perceive that Type II reporting errors reflect lower audit quality.

[6] In an exception, Kallunki et al. (2017) examine the relation between auditor intelligence and audit quality. Although an intrinsic characteristic, intelligence reflects cognitive ability; i.e., it is not a personality trait.

across individual auditors largely remains unexplained. As such, our analysis responds to calls for research on the determinants responsible for inter-partner variation in audit quality (e.g., Cameran et al. 2018; Lennox and Wu, 2018).

Second, we introduce analyzing personality theories to empirical audit research. Grounded in psychology, research in finance, management, and accounting relies on personality theories to motivate their predictions on the role that executive narcissism plays in their decisions and corporate outcomes (e.g., Aktas et al., 2016; Ham et al., 2017, 2018). We extend this research by examining whether audit quality is sensitive to partner narcissism. Auditors' work is considerably different from that of corporate executives. Auditors are required to evaluate their clients' compliance with accounting standards. Not only are auditors' judgment processes bounded by accounting and auditing standards, but also they are subject to discipline stemming from peer review, litigation, and reputation protection forces (DeFond and Zhang, 2014). Consequently, the implications of narcissism for auditors sharply diverge from those for corporate executives. Indeed, our evidence suggests that narcissism plays a positive role in audit quality in contrast to the largely negative impacts arising from executive narcissism. Although narcissists may have a lower tolerance for monitoring (Young et al., 2016), narcissistic partners may outperform in monitoring their clients' financial reporting. In short, we broaden our understanding on how narcissism as a personality dimension impacts economic behavior and outcomes.

Third, the PCAOB now requires the disclosure of the identities of engagement partners in the U.S. on the grounds that such disclosure would enable financial statement users to better gauge partner and audit quality, improving investor decision-making (PCAOB, 2009, 2013). In the discourse surrounding this proposed policy shift, both public accounting firms and societies of CPAs strenuously opposed divulging partner identities (Deloitte, 2009; Ernst & Young, 2009; Grant Thornton, 2009; KPMG, 2009; PricewaterhouseCoopers, 2009), while investor groups argued that this disclosure was valuable. Our study lends some support

to the intuition that individual personality traits matter to assurance services. Together with existing audit partner-level research, our analysis further implies that the public disclosure of the identity of engagement partners is informative to capital market participants. Against the backdrop of the PCAOB adopting rules requiring the disclosure of engagement partners' names starting in 2017, our research helps to inform the continuing debate over the merits of identifying partners in the U.S. and elsewhere.

Finally, experimental research suggests that partner accountability rises when they are required to actually sign the audit report (e.g., DeZoort, Harrison, and Taylor, 2006; PCAOB, 2009).[7] We provide evidence of another downside stemming from not requiring audit partners to physically sign their reports: investors are deprived of the information value in the signature size. Our evidence from examining ERCs and debt pricing implies that shareholders and lenders consider the extent of partner narcissism evident in signature size to be relevant to their evaluation of audit quality. Also, our research may benefit audit firms eager to design optimal partner assignment policies (Lennox and Wu, 2018); e.g., they may prefer to assign more narcissistic partners to clients known to undertake more aggressive financial reporting positions. Similarly, our results may interest audit firms that consider employees' attributes, including their personalities, in making recruitment and promotion decisions (Campbell, 2012).

2 Motivation

2.1 The Impact of Narcissism on Corporate Behavior and Performance

Although excessive narcissism is a clinical disorder, narcissism has become widely accepted as a personality dimension on which individuals can be arrayed on a continuum

[7] Carcello and Li (2013) explain that the PCAOB may later require engagement partners to sign their audit reports. Reinforcing this perspective, some investors and banking regulators have called for the imposition of a partner signature requirement in the U.S. (e.g., CalPERS 2009; Council of Institutional Investors 2009; AFL-CIO 2011; Federal Housing Finance Agency 2011).

(e.g., Freud, 1957; Emmons, 1987; Chatterjee and Hambrick, 2007). The prevailing view in psychology is that a person's degree of narcissism is relatively enduring (Cramer, 1998; Campbell, Foster, and Finkel, 2002). Highly narcissistic individuals consider themselves as exceptional performers and need to have their elevated self-images continually reaffirmed by others (Campbell, Goodie, and Foster, 2004). Feelings of entitlement and superiority, strong self-esteem, and a need for constant admiration and attention are major manifestations of narcissism.

Despite that narcissism is often framed as synonymous with a sense of superiority and entitlement, a lack of empathy, arrogance, and all sorts of self-centered behavior, it can also make a person more productive, including by bringing transformative ideas and strong leadership to an organization (e.g., Maccoby, 2000; Wallace and Baumeister, 2002). According to Maccoby (2003), narcissists tend to be independent thinkers driven by a vision of changing the world. They are also relatively uninhibited by internal constraints. For example, narcissists are less susceptible to the temptation to be drawn toward a herd mentality and to conform to social pressure. Narcissists are also not closely governed by external constraints. In particular, they chart their own course and are willing to take risks in pursuing their objectives without fearing failure. Other productive attributes of narcissism include passion, charisma, and perseverance, which can help narcissists become outstanding performers.

Recent research examines how executive-level narcissism affects corporate behavior and economic outcomes. For example, Chatterjee and Hambrick (2007) find that narcissistic CEOs tend to take bold actions that attract attention such as undertaking acquisitions, resulting in wide swings in firm performance. Ham et al. (2018) document that narcissistic CEOs are more likely to engage in overinvestment, deliver worse returns on assets, and enjoy higher compensation. Zhu and Chen (2015a) find that CEO narcissism limits directors' influence over corporate strategy. Relatedly, Zhu and Chen (2015b) report that narcissistic CEOs select directors who conform with their own personality given that these directors are

more supportive of the CEOs' risk-taking activities. Aktas et al. (2016) provide evidence that narcissistic acquirer CEOs tend to initiate deals and, as acquirers, they negotiate faster in the takeover process and experience lower announcement returns. Additionally, Ham et al. (2017) find that CFO narcissism is positively associated with earnings management and weak internal control quality. In sum, while some evidence suggests that executive narcissism negatively affects financial reporting and certain corporate outcomes, others research supports that narcissistic CEOs have a tighter grip on strategic control and a larger appetite for risk.

2.2 Audit Quality at the Individual Auditor Level

Recent research at the individual auditor level provides valuable insights on the determinants of audit quality. Focusing on Taiwanese companies, Chen et al. (2008) examine the role of partner tenure in shaping audit quality, while Chin and Chi (2009) analyze the importance of audit partner industry expertise to the incidence of client restatements. Gul et al. (2013) and Cameran et al. (2018) document that audit quality in China and the U.K., respectively, varies with the auditor's demographic background, including their education and experience. Aobdia et al. (2015) find that Taiwanese companies audited by higher-quality partners elicit larger earnings response coefficients, smaller IPO underpricing, and more attractive debt contracting. However, prior research seldom examines whether audit quality is sensitive to individual auditors' intrinsic personality traits, as opposed to acquired characteristics such as education, experience, expertise, or social networks.

Although recent research on CEO narcissism enriches our understanding of the impacts of executives' personalities, the arguments underlying its predictions do not necessarily apply to auditor narcissism. Executive narcissism is associated with bold corporate decisions, low financial reporting quality, and poor firm performance (Ham et al., 2017, 2018). To garner admiration and affirmation, narcissistic CEOs may take risky actions detrimental

to the company or manage earnings in attempting to reach targets. These actions involve a broad range of decision choices and are less subject to scrutiny by others. The personal attributes of auditors can have different implications than those of CEOs (Gul et al., 2013). In contrast to narcissistic CEOs who routinely dictate corporate policies, narcissistic auditors must comply with auditing standards promulgated by professional regulators and follow standardized auditing procedures. Key decisions such as tolerable risk levels and materiality thresholds are also largely set by the audit firm. Partners' work is also subject to explicit internal and external peer reviews as well as discipline stemming from litigation institutions and reputation protection forces. Consequently, one dimension of narcissism, the tendency to violate explicit rules to benefit themselves, may be attenuated for auditors.

2.3 Auditor Narcissism and Audit Quality

We posit that narcissism may shape an auditor's independence and competency, which, in turn, determines audit quality. The auditing process involves evaluating accounting records and practices, examining judgment, coordinating the audit engagement team, and communicating with client managers and its audit committee. The partner's personality attributes can affect all of these activities. Despite that consensus has emerged on the definition of narcissism as a compelling personality trait rooted in psychology theory, narcissism is a complex concept that may affect auditor independence and competence in multiple ways. Accordingly, it remains unclear *ex ante* whether narcissism benefits or undermines audit quality.

Narcissists are self-centered persons who routinely devalue others (Nevicka et al., 2011). This suggests that more narcissistic partners are more likely to discount the value of major clients because self-centered narcissists perceive themselves as being the most important consideration in any situation. Narcissistic individuals tend to focus on their own perspectives, while ignoring those of others (Byrne and Worthy, 2013). As such, acquiring and

maintaining an image as a savvy gatekeeper to attract respect and praise from their peers may matter more to narcissistic auditors than keeping their clients happy. Further, Maccoby (2003) argues that narcissists are relatively free from internal constraints in that, among other things, they resist both capitulating to a herd mentality and conforming to social pressure. This implies that narcissistic partners are less likely to respond to pressure to keep important clients by compromising their independence. Although they risk losing major clients, such potential defections are less of a concern to narcissists, who are typically more apt to take risks in pursuing their objectives without worrying excessively about potential negative outcomes (Maccoby, 2003). Finally, narcissists' need for constant recognition and attention (Raskin and Howard, 1988) implies that more narcissistic partners are eager to develop a reputation as the best in the field which, as they presumably understand, requires them to protect their independence. Taken together, prior research implies that more narcissistic auditors are more likely to remain independent instead of succumbing to client pressure. It follows that narcissism improves partner independence, which translates into higher audit quality.

From a cognitive standpoint, narcissism entails a belief in one's superior ability (e.g., Farwell and Wohlwend-Lloyd, 1998). Reflecting this self-perception, narcissistic partners are more likely to adamantly stick to their own opinions and less likely to accept the client manager's justification when evaluating the appropriateness of accounting policies and estimates. The psychology literature also finds that people high in narcissism arrive at their own judgments independent of those of others, and they outperform people low in narcissism when misleading information is presented (e.g., Byrne and Worthy, 2013). The judgement independence possessed by narcissistic partners implies that they are less likely to be deceived by inaccurate information provided by clients. This, in turn, increases the probability that partners will detect a breach, implying greater auditor competence. Accordingly, auditor narcissism may mitigate the potential for managers to exploit the discretion afforded under GAAP to distort their firms' financial reporting, resulting in higher audit quality.

Narcissism is associated with enhanced self-perception and a need to have such views reaffirmed by others (Judge, LePine, and Rich, 2006). Given that financial reporting failures can severely tarnish an individual auditor's reputation (e.g., He, Pittman, and Rui, 2016), narcissistic partners have strong incentives to maintain high audit quality. Nevicka, Bass, and Ten Velden (2016) find that narcissistic persons tend to react aggressively when they receive "ego-threat" information (i.e., information not conforming to their inflated self-views), which they counter with outstanding performance that demonstrates their ability. Auditors face challenges not only from clients, but also from peers or the general audit market. The challenges could be in-house peer reviews or regulatory inspections of audit work that may cast doubt on their competence and independence. Such a threat to their self-image can fuel the performance of narcissistic auditors, resulting in stricter external monitoring of their clients' financial reporting. In sum, besides its impact on auditor independence, narcissism could also motivate auditors to supply more audit effort to deliver high quality work, which helps to garner a reputation of superiority in auditing along with recognition. These arguments imply that the increased competence channel is partly behind more narcissistic auditors conducting higher quality audits.

On the other hand, psychology research finds that narcissistic group leaders dominate the decision process and tend to ignore input from others, leading to poor group decision outcomes (Nevicka et al., 2011). This implies that narcissistic partners tend to dismiss insights from other members of the audit engagement team that could help identify accounting errors. As a result, narcissistic partners become less informed and thus have a lower probability of detecting their clients' financial reporting problems, undermining auditor competence. For example, Trotman, Bauer, and Humphreys (2015) stress that the quality of engagement team discussions affects decision quality. In addition, narcissistic partners' elevated self-perception may engender relative optimism concerning their ability and the likelihood of positive

outcomes.[8] This can lead narcissistic partners to optimistically conclude that they can easily identify any problems in a client's financial reporting system without a sufficiently diligent collection and evaluation of audit evidence. Consequently, more narcissistic partners are less apt to detect breaches of accounting standards, suggesting lower auditor competence. In short, personality theories drawn from psychology research yield opposite predictions on how narcissism shapes partner competence.

To summarize, narcissism is expected to have a positive effect on auditor independence, although it can have either a positive or a negative impact on auditor competence. The overall effect of narcissism on audit quality can run in either direction, depending on which forces dominate. Given that this remains an empirical issue, we do not formulate a directional prediction. Importantly, we rely on cross-sectional analysis to help empirically clarify whether the role that narcissism plays in audit quality stems primarily from its impact on auditor competence versus independence.

3 Measurement, Data, and Research Design

3.1 Measuring Auditor Narcissism

Empirical research naturally struggles to identify a valid proxy for an underlying psychological construct such as a personality trait. Standard proxies used in the CEO narcissism literature include the prominence of the CEO's photograph in the firm's annual report (e.g., Zhu and Chen, 2015a, 2015b) or the number of personal pronouns used in press releases (e.g., Chatterjee and Hambrick, 2007; Aktas et al., 2016). However, the prominence of the CEO's photograph can reflect suggestions by corporate communications specialists

[8] Narcissism and overconfidence are distinct concepts from both psychological and behavioral perspectives (Campbell et al., 2004). Although a narcissistic person may exhibit a certain degree of overconfidence, this is not a main attribute of narcissism. Narcissism reflects more behavioral issues such as a need for constant recognition and attention, a lack of empathy, and a sense of entitlement. Ham et al. (2018) demonstrate that the narcissism measure that we use, signature size, is not correlated with the traditional measure of overconfidence.

instead of CEO narcissism, admitting measurement error. Similarly, corporate disclosure committees and investor relations consultants influence the number of first pronouns used in annual reports and press releases. Accordingly, these measures suffer from construct validity concerns of unknown severity (Koch and Beimann, 2014; Carey et al., 2015).

Recent studies show that signature size is a simple, unobtrusive measure of an individual's narcissism (Ham et al., 2017, 2018). Extensive prior research in psychology stresses that the signature is a powerful symbolic representation of the self (e.g., Kettle and Haubl, 2011; Bryan, Adams, and Monin, 2013; Chou, 2015). Relevant to our purposes, psychology research has long established a link between narcissism and signature size. In particular, Zweigenhaft and Marlowe (1973) demonstrate that individuals with higher self-esteem have larger signatures. Subsequent evidence lends support to the intuition that signature size reliably measures ego and dominance (Zweigenhaft, 1977; Jorgenson, 1977) as well as self-regard (Koole and Pelham, 2003). Self-esteem, ego, dominance, and self-regard are all prominent attributes of narcissism, reinforcing that we are on solid ground in gauging narcissism with signature size.

In another major upside, specifying narcissism with signature size ensures that the measure under study is nonreactive and unobtrusive. Social science research has long advocated measurement techniques involving an unobtrusive "physical trace" left behind by subjects (Webb, Campbell, Schwartz, and Sechrest, 1966). Using signature size does not require individuals to answer direct questions about narcissism in a survey, and participants are likely to be unaware that their level of narcissism would be evident in their signatures (Rudman, Dohn, and Fairchild, 2007).[9]

To further validate this measure of narcissism, Ham et al. (2018) analyze a sample of business school graduate students and show that there is a monotonic relation between

[9] Moreover, survey questions on issues as sensitive as narcissism are likely to generate very low response rates and/or unreliable answers.

signature size and results from the 16-item Narcissistic Personality Inventory (NPI-16) scale developed and validated by Ames, Rose, and Anderson (2006), where the NPI-16 is derived from the earlier 40-item Narcissistic Personality Inventory (NPI-40) scale developed and validated by Raskin and Howard (1988). They also show that signature size is distinct from overconfidence.[10] Ham et al. (2017) undertake a similar validation test in a lab setting, which corroborates the monotonic relation between signature size and the NPI-40 narcissism score. Collectively, prior research has shown that signature size constitutes a reliable measure of narcissism. We follow recent research in specifying a person's signature size to reflect their degree of narcissism (e.g., Davidson et al., 2015; Ham et al., 2017, 2018; Zhou, 2017; Bushman et al., 2018).

The annual reports for listed Taiwanese firms include the signatures of both the lead and review partners. After downloading the annual reports from 2006 to 2015 for each listed company, we locate the partners' signatures in the audit report section. After obtaining images of the signatures, we use a custom software program called ImageJ to determine their size. More specifically, we follow Ham et al. (2017, 2018) by using the program to draw a rectangle tightly around each signature, so that each side of the rectangle touches the most extreme endpoint of the signature. We multiply the length and width of the rectangle to determine the area occupied by the signature. To control for the length of the auditor's name, we divide the signature area by the number of characters in the partner's name.[11] For each partner, we then take the average of this measure using all the signatures of the same partner across the entire 2006-2015 sample period to obtain the average signature size.[12] Finally, we use the natural

[10] Ham et al. (2018) report that the Pearson correlation between signature size and narcissism is 0.36 with a *p*-value under 0.01. The correlation remains highly positive when they remove the six items in the NPI-16 that are also most closely related to overconfidence whereas the correlation between signature size and those six items is insignificant.

[11] Our empirical results are virtually identical when we re-specify this variable by: (i) dividing the signature area by the number of strokes in the partner's name to obtain an alternative standardized signature size; or (ii) using the raw signature area.

[12] To the extent that narcissism is a fixed and enduring personality characteristic, it remains stable over time or across settings for the same individual. However, an auditor's signature size may vary slightly

logarithm of the average signature size as the measure of narcissism of an individual partner.[13] The data source has some distinct advantages. First, all signatures are signed by hand since we delete the few cases where the signatures are electronically inserted. Second, all partners provide the same attestation for the same purpose using the same form with the same structure that did not substantially constrain the space available for the signature. Therefore, the signatures are comparable across partners, across clients, and over time. Although Ham et al. (2017, 2018) have validated that signature size measures narcissism, we further validate whether it holds for signatures in our setting. For the 145 undergraduate accounting students at a large public university in Taiwan who participated in the validation study, we find a correlation coefficient of 0.39 (p-value < 0.001) between signature size and narcissism (NPI-40), comparable to that reported in Ham et al. (2017, 2018).[14]

The financial statements of public companies in Taiwan must be certified by two audit partners: the lead and review partners. The lead partner handles planning and implementing the audit engagement, whereas the review partner is primarily responsible for reviewing the final audit report (e.g., Aobdia et al., 2015). Chin and Chi (2009) find that restatement likelihood in Taiwan is driven by the expertise of the lead partner; in contrast, the review partner has no perceptible impact on this frequency. Consistent with Chin and Chi (2009) and Chi and Chin (2011), Aobdia et al. (2015) document that in Taiwan review partner fixed effects do not explain the magnitude of discretionary accruals incremental to lead partner fixed effects, and that there is little or no link between review partner quality and capital market

and randomly across audit reports of different clients and/or over different years. We use the average signature size of an individual auditor to reduce the noise in our narcissism measure. Later, we provide evidence verifying that the signature size of an auditor does not vary significantly across clients or over time.

[13] Our core results are materially insensitive to using the natural logarithm of signature size or the raw average signature size. Similarly, our evidence holds when we replace our main narcissism test variable (based on average signature size over 2006-2015) with the size of the most recent signature to capture the narcissism construct.

[14] Details of the validation study, including correlations between components of narcissism (i.e., subscales of NPI-40) and signature size, are available from the authors upon request.

outcomes.[15] Given that the lead (review) partner plays a relatively active (passive) role in the engagement, we follow prior research by focusing on lead partner narcissism in the analysis.

3.2 Other Data

We download the annual reports containing auditor signatures from the Taiwan Stock Exchange's Market Observation Post System, which stores all annual reports since a company's listing. Financial and accounting data as well as data on signing partner names, audit firms, audit opinions, and accounting restatements are collected from the Taiwan Economic Journal (TEJ) database, which covers all public companies in Taiwan. Our sample contains 566 unique lead audit partners and 1,441 unique client firms covering the period from 2006 to 2015. The maximum sample size used in our empirical analysis is 12,244 firm-year observations; the sample shrinks for some estimations stemming from the loss of observations with missing values or the construction of certain variables.[16]

3.3 Research Design

To triangulate the analysis, we evaluate audit quality in multiple ways, capturing both its actual and perceived aspects. We use three measures of actual audit quality based on clients' reported earnings and actual misstatements, all of which are commonly used in extant research (e.g., Francis and Yu 2009; Reichelt and Wang 2010; Newton, Wang, and Wilkins 2013). The first measure is *ADACC*, which is the absolute value of abnormal accruals using a modified Jones model controlling for ROA.[17] The second measure is *STD_DD*, which is the

[15] Private conversations with several audit partners in Taiwan also confirm that the lead partner generally has more hands-on involvement in an engagement than the review partner.

[16] We analyze a constant sample in our regressions (i.e., an observation is dropped if a cross-sectional test variable is missing for it even if that variable never appears in, and thus does not affect, the main regression). However, it is important to stress that our core evidence holds when we examine the maximum number of observations possible in each regression.

[17] Some prior research implies that auditors focus more intently on constraining upward, rather than downward, earnings management (Nelson, Elliot, and Tarpley, 2002; Lennox, Wu, and Zhang, 2014), although other research (e.g., Myers, Myers, and Omer, 2003; Francis and Yu, 2009), including on Taiwanese firms (e.g., Aobdia et al., 2015), suggests that high-quality auditors reduce both forms. In results not reported in tables, we find that partner narcissism reduces both positive and negative abnormal accruals.

standard deviation of firm-level residuals from the Dechow and Dichev (2002) model over a five-year rolling window. Audit quality is inferred by examining abnormal accruals and accruals quality which characterize client earnings properties. A higher value of *ADACC* or *STD_DD* indicates lower audit quality. We run the following regression, where *AQ* is specified as either *ADACC* or *STD_DD*:

$$AQ_{it} = a_0 + a_1 AUD\_NAR_i + \sum \beta_k Control_{kit} + Industry\ Effects + Year\ Effects + \varepsilon_{it} \quad (1)$$

AUD_NAR is our measure of partner narcissism. As stressed earlier, *AUD_NAR* and all other variables at the individual auditor level reflect the lead audit partner. The choice and specification of the control variables follows recent research (e.g., Chin and Chi, 2009; Goodwin and Wu, 2014). This involves controlling for audit partner industry specialization (*AUD_SPEC*), tenure (*AUD_TENURE*), experience (*AUD_EXP*), and gender (*AUD_FEMALE*). We also control for audit firm-level industry specialization (*CPAFIRM_SPEC*), tenure (*CPAFIRM_TENURE*), and reputation (*BIG4*). The remaining control variables represent a comprehensive set of client firm characteristics, including its size (*SIZE*), sales growth (*SALEGROWTH*), the volatility of sales growth (*SALESVOLATILITY*), operating cash flows (*CFO*), cash flow volatility (*CFOVOLATILITY*), financial leverage (*LEV*), loss status (*LOSS*), financial distress (*BANKRUPTCY*), stock return volatility (*VOLATILITY*), the market-to-book ratio (*MB*), firm life cycle (*AGE*), and operating cycle (*OPERCYCLE*). Table 1 lists all regression variable specifications.

The third actual audit quality measure under study is the incidence of restatements. We code *RESTATE* equal to 1 if the financial statements are later restated, and 0 otherwise. We estimate this logistic regression, where *P* is Prob(*RESTATE*=1) in the logit function:

$$\log\left[\frac{P_{it}}{1-P_{it}}\right] = a_0 + a_1 AUD\_NAR_i + \sum \beta_k Control_{kit} + Industry\ Effects + Year\ Effects \quad (2)$$

The other two measures capture perceived audit quality. The fourth measure is built on the earnings response coefficient (ERC), reflecting the equity market's audit quality

perception after Teoh and Wong (1993) and Aobdia et al. (2015).[18] If investors conclude that audit quality rises with partner narcissism, then ERCs will be higher for firms appointing more narcissistic auditors. We estimate the following model, where *CAR* is the three-day cumulative (market-adjusted) abnormal returns surrounding the semi-annual and annual earnings announcements as these two earnings numbers are audited. *UE* is the corresponding seasonally differenced earnings per share deflated by stock price at the end of the day, three days before the corresponding earnings announcement. Control variables are similar to those in model (1) and (2). Finally, we follow Aobdia et al. (2015) by including market-model Beta (*BETA*), earnings persistence (*PERSIST*), and an indicator of annual earnings (*ANNUAL*) in this model:

$$CAR_{it} = a_0 + a_1 UE_{it}*AUD\_NAR_i + a_2 UE_{it} + a_3 AUD\_NAR_i + \sum \gamma_k UE_{it}*Control_{kit} + \sum \beta_k Control_{kit} + Industry\ Effects + \sum \mu UE_{it}*Industry\ Effects + Year\ Effects + \sum \pi UE_{it}*Year\ Effects + \varepsilon_{it} \quad (3)$$

In our fifth measure, we follow extensive prior research (e.g., Pittman and Fortin, 2004; Mansi, Maxwell, and Miller, 2004; Dhaliwal, Hogan, Trezevant, and Wilkins, 2011), including on Taiwanese companies (e.g., Aobdia et al., 2015; Chi et al., 2017), by capturing lender audit quality perceptions with debt pricing in this model:

$$SPREAD_{it+1} = a_0 + a_1 AUD\_NAR_i + \sum \beta_k Control_k + Industry\ Effects + Year\ Effects + \varepsilon_{it} \quad (4)$$

After Chi et al. (2017), we define $SPREAD_{it+1}$ as the weighted average interest rate of new loans initiated in year t+1 for client firm i with loan amounts as weights minus the average of the 91-day Taiwan Treasury bill interest rates in year t+1. Besides the control variables in models (1) and (2), we include the ratio of plant, property and equipment assets (*TANGIBLE*), high interest rate coverage ratio (*DINTCOV*), loan amounts (*LNPROC*) and loan maturity (*LNMAT*) in the $Control_k$ vector. All control variables are measured at year t, except

[18] We continue to find supportive evidence that investors conclude that audit quality improves with partner narcissism when we follow prior research (e.g., Hogan, 1997), including on Taiwanese firms (e.g., Aodbia et al., 2015), by gauging their perceptions with IPO underpricing.

for *LNPROC* and *LNMAT* which reflect year *t*+1. Like with *SPREAD*, *LNPROC* and *LNMAT* are the weighted averages of loan facility level measures for firms with multiple loans in the year. Therefore, regression (4) reflects the firm-year level.[19]

In all regressions, we control for industry and year fixed effects. All of the continuous variables used in the estimations are winsorized at the 1% and 99% percentiles to mitigate the influence of outliers and potential database coding errors. For all regressions, our test statistics are based on standard errors clustered by firm.[20]

4 Main Results

4.1 Descriptive Statistics and Correlations

Table 1 presents descriptive statistics, which include that the mean of the absolute value of abnormal accruals (*ADACC*) is 0.057. The mean likelihood of future restatements (*RESTATE*) is 1.6%. These statistics are generally consistent with prior research analyzing the Taiwanese setting (e.g., Chin and Chi, 2009; Aobdia et al., 2015). The correlation matrix in Table 2 indicates that auditor narcissism (*AUD_NAR*) is significantly negatively correlated with *ADACC*, *STD_DD*, *RESTATE*, and *SPREAD*, providing some preliminary empirical support to the narrative that partner narcissism is positively associated with both actual and perceived audit quality.[21] Next, we analyze whether this evidence persists in a multivariate framework.

[19] In untabulated analyses, we also control for CEO narcissism measured with their signature size, although this nearly decimates the samples—we lose over 80% of the observations in some specifications—since data on CEO signatures suffers from poor availability. Nonetheless, we find that our core evidence generally continues to hold in these drastically smaller samples.

[20] Our inferences are robust to clustering the standard errors by audit partner (or double clustering by partner and year, or firm and year).

[21] We use both semiannual and annual earnings to conduct the ERC analysis. Only annual observations are used in the correlation computations in Table 2.

4.2 Evidence on Actual Audit Quality

We begin by examining the links between partner narcissism and actual audit quality by focusing on the absolute value of abnormal accruals (*ADACC*). In Table 3, we report in the first column that the coefficient on *AUD_NAR* is -0.010 and statistically significant at the 1% level, implying that clients that hire more narcissistic partners benefit from higher audit quality. The coefficient estimates on the control variables are largely consistent with expectations formed based on prior research. In the second column, we report the least squares results when we specify *STD_DD* as the dependent variable. Again, the coefficient on *AUD_NAR* is negative (-0.009) and significant at the 1% level. In short, evidence from these regressions lends strong support that earnings quality is higher under more narcissistic partners. Next, we shift gears by examining the role that partner narcissism plays in the shaping the frequency of restatements.[22] In the third column, we find that the coefficient estimate on *AUD_NAR*, -1.035, loads negatively at the 1% level, consistent with more narcissistic partners constraining the incidence of misstatements.[23]

4.3 Audit Quality Measured by Market Perceptions

Table 4 reports the results when we analyze ERCs and debt pricing that reflect investor and lender perceptions, respectively. For the sake of brevity, we do not tabulate the results on the interactions between *UE* and the control variables. In the first column, the coefficient on *UE*AUD_NAR* loads positively at the 5% level, implying that auditor narcissism increases the

[22] Analyzing restatements, which represent an egregious audit failure since a clean opinion was issued on materially inaccurate financial statements, complements examining accruals-based audit quality proxies that capture earnings management that may be within the confines of GAAP. DeFond and Zhang (2014) outline the implications of focusing on accruals (e.g., continuous nature better suits small samples, although such indirect proxies suffer from high measurement error) versus restatements (e.g., low measurement error, although their infrequency undermines statistically power).

[23] While it is difficult to assess economic significance with respect to accruals related variables, it is relatively straightforward to interpret the economic significance with respect to the probability of a restatement. Based on the standard deviation of *AUD_NAR* and the odds ratio from the logistic regression, a one standard deviation increase in narcissism (*AUD_NAR*) is associated with a 23% reduction in the odds of an accounting restatement.

market reaction to unexpected earnings. This evidence suggests that investors perceive that partner narcissism improves earnings quality. In the second column, we find that the coefficient on *AUD_NAR* enters negatively at the 1% level in the interest rate spread regression, implying that firms relying on more narcissistic partners attract cheaper debt financing.[24] Collectively, the results in Table 4 on audit quality perceptions complements our earlier evidence that partner narcissism leads to higher actual audit quality.

4.4 Addressing Possible Selection and Reverse Causality Threats

4.4.1 Selection and Mandatory Auditor Rotation

There is always the concern that the audit quality proxies reflect the client firm's innate financial reporting quality instead of the auditor's performance. In our case, narcissistic auditors may prefer high-quality clients with a sound financial reporting reputation (Cisek et al., 2014). As such, our earlier results may reflect client characteristics instead of audit quality. We address this threat by using the mandatory rotation of audit partners as an exogenous pairing of auditors and clients. In other words, we focus on partner changes only but exclude all voluntary partner rotations from this analysis. Although it is possible that narcissistic partners who are rotated away from a client (client A) choose a new client (client B) similar in financial reporting quality, it is more plausible that client B and client A are not necessarily of the same type or at least partners have much less room to influence client assignment under mandatory rotation. In addition, client A's new auditor is likely to have a different level of narcissism than the predecessor. We estimate a changes model by restricting our sample to firm-years with a change in auditors as a result of mandatory partner rotation. The dependent variable is now the change in audit quality (except *RESTATE*), and the key independent variable is the change in narcissism, ΔAUD_NAR, which is measured as the difference in

[24] Our core evidence persists when we use facility-level, instead of firm-year level, data after Aobdia et al. (2015). Similarly, our results are robust to using the raw interest rate instead of the interest rate spread.

signature size between the incumbent auditor who is rotated away and the successor under mandatory rotation.

The results are reported in Table 5. We find that the coefficient on Δ*AUD_NAR* is negative and significant in the earnings quality and debt pricing regressions, although it fails to load when we focus on restatements. In the ERC analysis in the last column, *UE**Δ*AUD_NAR* enters positively, consistent with expectations. The within-firm analysis generally reinforces that (the likely exogenous) increase in partner narcissism leads to higher audit quality, helping to dispel the concern that omitted firm-level characteristics are spuriously behind our earlier evidence. Additionally, in re-estimating the regressions after restricting the samples to firms with the same CFO, the same CEO, or both, before and after the auditor rotation to hold executive-level narcissism constant, we find nearly identical evidence.

4.4.2 Reverse Causality

Although prior research provides ample empirical support that signature size measures an individual's narcissism (Ham et al., 2017, 2018), it is plausible that for some reason when auditors have more confidence in the quality of their work, they sign their names in a larger size. In other words, variations in audit quality may cause variations in signature size. To tackle this concern, we perform the following analysis. For each auditor, we classify the clients into those of high audit quality with respect to each of the audit quality measures (firms whose *ADACC* are in the lowest tercile, whose *STD_DD* are in the lowest tercile, with no restatements, or whose *SPREAD* are in the lowest tercile, respectively) and low audit quality (firms whose *ADACC* are in the highest tercile, whose *STD_DD* are in the highest, having restatements, or whose *SPREAD* are in the highest tercile, respectively). Then, we compare the average signature size on audit reports of low audit quality clients with that of high audit quality clients of the same partner. Note that we cannot partition clients using

perceived audit quality based on ERC because we would need an ERC estimate for each firm-year. As indicated in Table 6, the differences, in both mean and median signature size, are statistically insignificant. This evidence implies that a specific partner's signature size does not vary over time or across different clients (with potentially different innate quality); rather, signature size varies primarily across partners. Moreover, to the extent that signature size as the measure of narcissism remains constant for each auditor, the results further confirm that narcissism is an enduring and fixed personality trait.

5 Cross-Sectional Tests: Auditor Independence and Auditor Competence

To provide more insight into the channels through which narcissism may affect audit quality, we conduct cross-sectional analysis to isolate whether the impact of narcissism on audit quality varies across settings where auditor independence or auditor competence is particularly important to ensuring high audit quality.

5.1 Client Importance and Auditor Narcissism

Auditor independence is more apt to be compromised with important clients (e.g., Chen, Sun, and Wu 2010). We define client importance (*CL_IMP*) as the ratio of the client total assets divided by the sum of total assets of all clients audited by the same partner in a given year. We nest *CL_IMP* and the interaction term between *CL_IMP* and *AUD_NAR* in our audit quality regressions (in the case of equity market audit quality perceptions, we use the three-way interaction *UE*AUD_NAR*CL_IMP* along with underlying two-way interactions). As reported in Panel A of Table 7, the coefficients on *AUD_NAR*CL_IMP* and *UE*AUD_NAR*CL_IMP* are statistically significant in the predicted directions. In addition, they have opposite signs from the coefficients on *CL_IMP* and *UE*CL_IMP*, indicating that although client importance negatively affects audit quality, partner narcissism mitigates this impact. For smaller, less valuable clients, it is presumably easier for all auditors to remain

independent (Nelson et al., 2002), implying that narcissism plays hardly any role in this situation. For larger and thus more important clients, partner narcissism translates into higher audit quality, suggesting that auditor narcissism matters more when auditor independence is more likely to be compromised. Next, we focus on auditor-client school ties to sharpen our inferences related to partner independence.

5.2 Auditor-Client School Ties and Auditor Narcissism

Prior social network research implies that audit quality suffers when auditors and their clients have school ties (Guan, Su, Yang, and Wu 2016; He, Pittman, Rui, and Wu 2017). Auditor independence is more likely to suffer when there is a social link between the auditor and client managers stemming from sharing an alma mater. We learn each lead audit partner's educational background from the audit firm's website. If such information is not available there, then we determine the lead partner's educational background through private interviews. We also collect the education background of the client firm's CEO, CFO, and board members from its annual report. We specify an indicator variable *TIE*, which equals 1 if the lead audit partner and the client CEO, CFO, or a board member went to the same university, and 0 otherwise.

In Table 7, we report the results in Panel B. The significant coefficients on the interaction terms between *AUD_NAR* and *TIE* imply that partner narcissism improves audit quality more when auditors and client share school ties. Although school ties generally undermine audit quality evident in *TIE* (*UE*TIE*) entering positively (negatively) in the regressions, school ties involving a narcissistic partner alleviates this adverse impact on audit

quality.[25] Collectively, this evidence reinforces that greater independence is behind more narcissistic partners conducting better audits.[26]

5.3 Audit Complexity and Auditor Narcissism

Next, we analyze engagement complexity in evaluating whether partner narcissism improves audit quality through the competence channel. In our first proxy for audit complexity, we follow Goncharov, Riedl, and Shellhorn (2014) by focusing on the number of segments in which the client operates. Specifically, we define *NSEG* as the natural logarithm of the number of segments that a client firm has and interact *NSEG* with *AUD_NAR*. As reported in Panel C of Table 7, the coefficients on *AUD_NAR*NSEG* and *UE*AUD_NAR*NSEG* fail to load.

Our second proxy for engagement complexity, *INVREC,* is the magnitude of inventories and account receivables scaled by total assets (e.g., Carson, Simnett, Soo, and Wright 2012). In Panel D, we report that the coefficients on the relevant interaction terms (*AUD_NAR*INVREC* or *UE*AUD_NAR*INVREC* for the ERC regression) are statistically indistinguishable from zero.

In our third proxy for engagement complexity, we specify the client's number of subsidiaries (e.g., Hay, Knechel, and Wong, 2006), *NSUB*, measured as the natural logarithm of one plus the number of subsidiaries. In Panel E, we report that the coefficients on the

[25] Another measure of social bonding that may undermine partner independence is auditor tenure. However, given that mandatory audit partner rotation began in 2008 in Taiwan and our sample period, 2006-2015, starts only slightly earlier, this prevents us from meaningfully examining any moderating role that partner tenure plays.

[26] The provision of non-audit services (NAS) to the client is another potential threat to auditor independence. However, in Taiwan, only firms whose non-audit service fees exceed 25% of the total fees were required to disclose NAS fees prior to 2009. Although all firms disclose NAS fees starting in 2009, nearly half of the sample firms only disclose fee ranges instead of specific amounts (this also applies to pre-2009 observations). For example, if a firm discloses that the NAS fee is within the range of zero to two million Taiwan dollars, then we cannot determine whether it purchases NAS (i.e., whether the non-audit fee is zero or some positive number less than two million). Despite these complications, by deleting observations with fee ranges or using the midpoint of range as the NAS fee amount, we generally find evidence consistent with our results using important clients and school ties as conditioning variables. However, it is important to interpret the NAS-based evidence as only suggestive given the data constraints.

interaction terms *AUD_NAR*NSUB* and *UE*AUD_NAR*NSUB* are statistically insignificant. Taken together, the evidence in Panels C to E implies that the importance of partner narcissism to audit quality does not hinge on engagement complexity. Overall, our research suggests that enhanced auditor independence is the main channel through which auditor narcissism improves audit quality.

6 Additional Analyses

6.1 Narcissism for Big Four vs. Non-Big Four Auditors

Our main evidence implies that actual and perceived audit quality is increasing in partner narcissism. However, the role that narcissism plays in audit engagements could vary systematically across Big Four and non-Big Four audit firms for at least two reasons. First, Big Four audit firms have more rigorous quality control structures designed to help them deliver uniform audit quality across engagements (e.g., Gul et al., 2013; El Ghoul et al., 2016).[27] Such structures should constrain the impact of partner-specific characteristics on audit quality (e.g., Kallunki et al., 2017). Second, relative to the non-Big Four audit firms, the Big Four usually assign larger, well-structured engagement teams, potentially diluting the impact of partner-level narcissism.[28] To analyze this issue, we augment the regressions in Tables 3 and 4 with

[27] El Ghoul et al. (2016) outline in detail many of the distinctions that imply that Big Four audit firms, in comparison to the non-Big Four, employ stricter quality control structures and more standardized audit techniques that reflect developments in professional standards and insights gathered from internal quality control reviews and external inspection reports. More generally, extant research implies that the Big Four are eager to supply uniform assurance services across engagements to protect their valuable reputations and to avoid becoming ensnarled in costly litigation (e.g., Cooper and Robson, 2006; Humphrey, Loft, and Woods, 2009). Additionally, DeAngelo (1981) holds that since no single client is economically important to larger audit firms, they are less apt to compromise their independence relative to smaller firms. Finally, some prior research argues that non-Big Four firms are closer to their clients, leaving their independence more vulnerable (e.g., Louis, 2005; Lawrence, Minutti-Meza, and Zhang, 2011).

[28] Prior research implies that the Big Four with vast resources at their disposal take steps to ensure that the engagement teams are staffed by highly competent and independent personnel, including by cultivating an audit firm culture that shapes individual auditors' values, ethics, and attitudes toward the importance of conducting high-quality audits; providing professional development opportunities and excellent technical support resources; developing networks to facilitate the sharing of state-of-the-art audit methodologies; structuring engagement teams to ensure that they have appropriate industry-

interaction terms, *AUD_NAR*BIG4* and *UE*AUD_NAR*BIG4*, and present the results in Table 8. Apart from the restatement regression where the coefficient on *AUD_NAR*BIG4* fails to load, we find that the impact of partner narcissism on audit quality is less pronounced in Big Four clients. At the bottom of the table, we report test statistics on the significance of the combined coefficients of *AUD_NAR+AUD_NAR*BIG4*, and *UE*AUD_NAR+UE*AUD_NAR*BIG4*. We find that, except for the restatement regression, these coefficients are statistically significant, indicating that audit quality rises with partner narcissism even in the Big Four. Consistent with expectations, our evidence suggests that partner narcissism leads to higher audit quality, although its impact is concentrated in non-Big Four engagements.

6.2 Type I and Type II Going Concern Reporting Errors

The likelihood of issuing going concern opinions on financially distressed clients, and, in particular, the likelihoods of making Type I and Type II going concern reporting errors, are alternative indicators of audit quality (e.g., DeFond, Raghunandan, and Subramanyam 2002; Myers, Schmidt, and Wilkins 2014). We use these alternative measures to test the robustness of the impact of partner narcissism. Moreover, the Type I (false positive) and Type II (false negative) error tests may enable us to learn more about the type of audit mistakes that narcissism helps to reduce.

We follow prior research by classifying firms with negative operating cash flows as experiencing financial distress (e.g., DeFond et al., 2002). We code an indicator variable *GC* that equals 1 if a going concern opinion is issued to a client in financial distress, and 0 otherwise. A partner commits a Type I error by rendering a going concern opinion but the client does not go bankrupt in the next year. We specify an indicator variable, *TYPEI_GCE*, to

based and transaction-based expertise; and providing all engagement team members with timely evaluations and sound coaching to ensure that their practical work experience suitably complements their formal training (e.g., Dopuch and Simunic, 1982; Jeppesen, 2007; Carson, 2009; Christensen et al., 2016).

indicate a Type I reporting error. An auditor makes a Type II error, denoted by the indicator variable *TYPEII_GCE*, if the client declares bankruptcy within one year of receiving a clean audit opinion. Table 9 reports the logistic estimation results. We find that partner narcissism has no perceptible impact on either the likelihood of issuing a going concern opinion or the likelihood of committing a Type I error. In contrast, our evidence strongly supports that partner narcissism lowers the likelihood of making a Type II reporting error. In theory, an auditor can reduce Type I errors by becoming exceedingly conservative in their reporting. Our results suggests that more narcissistic auditors are not more conservative than less narcissistic auditors in issuing going concern opinions, as they are equally likely to make Type I reporting errors. This result also helps explain why auditor narcissism does not increase the likelihood of issuing going concern opinions. The evidence that auditor narcissism reduces Type II errors implies that narcissistic partners are less likely to succumb to client pressure by issuing overly optimistic opinions. This corroborates our earlier evidence suggesting that narcissistic partners are less likely to compromise their independence.

6.3 Auditor Sanctions

Finally, we test whether partner narcissism affects the likelihood that they experience regulatory sanctions, another *ex post* audit quality measure. Partner sanctions are indicative of extremely low audit quality stemming from unethical and/or unprofessional behavior (Aobdia et al., 2015; He et al., 2016). A sanction can involve either a suspension or even the revocation of permission to practice. We identify auditors sanctioned from 1998 to 2016 using the TEJ Auditor Sanction database. There are 52 cases involving 41 auditors; some auditors are sanctioned multiple times. We test whether auditor narcissism affects the likelihood of being sanctioned (denoted with the indicator variable *SANCTION*), the number of times being sanctioned (*SANCTION_FREQ*) and the length of suspension (*SUSPENSION_LENGTH*, specified as the natural logarithm of one plus the number of months the sanctioned auditor is

suspended) conditional on being sanctioned. Although this analysis suffers from low power since sanctions are scarce, we report in Table 10 that the coefficients on *AUD_NAR* are negative and statistically significant in all three regressions: the logistic regression involving *SANCTION*, the ordered logit model involving *SANCTION_FREQ*, and the linear regression involving *SANCTION_LENGTH*. Our results suggest that narcissistic partners are less likely to be sanctioned, and, if they are, the sanctions are less frequent and less severe.

7 Conclusions

Set against recent evidence on the importance of executive-level narcissism to corporate decisions and economic outcomes (e.g., Aktas et al., 2016; Ham et al., 2017, 2018), we contribute to extant research by analyzing whether audit partner narcissism shapes audit quality. More specifically, we examine how partner narcissism, as measured by the signature size in audit reports, affects audit quality.

We find that auditor narcissism engenders higher audit quality evident in lowering the absolute value of abnormal accruals, increasing accrual quality, constraining the likelihood of restatements, and improving perceived audit quality according to clients' earnings response coefficients and borrowing costs. The results hold when estimating changes models where the changes in audit quality and auditor narcissism stem from mandatory audit partner rotation. We also find that audit quality does not reversely affect signature size of the same auditor, reinforcing the causal role of auditor narcissism.

The impact of narcissism is more pronounced when the clients are larger (and presumably more important) and when auditors and client executives share school ties. In contrast, we find no evidence that engagement complexity affects the impact of partner narcissism on audit quality. Collectively, these results suggest that auditor narcissism improves audit quality mainly through increased auditor independence instead of higher auditor competence. In additional evidence consistent with expectations, we find that

although partner narcissism translates into higher audit quality in both Big Four and non-Big Four audit firms, it has a smaller impact in the Big Four that are known to have robust quality control structures and more standardized audit methodologies, which narrows the scope for partner-level characteristics to matter. We also document that although partner narcissism is irrelevant to the probability of rendering a going concern opinion or committing a Type I going concern reporting error, it does reduce the likelihood of making a Type II error. Altogether, these results imply that more narcissistic auditors are less likely to succumb to client pressure by issuing an overly optimistic opinion. Finally, we find that more narcissistic auditors are less likely to be sanctioned by regulators, and, in the rare cases that they are sanctioned, the sanctions are less severe.

It is important to stress that our analysis is subject to several limitations. First, given that we cannot directly observe an auditor's (or any individual's) level of narcissism, we resort to relying on signature size to proxy for this personality trait after extensive prior research. However, this measure does have theoretical foundations in psychology and has been validated in lab settings. Moreover, in all regressions, we control for individual auditor characteristics such as gender, tenure, experience, and expertise that could potentially affect signature size. Second, our sample is restricted to Taiwanese firms and auditors. Although external validity remains a concern with any single-country study, this testing ground provides a fairly representative set observations given the similarity between Taiwan and the U.S. in accounting and auditing standards as well as the institutions governing their capital and audit markets. Indeed, prior research on audit partners focuses on Taiwan as an opportune setting when data constraints prevent analyzing questions using firms from the U.S. or other major markets (e.g., Chin and Chi, 2009; Aobdia et al., 2015; Chi et al., 2017). Still, we caution that our inferences may not generalize to audit partners practicing elsewhere.

References

AFL-CIO. 2011. *Comment on PCAOB Concept Release on Possible Revisions to PCAOB Standards Related to Reports on Audited Financial Statements*. PCAOB Release No. 2011-003 (September 30). New York, NY: PCAOB.

Aobdia, D., C. Lin, and R. Petacchi. 2015. Capital market consequences of audit partner quality. *The Accounting Review* 90: 2143-2176.

Aktas, N., E. Bodt, H. Bollaert, and R. Roll. 2016. CEO narcissism and the takeover process: From private initiation to deal completion. *Journal of Financial and Quantitative Analysis* 51: 113-137.

Ames, D., P. Rose, and C. Anderson. 2006. The NPI-16 as a short measure of narcissism. *Journal of Research in Personality* 40: 440-450.

Bertrand, M. and A. Schoar. 2003. Managing with style: The effects of managers on firm policies. *Quarterly Journal of Economics* 118: 1169-1208.

Byrne, K. and D. Worthy. 2013. Do narcissists make better decisions? An investigation of narcissism and dynamic decision-making performance. *Personality and Individual Differences* 55: 112-117.

Bryan, C.J., Adams, G.S., and Monin, B. 2013. When cheating would make you a cheater: Implicating the self prevents unethical behavior. *Journal of Experimental Psychology* 142: 1001-1005.

Bushman, R., R. Davidson, A. Dey, and A. Smith. 2018. Bank CEO materialism: Risk controls, culture, and tail risk. *Journal of Accounting and Economics* 65:191-220.

Cai, H., V. Kwan, and C. Sedikides. 2012. A sociocultural approach to narcissism: The case of modern China. *European Journal of Personality* 26: 529-535.

CalPERS. 2009. *Comment on PCAOB Concept Release on Requiring the Engagement Partner to Sign the Audit Report*. PCAOB Release No. 2009-005 (September 14). Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/022_CalPERS.pdf

Cameran, M., D. Campa, and J. R. Francis. 2018. How important are partner differences in explaining audit quality? Working paper, Bocconi University, International University of Monaco (IUM), and University of Missouri at Columbia.

Campbell, D. 2012. Employee selection as a control system. *Journal of Accounting Research* 50: 931-966.

Campbell, W., J. Foster, and E. Finkel. 2002. Does self-love lead to love for others? A story of narcissistic game playing. *Journal of Personality and Social Psychology* 83: 340-354.

Campbell, W. A. Goodie, and J. Foster. 2004. Narcissism, confidence, and risk attitude. *Journal of Behavioral Decision Making* 17: 297-311.

Carey, A., M. Brucks, A. Küfner, N. Holtzman, F. Deters, M. Back, M. Donnellan, J. Pennebaker, and M. Mehl. 2015. Narcissism and the use of personal pronouns revisited. *Journal of Personality and Social Psychology* 109: e1-e15.

Carcello, J. and C. Li. 2013. Costs and benefits of requiring an engagement partner signature: Recent experience in the United Kingdom. *The Accounting Review* 88: 1511-1546.

Carcello, J. V., R. H. Hermanson, and N. T. McGrath. 1992. Audit quality attributes: The perceptions of audit partners, preparers, and financial statement users. *Auditing: A Journal of Practice and Theory* 11: 1-15.

Carson, E. 2009. Industry specialization by global audit firm networks. *The Accounting Review*: 84: 355-382.

Carson, E., R. Simnett, B. Soo, and A. Wright. 2012. Changes in audit market competition and the Big N premium. *Auditing: A Journal of Practice and Theory* 31: 47-73.

Carlson, E. N., S. Vazire, and T. F. Oltmanns. 2011. You probably think this paper's about you: Narcissists' perceptions of their personality and reputation. *Journal of Personality and Social Psychology* 101: 185-201.

Chatterjee, A. and D. Hambrick. 2007. It's all about me: narcissistic Chief Executive Officers and their effects on company strategy and performance. *Administrative Science Quarterly* 52: 351-386.

Chen, C., C. Lin, and Y. Lin. 2008. Audit partner tenure, audit firm tenure, and discretionary accruals: Does long auditor tenure impair earnings quality? *Contemporary Accounting Research* 25: 415-445.

Chen, S., S. Y. J. Sun, and D. Wu. 2010. Client importance, institutional improvements, and audit quality in China: An office and individual auditor level analysis. *The Accounting Review* 85: 127-158.

Chi, W., L. Myers, T. Omer, and H. Xie. 2017. The effects of audit partner pre-client and client-specific experience on audit quality and on perceptions of audit quality. *Review of Accounting Studies* 22: 361-391.

Chin, C. and H. Chi. 2009. Reducing restatement with increased industry expertise. *Contemporary Accounting Research* 26: 729-765.

Chou, E. 2015. What's in a name? The toll e-signatures take on individual honesty. *Journal of Experimental Social Psychology*, 61: 84-95.

Christensen, B., S. Glover, T. Omer, and M. Shelley. 2016. Understanding audit quality: Insights from audit professionals and investors. *Contemporary Accounting Research* 33: 1648–1684.

Church, B.K., S. M. Davis, and S. A. McCracken. 2008. The auditor's reporting model: A literature overview and research synthesis. *Accounting Horizons* 22: 69-90.

Cisek, S., C. Sedikides, C. Hart, H. Godwin, V. Benson, and S. Liversedge. 2014. Narcissism and consumer behavior: A review and preliminary findings. *Frontiers in Psychology* 5: 1-9.

Cooper, D. J. and K. Robson. 2006. Accounting, professions and regulation: Locating the sites of professionalization. *Accounting, Organizations, and Society* 31: 415-444.

Council of Institutional Investors. 2009. *Comment on PCAOB Concept Release on Requiring the Engagement Partner to Sign the Audit Report. PCAOB Release No. 2009-005 (September 4)*. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/004_CII.pdf

Cramer, P. 1998. Freshman to senior year: A follow-up study of identity, narcissism, and defense mechanisms. *Journal of Research in Personality* 32: 156-172.

Davidson, R., A. Dey, ad A. Smith. 2015. Executives' "off-the-job" behavior, corporate culture, and financial reporting risk. *Journal of Financial Economics* 117: 5-28.

Dhaliwal, D., C. Hogan, R. Trezevant, and M. Wilkins. 2011. Internal control disclosure, monitoring, and the cost of debt. *The Accounting Review* 86: 1131-1156.

DeAngelo, L. E. 1981. Auditor size and audit quality. *Journal of Accounting and Economics* 3: 183-199.

Dechow, P., and I. Dichev. 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review* 77: 35–59.

DeFond, M., K. Raghunandan, and K. R. Subramanyam. 2002. Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions. *Journal of Accounting Research* 40: 1247-1274.

DeFond, M. and J. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory* 24: 5-30.

DeFond, M. and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58: 275-326.

Deloitte. 2009. Comment letter on: Concept release on requiring the engagement partner to sign the audit report. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/020_DT.pdf.

Dopuch, N. and D. Simunic. 1982. Competition in auditing: An assessment. In Symposium on Auditing Research IV. Urbana: University of Illinois: 403-450.

El Ghoul, S., O. Guedhami, and J. Pittman. 2016. Cross-country evidence on the importance of Big Four auditors to equity pricing: The mediating role of legal institutions. *Accounting, Organizations, and Society* 54: 60-81.

Emmons, R. 1987. Narcissism: theory and measurement. *Journal of Personality and Social Psychology* 52: 11-17.

Ernst & Young. 2009. Comment letter on: Concept release on requiring the engagement partner to sign the audit report. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/007_EY.pdf

Farwell, L. and R. Wohlwend-Lloyd 1998. Narcissistic processes: Optimistic expectations, favorable self-evaluations, and self-enhancing attributions. *Journal of Personality* 66: 65-83.

Federal Housing Finance Agency. 2011. *Comment on PCAOB Concept Release on Possible Revisions to PCAOB Standards Related to Reports on Audited Financial Statements*. PCAOB

Release No. 2011-003 (September 30). Available at: http://pcaobus.org/Rules/Rulemaking/Docket034/108.pdf

Foster, G. 1977. Quarterly accounting data: Time-series properties and predictive-ability results. *The Accounting Review* 52: 1-21.

Francis, J. and M. Yu. 2009. The effect of Big Four office size on audit quality. *The Accounting Review* 84: 1521–1552.

Freud, S. 1957. On narcissism: An introduction. In *The Standard Edition of The Complete Psychological Works of Sigmund Freud*, Edited by J. Strachey, Hogarth Press, London, U.K.: 67-104.

Goncharov, I., E. J. Riedl, and T. Sellhorn. 2014. Fair value and audit fees. *Review of Accounting Studies* 19: 210-241.

Goodwin, J. and D. Wu. 2014. Is the effect of industry expertise on audit pricing an office-level or a partner-level phenomenon? *Review of Accounting Studies* 19: 1532-1578.

Guan, Y., N. Su, Z. Yang, and D. Wu. 2016. Do school ties between auditors and client executives influence audit outcomes? *Journal of Accounting and Economics* 61: 506-525.

Grant Thornton. 2009. Comment letter on: Concept release on requiring the engagement partner to sign the audit report. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/013_GT.pdf

Gul, F., D. Wu, and Z. Yang. 2013. Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review* 88: 1993-2023.

Ham, C., M. Lang, N. Seybert, and S. Wang. 2017. CFO narcissism and financial reporting quality. *Journal of Accounting Research* 55: 1089-1135.

Ham, C., N. Seybert, and S. Wang. 2018. Narcissism is a bad sign: CEO signature size, investment, and performance. *Review of Accounting Studies*, forthcoming.

Hay, D., R. Knechel, and N. Wong. 2006. Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research* 23:141-191.

Hayward, M. and D. Hambrick. 1997. Explaining the premium paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly* 42: 103-127.

He, X., J. Pittman, and O. Rui. 2016. Reputational implications for partners after a major audit failure: Evidence from China. *Journal of Business Ethics* 138: 703-722.

He, X., J. A. Pittman, O. M. Rui and D. Wu. 2017. Do social ties between external auditors and audit committee members affect audit quality? *The Accounting Review* 92: 61-87.

Hogan, C. E. 1997. Costs and benefits of audit quality in the IPO market: A self-selection analysis. *The Accounting Review* 72: 67-86.

Hopwood, A., J. McKeown, and J. Mutchler. 1989. A test of the incremental explanatory power of opinions qualified for consistency and uncertainty. *The Accounting Review* 64: 28-48.

Humphrey, C., A. Loft, and M. Woods. 2009. The global audit profession and the international

financial architecture: Understanding regulatory relationships at a time of financial crisis. *Accounting, Organizations and Society* 34: 810-825.

Jeppesen, K.K. 2007. Organizational risk in large audit firms. *Managerial Auditing Journal* 22: 590-603.

Jia, T., L. van Lent, and Y. Zeng. 2014. Masculinity, testosterone, and financial misreporting. *Journal of Accounting Research* 52: 1195-1246.

Jorgenson, D. 1977. Signature size and dominance: A brief note. *Journal of Psychology* 97: 269-270.

Judge, T., J. Lepine, and B. Rich. 2006. Loving yourself abundantly: Relationship of the narcissistic personality to self-and other perceptions of workplace deviance, leadership, and task and contextual performance. *Journal of Applied Psychology* 91: 762-776.

Kallunki, J, J Mikkonen, L. Niemi, and H. Nilsson. 2017. IQ and audit quality: Do smarter auditors deliver better audits? Working paper, Stockholm School of Economics.

Kettle, K.L., and G. Haubl. 2011. The signature effect: Signing influences consumption related behavior by priming self-identity. *Journal of Consumer Research* 38: 474-489.

Koch, I., and Biemann, T. 2014. Signs of narcissism of CEOs: Validating a widely used measure. *Academy of Management Proceedings*.

Koole, S. L. and B. W. Pelham. 2003. On the nature of implicit self-esteem: The case of the name letter effect. In S. Spencer, S. Fein, & M. P. Zanna (Eds.), Motivated social perception: The Ontario symposium (pp. 93–116). Hillsdale, NJ: Lawrence Erlbaum.

KPMG. 2009. Comment letter on: Concept release on requiring the engagement partner to sign the audit report. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/021_KPMG.pdf.

Krishnan, J. 1994. Auditor switching and conservatism. *The Accounting Review* 69: 200-215.

Kwan, V., L. Kuang, and N. Hui. 2009. Identifying the sources of self-esteem: The mixed medley of benevolence, merit, and bias. *Self and Identity* 8: 176-195.

Kwan, V., C. Hui, and J. McGee. 2010. What do we know about the Chinese self? Illustrations with self-esteem, self-efficacy, and self-enhancement. In *Oxford Handbook of Chinese Psychology*, edited by M. Bond, Oxford University Press, Oxford, UK.

Lawrence, A., M. Minutti-Meza, and P. Zhang. 2011. Can Big 4 versus non-Big 4 differences in audit-quality proxies be attributed to client characteristics? *The Accounting Review* 86: 259-286.

Lennox, C., X. Wu, and T. Zhang. 2014. Audit adjustments and measures of earnings quality. Working paper, Nanyang Technological University.

Lennox, C. S., and Wu, X., 2018. A review of the archival literature on audit partners. *Accounting Horizons*, forthcoming.

Louis, H. 2005. Acquirers' abnormal returns and the non-Big 4 auditor clientele effect. *Journal of Accounting and Economics* 40: 75-99.

Maccoby, M. 2000. Narcissistic leaders: The incredible pros, the inevitable cons. *Harvard Business Review* 78: 68-78.

Maccoby, M. 2003. *The Productive Narcissist*. Broadway Books, New York.

Malmendier, U. and G. Tate. 2008. Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics* 89: 20-43.

Mansi, S. A., W.F. Maxwell, and D. P. Miller. 2004. Does auditor quality and tenure matter to investors? Evidence from the bond market. *Journal of Accounting Research* 42: 755–-793.

Miller J., L. Maples, L. Buffardi, H. Cai, B. Gentile, Y. Kisbu-Sakarya, V. Kwan, A. LoPilato, L. Pendry, C. Sedikides, L. Siedor, and W. Campbell. 2015. Narcissism and United States' culture: The view from home and around the world. *Journal of Personality and Social Psychology* 105: 1068-1089.

Myers, J., L. Myers, and T. Omer. 2003. Exploring the terms of the auditor-client relationship and the quality of earnings: The case for mandatory auditor rotation? *The Accounting Review* 78: 779-799.

Myers, L., J. Schmidt, and M. Wilkins. 2014. An investigation of recent changes in going concern reporting decisions among Big N and non-Big N auditors. *Review of Quantitative Finance and Accounting* 43: 155-172.

Nelson, M.W., J.A. Elliott, R.L. Tarpley. 2002. Evidence from auditors about managers' and auditors' earnings management decisions. *The Accounting Review* 77: 175–202.

Nelson, M. and H. Tan. 2005. Judgment and decision making research in auditing: A task, person, and interpersonal interaction perspective. *Auditing: A Journal of Practice & Theory* 24: 41-71.

Nevicka, B., F. Ten Velden, A. De Hoogh, and A. Van Vianen. 2011. Reality at odds with perceptions: Narcissistic leaders and group performance. *Psychological Science* 22: 1259-1264.

Nevicka, B., M. Baas, and F. Ten Velden. 2016. The bright side of threatened narcissism: Improved performance following ego threat. *Journal of Personality* 84: 809-823.

Newton, N., D. Wang, and M. Wilkins. 2023. Does a lack of choice lead to lower quality? Evidence from auditor competition and client restatements. *Auditing: A Journal of Practice and Theory* 32: 31-67.

Pittman, J. and S. Fortin. 2004. Auditor choice and cost of debt capital for newly public firms. *Journal of Accounting and Economics* 37: 113-136.

PricewaterhouseCoopers. 2009. Comment letter on: Concept release on requiring the engagement partner to sign the audit report. Available at: http://pcaobus.org/Rules/Rulemaking/Docket029/014_PwC.pdf

Public Company Accounting Oversight Board (PCAOB). 2009. *Concept Release on Requiring the Engagement Partner to Sign the Audit Report*. PCAOB Release No. 2009-005. Washington, DC: PCAOB.

Public Company Accounting Oversight Board (PCAOB). 2013. *Improving Transparency of Audits: Proposed Amendments to PCAOB Auditing Standards to Provide Disclosure in the Auditor's Report of Certain Participants in the Audit.* PCAOB Release No. 2013-009. Washington, DC: PCAOB.

Raskin, R., and T. Howard. 1988. A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology* 54: 890-902.

Reichelt, K. and D. Wang. 2010. National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48: 647-686.

Rudman, L., M. Dohn, and K. Fairchild. 2007. Implicit self-esteem compensation: Automatic threat defense. *Journal of Personality and Social Psychology* 93: 798-813.

Teoh, S. and T.J. Wong. 1993. Perceived auditor quality and the earnings response coefficient. *The Accounting R*eview 68: 346–366.

Trotman, K., T. Bauer, and K. Humphreys. 2015. Group judgement and decision making in auditing: Past and future research. *Accounting, Organization and Society* 47: 56-72.

Wallace, H. and R. Baumeister. 2002. The performance of narcissists rises and falls with perceived opportunity of glory. *Journal of Personality and Social Psychology* 82: 819-834.

Webb, E., Campbell, D., Schwartz, R., and Sechrest L. 1966. Unobtrusive Measures: Nonreactive Research in the Social Sciences. Chicago: Rand McNally.

Young, S., F. Du, K. Dworkis, and K. Olsen. 2016. It's all about all of us: The rise of narcissism and its implications for management control system research. *Journal of Management Accounting Research* 28: 39-55.

Zhou, Y. 2017. Narcissism and the art market performance. *European Journal of Finance* 23: 1197-1218.

Zhu, D. and G. Chen. 2015a. CEO narcissism and the impact of prior board experience on corporate strategy. *Administrative Science Quarterly* 60: 31-65.

Zhu, D. and G. Chen. 2015b. Narcissism, director selection, and risk-taking spending. *Strategic Management Journal* 36: 2075-2098.

Zweigenhaft, R., and D. Marlowe. 1973. Signature size: Studies in expressive movement. *Journal of Consulting and Clinical Psychology* 40: 469-473.

Zweigenhaft, R. 1977. The empirical study of signature size. *Social Behavior and Personality* 5: 177-185.

Table 1
Pooled Firm-Year Descriptive Statistics

Variables	n	Mean	Median	Std. Dev.	Min	Max
ADACC	11,867	0.057	0.040	0.057	0.000	0.587
STD_DD	10,335	0.068	0.060	0.038	0.002	0.308
RESTATE	12,244	0.016	0.000	0.126	0.000	1.000
CAR	11,252	-0.004	-0.005	0.041	-0.124	0.137
SPREAD	3,209	1.958	1.856	0.694	0.488	5.412
AUD_NAR	12,244	9.826	9.808	0.251	8.726	11.222
AUD_SPEC	12,244	0.139	0.000	0.346	0.000	1.000
AUD_TENURE	12,244	4.913	4.000	3.151	1.000	23.000
AUD_EXP	12,244	10.960	11.000	5.619	1.000	33.000
AUD_FEMALE	12,244	0.342	0.000	0.474	0.000	1.000
CPAFIRM_SPEC	12,244	0.367	0.000	0.482	0.000	1.000
CPAFIRM_TENURE	12,244	10.027	9.000	6.121	1.000	33.000
BIG4	12,244	0.849	1.000	0.358	0.000	1.000
SIZE	12,244	15.316	15.116	1.424	12.538	19.729
SALESGROWTH	12,244	0.059	0.023	0.329	-0.654	1.780
SALESVOLATILITY	12,244	0.173	0.114	0.192	0.006	1.203
CFO	12,244	0.067	0.066	0.111	-0.330	0.380
CFOVOLATILITY	12,244	0.072	0.052	0.071	0.004	0.442
DEBT	12,244	0.411	0.412	0.178	0.057	0.851
LOSS	12,244	0.257	0.000	0.437	0.000	1.000
BANKRUPTCY	12,244	3.786	2.772	3.877	-0.928	25.933
VOLATILITY	12,244	0.120	0.106	0.067	0.026	0.390
MB	12,244	1.608	1.246	1.212	0.318	7.501
AGE	12,244	3.220	3.258	0.481	1.946	4.094
OPERCYCLE	12,244	2.625	2.468	0.818	1.249	6.331
UE	11,252	-0.006	0.000	0.129	-0.608	0.595
BETA	11,252	1.053	0.998	0.772	-0.968	3.546
PERSIST	11,252	0.210	0.200	0.448	-0.870	1.491
TANGBILE	3,209	0.331	0.325	0.187	0.001	0.796
DINTCOV	3,209	0.500	1.000	0.500	0.000	1.000
LNPROC	3,209	12.952	12.916	1.831	8.582	17.519
LNMAT	3,209	7.089	6.999	0.601	5.919	8.611

Variable Definitions:

ADACC = absolute value of abnormal accruals derived from the modified Jones model adjusted for performance (ROA);

STD_DD = standard deviation of firm-level residuals from the cross-sectional estimation of Dechow and Dichev (2002) model over five-year rolling windows;

RESTATE = indicator variable that takes the value of 1 if a client's annual financial statements is misstated, and 0 otherwise.

CAR = three-day cumulative (market-adjusted) abnormal returns surrounding the semi-annual and annual earnings announcements;

SPREAD = weighted average interest rate of new loans initiated in year *t*+1 for client firm *i* with loan amounts as weights minus the average of the 91-day Taiwan Treasury bill interest rates in year *t+1*.

AUD_NAR = natural logarithm of the average area per character of the auditor's signature;

AUD_SPEC = indicator variable that takes the value of 1 if the auditor has the highest number of clients in the client's industry in a specific fiscal year, and 0 otherwise;

AUD_TENURE = number of years that the auditor is retained by the client firm;

AUD_EXP = number of years since the auditor became a registered public accountant;

AUD_FEMALE = indicator variable that takes the value of 1 if the auditor is female, and 0 otherwise;

CPAFIRM_SPEC	=	indicator variable that takes the value of 1 if the client's audit firm has the highest number of clients in the client's industry in a specific year, and 0 otherwise;
CPAFIRM_TENURE	=	number of years an audit firm is retained by the client firm;
BIG4	=	indicator variable that takes the value of 1 if a firm is audited by a Big 4 audit firm, and 0 otherwise;
SIZE	=	natural logarithm of a client's total assets (in $ thousands);
SALESGROWTH	=	one-year growth rate of the client firm's sales revenue;
SALESVOLATILITY	=	standard deviation of sales revenue of the client firm over three-year rolling windows;
CFO	=	operating cash flows deflated by lagged total assets of the client;
CFOVOLATILITY	=	standard deviation of *CFO*. We use a rolling window and require three years of data to estimate;
DEBT	=	client's total liabilities deflated by total assets;
LOSS	=	indicator variable that takes the value of 1 if the client's income before extraordinary items is negative, and 0 otherwise;
BANKRUPTCY	=	Altman Z-score of the client firm that measures of the probability of bankruptcy, with a lower value indicating greater financial distress;
VOLATILITY	=	client's stock volatility, calculated as the standard deviation of 12 monthly stock returns for the current fiscal year;
MB	=	ratio of a client's market value of equity to its book value of equity;
AGE	=	natural logarithm of the number of years since the client firm's incorporation;
OPERCYCLE	=	natural logarithm of the same of account receivables turnover inventory turnover in days: ln{360/[Sales/Average Accounts Receivable] + 360/[Cost of Goods Sold/Average Inventory]};
UE	=	seasonally differenced semiannual and annual earnings per share deflated by stock price at the end of the day, three days before the corresponding earnings announcement;
BETA	=	market-model beta, estimated over the 12 months preceding the earnings announcement period;
PERSIST	=	autoregressive coefficient from Foster's (1977) model estimated over the sixteen quarters prior to the earnings announcement;
TANGIBLE	=	ratio of plant property and equipment to total assets;
DINTCOV	=	indicator variable that takes the value of 1 if interest rate coverage is above median, and 0 otherwise, where interest rate coverage is income before interest expenses and taxes divided by interest expenses;
LNPROC	=	natural logarithm of loan amount. It is the weighted averages of loan facility level measures for firms with multiple loans in the year;
LNMAT	=	natural logarithm of loan maturity. It is the weighted averages of loan facility level measures for firms with multiple loans in the year.

Variables are based on data from the Taiwan Economic Journal (TEJ) database.

Table 2
Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) *ADACC*		**0.238**	**0.024**	0.001	**0.132**	**-0.039**	**-0.019**	**-0.084**	-0.004	-0.017	**-0.022**
(2) *STD_DD*	**0.196**		**0.025**	**-0.019**	**0.206**	**-0.060**	**-0.086**	**-0.140**	-0.011	**-0.028**	**-0.040**
(3) *RESTATE*	**0.019**	0.009		**-0.031**	**0.052**	**-0.028**	**0.018**	-0.008	0.002	-0.002	**-0.035**
(4) *CAR*	0.002	**-0.022**	**-0.027**		**-0.066**	**0.023**	**0.017**	**0.029**	**0.023**	0.011	-0.010
(5) *SPREAD*	**0.149**	0.186	0.064	-0.069		**-0.089**	**-0.055**	**-0.108**	**-0.074**	**-0.046**	**-0.077**
(6) *AUD_NAR*	**-0.034**	**-0.049**	**-0.023**	**0.025**	**-0.074**		**0.027**	**-0.014**	**0.090**	**0.072**	**-0.300**
(7) *AUD_SPEC*	**-0.025**	**-0.083**	**0.018**	0.015	**-0.057**	**0.021**		**0.060**	**0.054**	**0.019**	**0.096**
(8) *AUD_TENURE*	**-0.069**	**-0.129**	**-0.021**	0.031	**-0.103**	-0.016	**0.047**		**0.499**	**-0.029**	-0.009
(9) *AUD_EXP*	-0.016	**-0.036**	-0.005	0.028	**-0.060**	**0.070**	**0.053**	**0.480**		**-0.121**	**-0.024**
(10) *AUD_FEMALE*	-0.012	**-0.020**	-0.002	0.011	**-0.428**	**0.089**	**0.019**	-0.017	**-0.107**		-0.006
(11) *CPAFIRM_SPEC*	-0.016	**-0.034**	**-0.035**	-0.012	**-0.769**	**-0.253**	**0.096**	0.007	-0.012	-0.006	
(12) *CPAFIRM_TENURE*	**-0.116**	**-0.240**	0.000	0.032	**-0.222**	0.015	**0.079**	**0.461**	**0.114**	**0.074**	**0.046**
(13) *BIG4*	**-0.038**	**-0.048**	**-0.069**	0.011	**-0.196**	**0.057**	**0.065**	**-0.085**	**-0.059**	**0.151**	**0.314**
(14) *SIZE*	**-0.112**	**-0.200**	**0.025**	0.027	**-0.314**	0.008	**0.077**	**0.155**	**0.030**	**0.037**	**0.048**
(15) *SALESGROWTH*	**0.047**	**-0.022**	-0.002	0.049	-0.006	**0.013**	0.013	**-0.020**	-0.016	0.003	0.016
(16) *SALESVOLATILITY*	**0.175**	**0.223**	0.013	-0.024	**0.111**	0.006	-0.017	**-0.103**	**-0.037**	-0.015	**-0.033**
(17) *CFO*	**-0.048**	**-0.095**	**-0.025**	0.110	**-0.316**	**0.019**	**-0.025**	-0.011	-0.014	-0.014	**0.049**
(18) *CFOVOLATILITY*	**0.353**	**0.275**	**0.022**	-0.004	**0.140**	**0.020**	**-0.023**	**-0.085**	-0.007	0.002	**-0.040**
(19) *DEBT*	**0.037**	**0.047**	**0.056**	**-0.055**	**0.242**	**0.031**	-0.006	**0.019**	0.003	-0.004	**-0.038**
(20) *LOSS*	**0.018**	**0.129**	**0.042**	**-0.132**	**0.265**	**-0.056**	**-0.042**	**-0.046**	**-0.029**	-0.012	**-0.045**
(21) *BANKRUPTCY*	**0.058**	-0.013	**-0.070**	**0.117**	**-0.333**	-0.001	0.017	**-0.035**	0.012	0.009	**0.038**
(22) *VOLATILITY*	**0.121**	**0.231**	**0.068**	**-0.079**	**0.207**	**-0.044**	**-0.057**	**-0.186**	**-0.124**	**-0.042**	**-0.048**
(23) *MB*	**0.103**	**0.112**	**-0.037**	**0.077**	**-0.108**	0.003	**-0.018**	**-0.078**	**0.026**	**-0.020**	0.011
(24) *AGE*	**-0.129**	**-0.241**	**0.027**	**0.024**	**-0.112**	0.012	**0.102**	**0.213**	**0.089**	**0.031**	-0.012
(25) *OPERCYCLE*	**0.046**	**-0.043**	-0.003	**0.059**	**-0.108**	0.013	**0.068**	0.011	**0.025**	**0.023**	**0.019**
(26) *UE*	**0.022**	**-0.023**	-0.004	**0.108**	-0.019	0.007	0.004	**0.031**	0.015	-0.011	-0.008
(27) *BETA*	-0.013	**0.038**	0.007	**-0.055**	0.013	**-0.034**	-0.007	**-0.018**	**-0.057**	-0.007	0.002
(28) *PERSIST*	**0.034**	**0.029**	0.001	0.007	0.023	0.006	-0.008	**-0.030**	**0.018**	0.012	**0.038**
(29) *TANGBILE*	**-0.240**	**-0.195**	**-0.034**	**-0.062**	**-0.066**	0.009	-0.017	-0.014	**-0.087**	0.004	**0.045**
(30) *DINTCOV*	0.001	**-0.120**	-0.025	**0.129**	**-0.359**	0.028	**0.034**	0.008	-0.010	-0.013	**0.017**
(31) *LNPROC*	**-0.041**	**-0.136**	0.027	**0.042**	**-0.175**	-0.010	**0.030**	**0.033**	-0.002	-0.014	0.052
(32) *LNMAT*	-0.008	**-0.032**	0.003	-0.021	**0.049**	**-0.036**	-0.025	**-0.036**	-0.013	0.022	**-0.003**

Table 2 (Continued)

Variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1) *ADACC*	**-0.133**	**-0.044**	**-0.122**	**0.146**	**0.229**	**-0.148**	**0.473**	**0.057**	**0.020**	**0.052**	**0.144**
(2) *STD_DD*	**-0.239**	**-0.057**	**-0.217**	**0.044**	**0.224**	**-0.098**	**0.297**	**0.036**	**0.143**	**0.081**	**0.236**
(3) *RESTATE*	0.011	**-0.069**	**0.029**	0.014	**0.025**	**-0.023**	**0.037**	**0.059**	**0.042**	**-0.037**	**0.069**
(4) *CAR*	**0.024**	0.015	**0.016**	0.036	**-0.020**	**0.093**	0.002	**-0.060**	**-0.132**	**0.070**	**-0.066**
(5) *SPREAD*	**-0.224**	**-0.201**	**-0.301**	0.019	**0.081**	**-0.288**	**0.145**	**0.245**	**0.281**	**-0.281**	**0.233**
(6) *AUD_NAR*	0.004	**0.041**	-0.000	0.018	**0.021**	0.023	0.002	**0.037**	**-0.051**	-0.008	**-0.039**
(7) *AUD_SPEC*	**0.110**	**0.065**	**0.091**	0.004	0.005	-0.014	-0.017	-0.008	**-0.042**	**0.021**	**-0.047**
(8) *AUD_TENURE*	**0.454**	**-0.121**	**0.161**	**-0.034**	**-0.116**	-0.003	**-0.096**	**0.026**	**-0.046**	**-0.068**	**-0.179**
(9) *AUD_EXP*	**0.122**	**-0.080**	**0.033**	-0.010	**-0.035**	-0.016	0.012	0.005	**-0.023**	0.007	**-0.100**
(10) *AUD_FEMALE*	**0.069**	**0.151**	**0.034**	0.001	-0.010	-0.004	0.004	-0.004	-0.012	0.001	**-0.040**
(11) *CPAFIRM_SPEC*	**0.048**	**0.314**	**0.049**	0.002	-0.015	**0.051**	**-0.030**	**-0.041**	**-0.045**	**0.032**	**-0.050**
(12) *CPAFIRM_TENURE*		0.004	**0.401**	**-0.079**	**-0.197**	**-0.019**	**-0.184**	**0.080**	**-0.024**	**-0.152**	**-0.278**
(13) *BIG4*	**0.020**		**0.124**	-0.003	-0.008	**0.120**	**-0.057**	**-0.043**	**-0.088**	**0.070**	**-0.040**
(14) *SIZE*	**0.376**	**0.107**		**0.054**	**-0.078**	**0.113**	**-0.146**	**0.310**	**-0.204**	**-0.186**	**-0.250**
(15) *SALESGROWTH*	**-0.069**	**0.037**	**0.100**		**0.122**	**0.067**	**0.146**	**0.069**	**-0.244**	**0.104**	**0.070**
(16) *SALESVOLATILITY*	**-0.210**	0.006	**-0.096**	-0.012		**-0.069**	**0.471**	**0.134**	-0.005	**0.066**	**0.156**
(17) *CFO*	**-0.032**	**0.122**	**0.101**	**0.138**	-0.009		**-0.156**	**-0.233**	**-0.359**	**0.276**	**-0.066**
(18) *CFOVOLATILITY*	**-0.202**	**-0.036**	**-0.162**	**0.018**	**0.427**	**-0.050**		**0.064**	0.009	**0.095**	**0.160**
(19) *DEBT*	**0.081**	**-0.037**	**0.321**	**0.075**	**0.150**	**-0.239**	**0.040**		**0.087**	**-0.598**	**0.058**
(20) *LOSS*	**-0.028**	**-0.088**	**-0.215**	**-0.323**	-0.005	**-0.412**	0.008	**0.080**		**-0.160**	**0.190**
(21) *BANKRUPTCY*	**-0.142**	**0.103**	**-0.203**	**0.189**	**0.110**	**0.401**	**0.117**	**-0.678**	**-0.371**		**0.076**
(22) *VOLATILITY*	**-0.288**	**-0.024**	**-0.233**	**0.028**	**0.176**	**-0.065**	**0.174**	**0.039**	**0.200**	**-0.031**	
(23) *MB*	**-0.209**	**0.065**	**-0.135**	**0.271**	**0.127**	**0.268**	**0.148**	**-0.110**	**-0.216**	**0.549**	**0.140**
(24) *AGE*	**0.443**	**-0.168**	**0.270**	**-0.047**	**-0.252**	**-0.101**	**-0.232**	**0.138**	**-0.032**	**-0.243**	**-0.260**
(25) *OPERCYCLE*	**0.078**	0.015	**0.177**	**0.148**	**0.109**	**0.078**	**0.047**	**0.058**	**-0.083**	**0.119**	**-0.071**
(26) *UE*	**0.030**	-0.012	0.006	**0.386**	**-0.062**	**0.102**	**-0.035**	0.008	**-0.189**	**0.110**	**0.039**
(27) *BETA*	-0.006	**0.048**	**0.108**	**0.020**	**0.045**	**-0.043**	**0.016**	0.008	**0.090**	**-0.053**	**0.476**
(28) *PERSIST*	**-0.103**	**0.049**	**-0.017**	**0.053**	**0.023**	**0.074**	**0.025**	**-0.019**	**-0.054**	**0.088**	**0.046**
(29) *TANGBILE*	-0.019	**0.085**	-0.015	-0.007	**-0.251**	**0.251**	**-0.309**	**-0.111**	**0.085**	**-0.167**	**0.030**
(30) *DINTCOV*	-0.013	**0.049**	**0.124**	**0.188**	**-0.059**	**0.410**	**-0.056**	**-0.409**	**-0.455**	**0.552**	**-0.105**
(31) *LNPROC*	**0.192**	**0.085**	**0.618**	**0.045**	**-0.083**	**0.106**	**-0.042**	**0.170**	**-0.164**	**-0.058**	**-0.119**
(32) *LNMAT*	**-0.061**	**0.035**	**-0.045**	**0.037**	-0.002	0.011	0.022	-0.019	-0.013	0.025	**0.044**

Table 2 (Continued)

Variables	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
(1) *ADACC*	**0.142**	**-0.127**	**0.076**	**0.034**	**-0.024**	**0.031**	**-0.293**	-0.007	-0.018	-0.000
(2) *STD_DD*	**0.155**	**-0.248**	-0.017	-0.006	**0.029**	**0.022**	**-0.205**	**-0.105**	**-0.133**	-0.019
(3) *RESTATE*	-0.013	**0.027**	0.001	-0.007	0.006	0.000	**-0.032**	-0.026	**0.029**	0.005
(4) *CAR*	**0.036**	**0.021**	**0.038**	**0.095**	**-0.039**	0.009	**-0.069**	**0.124**	**0.032**	-0.016
(5) *SPREAD*	**-0.068**	**-0.085**	**-0.070**	0.001	0.029	-0.000	**-0.041**	**-0.350**	**-0.198**	-0.010
(6) *AUD_NAR*	0.008	0.009	0.007	0.011	**-0.033**	-0.000	0.016	**0.035**	-0.011	**-0.044**
(7) *AUD_SPEC*	-0.003	**0.098**	**0.055**	0.007	-0.005	-0.006	-0.025	**0.034**	**0.037**	-0.027
(8) *AUD_TENURE*	**-0.085**	**0.261**	0.005	0.008	**-0.018**	**-0.019**	-0.023	0.002	**0.049**	**-0.045**
(9) *AUD_EXP*	**0.027**	**0.088**	**0.028**	0.013	**-0.043**	**0.018**	**-0.093**	-0.011	0.002	-0.017
(10) *AUD_FEMALE*	**-0.032**	**0.030**	**0.028**	-0.013	-0.007	0.010	-0.003	-0.013	-0.017	0.025
(11) *CPAFIRM_SPEC*	**0.018**	-0.014	0.013	-0.003	-0.000	**0.040**	**0.036**	0.017	**0.058**	0.004
(12) *CPAFIRM_TENURE*	**-0.188**	**0.482**	**0.052**	0.009	-0.004	**-0.102**	-0.026	0.000	**0.218**	**-0.080**
(13) *BIG4*	**0.044**	**-0.168**	-0.017	-0.008	**0.043**	**0.048**	**0.079**	**0.049**	**0.092**	**0.038**
(14) *SIZE*	**-0.116**	**0.240**	**0.116**	-0.003	**0.070**	-0.012	0.000	**0.132**	**0.644**	**-0.043**
(15) *SALESGROWTH*	**0.220**	**-0.062**	**0.146**	**0.243**	0.015	**0.034**	**-0.093**	**0.139**	**0.035**	**0.043**
(16) *SALESVOLATILITY*	**0.143**	**-0.232**	**0.115**	**-0.036**	**0.021**	-0.001	**-0.252**	**-0.053**	**-0.051**	-0.012
(17) *CFO*	**0.221**	**-0.094**	**0.046**	**0.054**	**-0.026**	**0.071**	**0.287**	**0.335**	**0.080**	0.011
(18) *CFOVOLATILITY*	**0.163**	**-0.188**	**0.103**	-0.008	-0.015	0.015	**-0.362**	**-0.061**	0.006	0.015
(19) *DEBT*	**-0.068**	**0.135**	**0.054**	-0.010	0.002	-0.013	**-0.098**	**-0.389**	**0.186**	-0.026
(20) *LOSS*	**-0.130**	**-0.028**	**-0.075**	**-0.178**	**0.096**	**-0.049**	**0.089**	**-0.455**	**-0.161**	-0.018
(21) *BANKRUPTCY*	**0.523**	**-0.259**	**0.052**	**0.063**	-0.004	**0.071**	**-0.146**	**0.365**	**-0.064**	**0.048**
(22) *VOLATILITY*	**0.245**	**-0.251**	**-0.053**	**0.041**	**0.418**	**0.037**	0.006	**-0.097**	**-0.118**	**0.041**
(23) *MB*		**-0.234**	**0.104**	**0.096**	**-0.019**	**0.131**	**0.031**	**0.185**	0.024	0.016
(24) *AGE*	**-0.239**		-0.003	**0.019**	**-0.077**	**-0.096**	-0.002	**-0.062**	**0.136**	**-0.072**
(25) *OPERCYCLE*	**0.081**	0.012		**0.039**	**-0.068**	-0.010	-0.006	**0.083**	**0.174**	-0.020
(26) *UE*	**0.185**	**0.034**	**0.070**		**-0.022**	**0.027**	**-0.047**	**0.120**	-0.001	-0.020
(27) *BETA*	**-0.056**	**-0.071**	**-0.052**	**-0.025**		-0.001	0.029	-0.022	0.006	-0.030
(28) *PERSIST*	**0.118**	**-0.100**	-0.015	0.008	-0.006		**-0.037**	**0.068**	0.004	**0.063**
(29) *TANGBILE*	**-0.035**	0.014	0.005	**-0.054**	0.024	**-0.036**		**-0.052**	**0.044**	**0.056**
(30) *DINTCOV*	**0.252**	**-0.058**	**0.086**	**0.148**	-0.022	**0.063**	**-0.046**		**0.085**	**-0.007**
(31) *LNPROC*	**0.032**	**0.157**	**0.235**	0.021	0.028	0.003	**0.037**	**0.087**		**0.233**
(32) *LNMAT*	0.013	**-0.070**	-0.015	-0.006	-0.019	**0.061**	**0.072**	-0.019	**0.259**	

This table reports the Pearson (above diagonal) and Spearman (below diagonal) correlations of variables used in main regressions. Correlation coefficients in bold are statistically significant at the 5% level or better.

Table 3
Auditor Narcissism and Actual Audit Quality

	Dependent Variable		
	ADACC	*STD_DD*	*RESTATE*
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**
Intercept	0.161***	0.210***	-21.874
	(7.73)	(8.33)	(0.01)
AUD_NAR	-0.010***	-0.009***	-1.035***
	(-4.96)	(-3.89)	(9.60)
AUD_SPEC	-0.003**	-0.007***	-0.247
	(-2.37)	(-5.65)	(0.80)
AUD_TENURE	-0.000**	-0.001***	-0.053*
	(-2.43)	(-2.89)	(3.48)
AUD_EXP	0.000	0.000***	0.041***
	(1.40)	(2.69)	(7.42)
AUD_FEMALE	-0.001	0.000	0.247
	(-1.10)	(0.25)	(2.04)
CPAFIRM_SPEC	-0.002*	-0.002	-0.397**
	(-1.68)	(-1.26)	(3.95)
CPAFIRM_TENURE	0.000	-0.000	0.020
	(1.02)	(-1.62)	(1.54)
BIG4	-0.000	-0.003	-0.676***
	(-0.08)	(-1.49)	(10.98)
SIZE	-0.002***	-0.003***	0.214***
	(-3.91)	(-4.36)	(10.41)
SALESGROWTH	0.013***	0.001	0.267
	(5.62)	(0.72)	(1.66)
SALESVOLATILITY	-0.004	0.013***	0.523
	(-0.95)	(3.41)	(1.61)
CFO	-0.059***	-0.009	-0.078
	(-5.80)	(-1.60)	(0.01)
CFOVOLATILITY	0.351***	0.105***	2.001*
	(23.48)	(9.54)	(3.18)
DEBT	0.006	0.014***	1.349**
	(1.23)	(2.60)	(4.96)
LOSS	-0.002	0.008***	0.670***
	(-1.43)	(5.74)	(12.85)
BANKRUPTCY	-0.000	0.000	0.024
	(-0.48)	(0.99)	(0.51)
VOLATILITY	0.012	0.039***	4.254***
	(1.18)	(4.39)	(13.50)
MB	0.003***	0.002**	-0.036
	(4.29)	(2.44)	(0.20)
AGE	-0.003**	-0.010***	0.141
	(-2.19)	(-5.50)	(0.39)
OPERCYCLE	0.002***	-0.001	-0.095
	(2.72)	(-1.43)	(0.72)
Industry Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Number of Observations	11,867	10,335	12,244
Adjusted R^2/Pseudo R^2	0.257	0.203	0.243

This table reports the OLS estimation results. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. All variables are defined in Table 1.

Table 4
Auditor Narcissism and Perceived Audit Quality

	Dependent Variable	
	CAR	***SPREAD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
Intercept	-0.002	4.955***
	(-0.18)	(9.27)
UE	-0.254***	
	(-3.01)	
AUD_NAR	0.003	-0.145***
	(1.60)	(-3.37)
*UE*AUD_NAR*	0.055***	
	(3.67)	
AUD_SPEC	0.001	-0.054*
	(0.69)	(-1.75)
AUD_TENURE	0.000	0.001
	(1.16)	(0.27)
AUD_EXP	0.000	-0.005*
	(0.54)	(-1.94)
AUD_FEMALE	0.000	-0.020
	(0.36)	(-0.90)
CPAFIRM_SPEC	-0.001	-0.013
	(-1.40)	(-0.45)
CPAFIRM_TENURE	-0.000	-0.005*
	(-0.94)	(-1.73)
BIG4	0.001	-0.163***
	(1.04)	(-3.68)
SIZE	-0.000	-0.080***
	(-0.19)	(-5.85)
SALESGROWTH		0.030
		(1.23)
SALESVOLATILITY		0.014
		(0.17)
CFO		-0.361***
		(-3.43)
CFOVOLATILITY		0.021
		(0.13)
DEBT	-0.009***	0.786***
	(-3.58)	(5.57)
LOSS	-0.008***	0.198***
	(-6.35)	(6.30)
BANKRUPTCY		-0.020
		(-1.53)
VOLATILITY	-0.005***	1.025***
	(-7.74)	(4.53)
MB	0.001**	-0.048**
	(1.97)	(-2.51)
AGE		0.038
		(1.06)
OPERCYCLE		-0.028
		(-1.59)
BETA	-0.001	
	(-1.35)	

PERSIST	-0.003	
	(-1.07)	
ANNUAL	-0.002	
	(-0.57)	
ADACC		-0.035
		(-0.20)
TANGIBLE		0.155
		(1.63)
DINTCOV		-0.167***
		(-6.81)
LNPROC		-0.031***
		(-3.55)
LNMAT		0.004
		(0.22)
*UE**Control Variables	Yes	No
Industry Fixed Effects	Yes	Yes
*UE**Industry Fixed Effects	Yes	No
Year Fixed Effects	Yes	Yes
*UE**Year Fixed Effects	Yes	No
Number of Observations	11,252	3,209
Adjusted R^2	0.056	0.496

This table reports the OLS estimation result. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. *CAR* is the three-day cumulative abnormal returns (market-adjusted) around the semi-annual and annual earnings announcements. *UE* is the corresponding seasonally differenced quarterly earnings per share deflated by stock price at the end of the day three days before the corresponding earnings announcement. *BETA* is market-model beta, estimated over 12 months prior to the earnings announcement period. *PERSIST* is the autoregressive coefficient from Foster's (1977) model estimated over the sixteen quarters prior to the earnings announcement. *ANNUAL* is an indicator variable equal to 1 for the annual earnings announcement and 0 otherwise. *SPREAD* is the weighted average interest rate of new loans initiated in year *t*+1 for client firm *i* with loan amounts as weights minus the average of the 91-day Taiwan Treasury bill interest rates in year *t+1*. *TANGIBLE* is the ratio of property, plant and equipment (PPE) to total assets. *DINTCOV* is an indicator variable equal to 1 if a firm's interest coverage ratio (income before interest expense and taxes divided by interest expense) is above the median interest coverage ratio in a given year, and 0 otherwise. *LNPROC* is the natural logarithm of the sum of loan amounts by a firm in a given year. *LNMAT* is the natural logarithm of weighted average of loan maturity by the facility amount. All other variables are defined in Table 1.

Table 5
Changes Models Stemming from Mandatory Auditor Rotation

	Dependent Variable				
	ΔADACC	*ΔSTD_DD*	*RESTATE*	*CAR*	*ΔSPREAD*
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
ΔAUD_NAR	-0.016***	-0.002*	-0.873	0.002	-0.193***
	(-3.35)	(-1.73)	(2.10)	(0.96)	(-2.80)
*UE***ΔAUD_NAR*				0.051**	
				(2.33)	
UE				0.029***	
				(2.86)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE**Control Variables	No	No	No	Yes	No
*UE**Industry Fixed Effects	No	No	No	Yes	No
*UE**Year Fixed Effects	No	No	No	Yes	No
Number of Observations	1,574	1,366	1,599	1,410	374
Adjusted R^2/Pseudo R^2	0.143	0.024	0.141	0.063	0.131

This table reports the OLS and logistic estimation results from changes models. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. All variables are defined in Table 1.

Table 6
Auditor Signature Size Partitioned by Client Audit Quality of the Same Auditor

	ADACC		*STD_DD*		*RESTATE*		*SPREAD*	
Partition	**Low**	**High**	**Low**	**High**	**No**	**Yes**	**Low**	**High**
Mean *AUD_NAR*	9.761	9.769	9.771	9.766	9.694	9.679	9.774	9.797
Test of difference in Mean *AUD_NAR*:	0.75		-0.42		0.33		1.46	
Paired t-test	(0.455)		(0.488)		(0.740)		(0.145)	
Median *AUD_NAR*	9.750	9.774	9.779	9.770	9.662	9.660	9.795	9.821
Test of difference in Median *AUD_NAR*:	2532.00		1231.50		36.00		1358.50	
Wilcoxon signed rank test	(0.335)		(0.597)		(0.708)		(0.323)	

This table reports mean and median differences in signature size of the same auditor across the high audit quality clients (*ADACC* are in the lowest tercile, *STD_DD* are in the lowest tercile, *RESTATE*=0, or *SPREAD* are in the lowest tercile) and low audit quality clients (*ADACC* are in the highest tercile, *STD_DD* are in the highest tercile, *RESTATE*=1, or *SPREAD* are in the highest tercile) audited by the same audit partner. The p-values of the mean difference and median difference tests are reported in parentheses.

Table 7
Effects of Client Importance, Auditor-Client School Ties, and Audit Complexity

Panel A: Effect of Client Importance

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPREAD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.005**	-0.006**	-0.096	0.003*	-0.070
	(-2.03)	(-2.02)	(0.04)	(1.71)	(-1.28)
*AUD_NAR*CL_IMP*	-0.021***	-0.013**	-2.672***		-0.259**
	(-3.01)	(-2.10)	(8.29)		(-2.21)
CL_IMP	0.204***	0.132**	26.419***	0.002	2.549**
	(3.04)	(2.12)	(8.60)	(1.18)	(2.21)
UE				-0.138	
				(-1.34)	
*UE*AUD_NAR*				0.036**	
				(2.02)	
*UE*AUD_NAR*CL_IMP*				0.085*	
				(1.71)	
*UE*CL_IMP*				-0.423*	
				(-1.66)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE*Control Variables	No	No	No	Yes	No
*UE*Industry Fixed Effects	No	No	No	Yes	No
*UE*Year Fixed Effects	No	No	No	Yes	No
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.258	0.204	0.249	0.056	0.497

Panel B: Effect of Auditor-Client School Ties

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPEARD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.009***	-0.008***	-0.724**	0.003*	-0.117***
	(-3.97)	(-3.09)	(3.17)	(1.68)	(-2.60)
*AUD_NAR*TIE*	-0.008*	-0.009**	-2.174**		-0.162**
	(-1.75)	(-2.17)	(5.48)		(-2.02)
TIE	0.078*	0.093**	21.325***	0.001	1.564**
	(1.76)	(2.18)	(5.58)	(0.83)	(1.98)
UE				-0.204**	
				(-2.23)	
*UE*AUD_NAR*				0.044***	
				(2.69)	
*UE*AUD_NAR*TIE*				0.071**	
				(2.27)	
*UE*TIE*				-0.374**	
				(-2.32)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes

*UE**Control Variables	No	No	No	Yes	No
*UE**Industry Fixed Effects	No	No	No	Yes	No
*UE**Year Fixed Effects	No	No	No	Yes	No
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.258	0.203	0.247	0.056	0.497

Panel C: Effect of Number of Segments

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPEARD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.014***	-0.011***	-0.460	0.003*	-0.178**
	(-3.90)	(-2.55)	(0.68)	(1.78)	(-2.27)
*AUD_NAR*NSEG*	0.006	0.002	-0.810		0.013
	(1.51)	(0.52)	(1.69)		(0.44)
NSEG	-0.063	-0.027	8.213	-0.004***	-0.118
	(-1.59)	(-0.58)	(1.81)	(-4.35)	(-0.40)
UE				-0.321***	
				(-2.80)	
*UE*AUD_NAR*				0.067***	
				(2.99)	
*UE*AUD_NAR*NSEG*				-0.021	
				(-0.77)	
*UE*NSEG*				0.106	
				(0.76)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE**Control Variables	No	No	No	Yes	No
*UE**Industry Fixed Effects	No	No	No	Yes	No
*UE**Year Fixed Effects	No	No	No	Yes	No
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.258	0.205	0.246	0.058	0.497

Panel D: Effect of Inventory and Receivables

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPEARD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.024**	-0.013**	-1.767**	0.003*	-0.198**
	(-2.41)	(-2.25)	(7.34)	(1.67)	(-2.33)
*AUD_NAR*INVREC*	-0.001	0.009	2.249		0.155
	(-0.40)	(0.64)	(1.74)		(0.81)
INVREC	0.266**	-0.100	-23.591	0.007**	-1.698
	(2.13)	(-0.69)	(2.00)	(2.23)	(-0.91)
UE				-0.341**	
				(-2.48)	
*UE*AUD_NAR*				0.073***	
				(2.80)	
*UE*AUD_NAR*INVREC*				-0.055	
				(-0.77)	
*UE*INVREC*				0.278	
				(0.75)	

Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE**Control Variables	No	No	No	Yes	No
*UE**Industry Fixed Effects	No	No	No	Yes	No
*UE**Year Fixed Effects	No	No	No	Yes	No
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.263	0.204	0.250	0.056	0.497

Panel E: Effect of Number of Subsidiaries

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPEARD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.017***	-0.020***	-0.549	0.003	-0.146*
	(-3.14)	(-3.62)	(0.66)	(1.61)	(-1.71)
*AUD_NAR*NSUB*	0.003	0.003	-0.249		-0.009
	(1.50)	(1.17)	(0.67)		(-0.20)
NSUB	-0.034	-0.056**	2.469	-0.003***	0.100
	(-1.63)	(-2.41)	(0.69)	(-5.32)	(0.23)
UE				-0.475***	
				(-2.69)	
*UE*AUD_NAR*				0.096***	
				(2.95)	
*UE*AUD_NAR*NSUB*				-0.022	
				(-1.43)	
*UE*NSUB*				0.112	
				(1.43)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE**Control Variables	No	No	No	Yes	No
*UE**Industry Fixed Effects	No	No	No	Yes	No
*UE**Year Fixed Effects	No	No	No	Yes	No
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.259	0.206	0.244	0.059	0.497

This table reports the OLS and logistic estimation results. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. *CL_IMP* is the ratio of the client's total assets divided by the sum of total assets of all clients of the same audit partner in a given year. *TIE* is an indicator variable that takes the value of 1 if the lead audit partner and the client CEO, CFO, or board members went to the same school either as an undergraduate or a graduate student, and 0 otherwise. *NSEG* is the natural logarithm of the number of segments that a client firm has. *INVREC* is the sum of a client firm's inventories and account receivables divided by its total assets. *NSUB* is the natural logarithm of one plus the number of subsidiaries. All other variables are defined in Table 1.

Table 8
Big Four versus Non-Big Four

	Dependent Variable				
	ADACC	***STD_DD***	***RESTATE***	***CAR***	***SPREAD***
Independent Variables	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**	**Coeff. (*t*-stat)**
AUD_NAR	-0.020***	-0.022***	-1.779***	0.003	-0.348***
	(-3.77)	(-3.80)	(10.67)	(1.62)	(-3.67)
*AUD_NAR*BIG4*	0.012**	0.016**	1.210*		0.261**
	(2.11)	(2.50)	(3.03)		(2.39)
BIG4	-0.116**	-0.162**	-12.491*	0.001	-2.718**
	(-2.11)	(-2.52)	(3.39)	(1.08)	(-2.53)
UE				-0.500**	
				(-3.43)	
*UE*AUD_NAR*				0.103***	
				(3.77)	
*UE*AUD_NAR*BIG4*				-0.065**	
				(-2.06)	
*UE*BIG4*				0.331*	
				(2.02)	
Control Variables	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
*UE*Control Variables	No	No	No	Yes	No
*UE*Industry Fixed Effects	No	No	No	Yes	No
*UE*Year Fixed Effects	No	No	No	Yes	No
H_0: *AUD_NAR+AUD_NAR*BIG4*=0	-0.008***	-0.006***	-0.569		-0.087**
	[0.001]	[0.000]	[0.178]		[0.043]
H_0: *UE*AUD_NAR+UE*AUD_NAR*BIG4*=0				0.038**	
				[0.020]	
Number of Observations	11,867	10,335	12,244	11,252	3,209
Adjusted R^2/Pseudo R^2	0.256	0.204	0.245	0.051	0.498

This table reports the OLS and logistic estimation results. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. The p-values for testing *AUD_NAR+AUD_NAR*BIG4*=0 and *UE*AUD_NAR+UE*AUD_NAR*BIG4*=0 are reported in brackets. All variables are defined in Table 1.

Table 9
Going Concern Tests

	Dependent Variable		
	GC	*TYPEI_GCE*	*TYPEII_GCE*
Independent Variables	**Coeff. (χ^2-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (χ^2-stat)**
Intercept	15.475*	26.487***	17.747
	(3.64)	(7.58)	(0.00)
AUD_NAR	-1.156	-1.469	-4.009***
	(2.32)	(2.46)	(9.33)
AUD_SPEC	-0.002	-0.214	0.332
	(0.00)	(0.07)	(0.11)
AUD_TENURE	0.098	0.061	0.040
	(1.51)	(0.47)	(0.15)
AUD_EXP	0.046	0.056	-0.024
	(2.11)	(2.53)	(0.21)
AUD_FEMALE	-0.036	-0.049	0.350
	(0.01)	(0.01)	(0.27)
CPAFIRM_SPEC	-0.696	-0.948*	-1.706*
	(1.77)	(2.53)	(3.21)
CPAFIRM_TENURE	-0.070	-0.050	-0.075
	(2.05)	(0.79)	(2.22)
BIG4	-0.508	0.003	-1.314**
	(1.42)	(0.00)	(4.47)
SIZE	-1.071***	-1.751***	0.253
	(27.12)	(34.02)	(1.17)
SALESGROWTH	-0.732*	-0.553	-1.762
	(3.42)	(1.62)	(2.65)
SALESVOLATILITY	0.674	0.442	-0.064
	(0.61)	(0.21)	(0.00)
CFO	-1.462	-1.200	-7.107
	(0.37)	(0.20)	(2.16)
CFOVOLATILITY	-4.770*	-4.349	-11.623*
	(3.61)	(2.48)	(3.21)
DEBT	7.954***	8.902***	2.892
	(43.31)	(40.21)	(2.56)
LOSS	2.116***	2.234**	2.483**
	(9.25)	(6.41)	(4.01)
BANKRUPTCY	0.081	0.116**	-0.137
	(2.45)	(5.41)	(0.37)
VOLATILITY	6.967***	6.091***	-2.895
	(13.19)	(8.08)	(0.53)
MB	0.076	0.025	-0.421*
	(0.59)	(0.05)	(2.99)
AGE	0.475	0.770	0.113
	(0.93)	(1.67)	(0.02)
OPERCYCLE	0.128	0.054	0.471
	(0.51)	(0.07)	(1.98)
Industry Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Number of Observations	2,550	2,550	2,550
Pseudo R^2	0.631	0.661	0.495

This table reports the logistic estimation results. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. *GC* is an indicator variable that takes the value 1 if an going concern opinion is issued for a client in financial distress in the year (defined as having negative operating cash flows in the year), and 0 otherwise. *TYPEI_GCE* is an indicator variable that takes the value 1 if a going concern opinion is issued but the client is not going bankruptcy in the following year, and 0 otherwise. *TYPEII_GCE* is an indicator variable that takes the value 1 if the client declares bankruptcy within one year of a clean audit opinion, and 0 otherwise. All other variables are defined in Table 1.

Table 10
Auditor Sanction Tests

	Dependent Variable		
	SANCTION	***SANCTION_ FREQ***	***SUSPENSION_ LENGTH***
Independent Variables	**Coeff. (χ^2-stat)**	**Coeff. (χ^2-stat)**	**Coeff. (*t*-stat)**
Intercept	208.600***	-20.100	-59.981
	(20.39)	(2.17)	(-0.99)
AUD_NAR	-1.496**	-3.861**	-2.110***
	(4.99)	(3.76)	(-3.49)
AUD_FEMALE	-1.496**	-12.200	-1.170***
	(5.80)	(0.00)	(-3.16)
BEGAUDYEAR	-0.102***	0.146	0.036
	(19.72)	(2.38)	(1.21)
BIG4	-0.476	0.119	0.268
	(2.36)	(0.01)	(0.83)
Number of Observations	566	41	41
Pseudo R^2/Adjusted R^2	0.170	0.233	0.283

This table reports the logistic and OLS estimation results. Test statistics are based on standard errors clustered by client firm. *, **, and *** indicate significance (two-tailed) at the 10%, 5%, and 1% levels, respectively. *SANCTION* is an indicator variable that takes the value of 1 if the audit partner has ever been sanctioned by the regulators, and 0 otherwise. *SANCTION_FREQ* is the number of times that the audit partner has been sanctioned. *SUSPENSION_LENGTH* is the natural logarithm of one plus the number of months the auditor is suspended as a result of a sanction. The *SANCTION* regression is estimated with a logit model. The *SANCTION_FREQ* regression is estimated with an ordered logit model. The *SUSPENSION_LENGTH* model is estimated with OLS. *BEGAUDYEAR* is the year in which the partner begins to sign audit reports. All other variables are defined in Table 1.