

The Consequences of Audit Firm Mergers for Audit Quality: Partner-Level Evidence

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Abstract

We study the period around audit firm mergers, to investigate whether audit quality is related to audit partners' pre-merger firm of origin. Partners from the largest pre-merger firms (big partners) are more likely to issue an unclean audit opinion in the merger year, but not partners from the smaller pre-merger firms (small partners) nor partners who are new to the merged firms (new partners). Big partners' clients have no changes in the incidence of restatement errors and the absolute value of discretionary accruals in the post-merger period. There is only weak evidence of declines in audit quality for small and new partners' clients in the post-merger period. Clients switch away from the newly merged firm when issued with a going concern opinion by a big partner in the merger year and the one after that, but not when these opinions are issued by a small or a new partner. Clients switching away are more likely to go to a Non-Big N shortly after the merger year. Audit firms have increases in median client portfolio size and decreases in median client audit fee ratios, but no changes in median client risk or profitability in the post-merger period. Newly merged audit firms lose a few clients after mergers, driven by fewer gains from the Non-Big N.

1. Introduction

This study examines whether partner audit quality changes after the merger of audit offices. Prior studies that have considered office and firm-level changes in audit quality after mergers report mixed results. Initial analyses of merger events and audit quality were predicated on the independence hypothesis that was developed in the seminal work of De Angelo (1981). The independence hypothesis is that larger firms have greater quasi-rents, which result in higher audit quality due to the greater losses from potential audit failure. Mergers leading to the formation of a larger, unified audit firm will increase quasi-rents and result in higher post-merger audit quality. Early empirical evidence aligns with the independence hypothesis, revealing that merged firms show an improvement in audit quality in the immediate post-merger period (Chan and Wu, 2011). However, subsequent studies have failed to consistently observe this enhanced post-merger audit quality. The evolving perspective from recent research is that mergers are inherently complex and diverse, with various factors associated with the merger event influencing its impact on post-merger audit quality. Recent studies have highlighted the significance of factors such as the relative size of merged firms (Jiang et al., 2019; Christensen et al., 2022), knowledge transfer (He et al., 2022), and the proximity of merged offices (Choi et al., 2017) in shaping post-merger audit quality. This emphasizes the need to consider a range of contextual factors to understand the relationship between mergers and post-merger audit quality.

This study examines post-merger partner audit quality in contrast to previous research that has predominantly focused on audit firms or offices. Many factors influencing post-merger audit quality are tied to the characteristics of audit partners. Investigating mergers solely at the firm or office levels blends partners and their distinctive characteristics. While the impact of a merger may be positive or negative at the office or firm level, there is likely to be variation among partners within these entities. Consequently, the degree to which post-merger audit quality is attributable to partners' behaviours remains uncertain when relying solely on office or firm data. A more informative approach is to examine mergers at the partner level, especially since partners bear primary responsibility for executing audits and play a central role in shaping audit quality (Lennox and Wu, 2017; Hardies et al., 2020). Examining mergers from this perspective allows for a nuanced understanding of how individual partner characteristics contribute to overall post-merger audit quality.

Another advantage of conducting our analysis at the partner level is that we can examine post-merger issues with a greater level of specificity than is achievable by analyses at the office or firm level. When examining mergers at the

firm and office levels, it is challenging to distinguish between audit personnel who were part of the merger event and those who joined the firm post-merger. Our partner-level analysis enables us to identify both continuing and new partners in the post-merger period. In addition, we can discern whether a partner's pre-merger affiliation was with the larger or smaller of the merged firms, and we can directly measure changes in partners' client portfolios resulting from the merger. This provides valuable insights into the specific partner-related dynamics and impacts of the merger.

The motivation for this study is from the public policy debate about the configuration of the audit market. International regulators continue to express concerns about audit market concentration and its potential ramifications for both audit quality and pricing (Gunn et al., 2019). The occurrence of audit firm mergers introduces an additional layer to this debate, as it has the potential to constrain choices available to clients in selecting their auditors. Mergers may yield efficiency-related benefits for audit firms (Gong et al., 2016) and there is evidence suggesting that mergers can lead to enhancements in audit quality (Chan and Wu, 2011; Ding and Jia, 2012). Nevertheless, the correlation between mergers and improved audit quality is not unequivocal. Consequently, formulating effective policies related to merger activity requires further examination and a nuanced understanding of how merger events influence audit quality.

We examine partners' audit quality in the period after an audit office merger for Australian companies during the period from 1995 to 2002. Our analysis utilizes data from 40 audit office mergers that occurred during the sample period. Because audit quality has multiple dimensions (DeFond and Zhang, 2014), we utilize several measures of audit quality. The audit quality proxies utilized include the issuance of unclean audit opinions, financial report restatements, and the absolute value of performance-adjusted discretionary accruals (Jones, 1991; Kothari et al., 2005). We identify audit partners according to whether they originated with the larger or smaller of the merged firms. This enables us to identify any differential effects in post-merger audit quality for partners originating from larger versus smaller merging firms.

The key findings of the study are as follows. Results of the main analysis show that partners originating from the bigger merging firm are more likely to issue an unclean audit opinion (UAO) in the merger year. The increase in the probability of UAO issuance for big partners is 3.7 percentage points, compared to 1 percentage point for small partners. However, there is only weak evidence that this increased likelihood of UAO issuance persists in the following four-year post-merger period that we examine. For the other measures of audit quality, namely restatements and

discretionary accruals, our results do not show any change for partners after an audit office merger event. The results are consistent with partners originating from the bigger merging audit firm being more conservative in the merger year than with a general improvement in post-merger audit quality anticipated by the independence theory (DeAngelo, 1981). The findings are consistent with the risk avoidance theory (Johnstone and Bedard, 2004), which suggests risky clients will face heightened scrutiny (Zimmerman et al., 2022) aimed at strategically prompting them to seek an alternative auditor that will provide a more favourable opinion (Davidson et al., 2006).

We conduct several tests to check the robustness of our results. These include controlling for the response of other audit firms that have been shown to adjust their audit quality when a substantial merger occurs in the audit market (e.g., Cahan et al., 2021); including client fixed effects in the regression analyses; controlling for the relative change in size of partners' client portfolios in the post-merger period; using a different propensity-score method to identify the non-merged client control sample; and controlling for possible effects arising from an increase in partner conservatism following the Enron collapse and demise of Arthur Andersen. In all the additional tests, our results are consistent with those reported for the main analysis.

This study constitutes a valuable addition to the existing literature on audit mergers by focusing specifically on partner-level audit quality, which to our knowledge has not been previously explored. The uniqueness of the Australian context enhances the significance of our contribution, as the disclosure of audit partner identity has been a corporate law requirement since the 1970s. The disclosure requirement is currently in the Corporations Act 2001 in sections 324AB and 324AD. This longstanding requirement allows for tracking of partners' audit outcomes in the pre-and post-merger periods over an extended period.

Our findings also diverge from prior research due to other distinct features of the Australian market setting. Unlike previous studies conducted in China, the Australian audit market presents its own set of dynamics. While there are some parallels with prior merger studies in the United States, the Australian setting offers a unique advantage for conducting cleaner post-merger tests. This is attributed to the geographical dispersion of major audit offices, located in different State capital cities, facilitating a more controlled examination of the outcomes of audit mergers.

The paper proceeds as follows. The next section reviews relevant prior literature and presents the development of hypotheses. The research design is then outlined, followed by the presentation of the main results and then

additional analyses. The final section summarizes the findings, makes brief concluding comments, and outlines the study's limitations.

2. Literature Review and Hypotheses

An obvious feature of merger events is that they generally result in the creation of a larger consolidated audit firm. Chan and Wu (2011) leveraged this characteristic to examine the impact of mergers on audit quality, employing a sample of 59 Chinese mergers spanning from 1999 to 2006. Their investigation centred on testing the independence hypothesis (DeAngelo, 1981), which posits that larger audit firms have greater incentives to conduct high-quality audits. The rationale behind this hypothesis is that failure to do so could result in the loss of client-specific quasi-rents, as clients may disengage from an audit firm that fails to report a breach by one of its clients.

Prior research affirms the expected positive association between the size of audit firms and audit quality (e.g., Becker et al., 1998; Francis et al., 1999; Francis and Krishnan, 1999). A merger is expected to increase the size of partners' client portfolios, whether through an increase in the number of clients or larger client engagements. In alignment with the independence hypothesis, Chan and Wu (2011) observed that audit firms were more inclined to issue modified audit opinions in the post-merger year. This finding is indicative of a commitment to audit quality, reflecting the larger firm's sensitivity to the potential loss of quasi-rents associated with audit failures.

Additional early studies similarly document a post-merger increase in audit quality, consistent with the independence hypothesis. For example, Ding and Jia (2012) examined the merger involving Price Waterhouse and Coopers & Lybrand in 1998. Their findings reveal that UK clients of the merged firm (PricewaterhouseCoopers or PwC) experienced increased audit quality during the post-merger period relative to clients of other Big-N firms.

Nevertheless, subsequent findings present a more nuanced perspective on the association between merger events and post-merger audit quality. Over time, it becomes evident that the independence hypothesis provides only a partial explanation for the changes in audit quality following mergers. This research specifically underscores that the impact of mergers on audit quality varies due to the heterogeneity in merger circumstances.

For example, the 1998 PwC merger was also investigated in the US context by Choi et al. (2017). Similar to Ding and Jia (2012), they find an increase in post-merger audit quality for clients of the merged firm. However, Choi et al. (2017) also show that the increase in audit quality was driven by offices in cities where both firms had separate offices before the merger or overlapping offices. They suggest that consolidation of overlapping offices results in an

immediate increase in office size, industry expertise, and local audit market concentration, all of which could potentially contribute to increased audit quality. This highlights the importance of recognizing that a diverse set of merger-related factors can influence post-merger audit quality.

Additional factors and contextual settings are relevant to comprehending the dynamics of post-merger audit quality. For example, Jiang et al. (2019) explore the size differential in US audit firm mergers from 1976 to 1995. Their findings reveal a post-merger improvement in audit quality when a Big 4 firm acquires a non-Big 4 counterpart. Interestingly, they did not find a discernible change in audit quality for mergers involving non-Big N firms. In a related study, Christensen et al. (2022) concentrate on small U.S. audit firm mergers occurring from 2004 to 2016. Their results show a decrease in post-merger audit quality, particularly when firms extend their operations into new industries. This aligns with prior research indicating negative consequences on audit quality stemming from rapid growth in audit office size (e.g., Bills et al., 2016). These studies collectively suggest that, in certain scenarios, contrary to the expectations of the independence hypothesis, a merger-induced increase in size may have adverse effects on audit quality, especially for smaller audit firms.

A primary motive for mergers is the pursuit of beneficial synergies (Devos et al., 2009). Such benefits are evident from research on mergers in the audit setting. Examining the aftermath of Arthur Andersen's collapse in 2002, Zimmerman et al. (2022) investigated the impact of acquisitions of Andersen offices by other audit firms. Their study reveals that offices demonstrated an enhancement in audit quality for existing clients after the acquisition of an Andersen office, compared to same-firm offices that did not undergo such acquisitions. Zimmerman et al. (2022) attribute this improvement to heightened scrutiny of new ex-Andersen clients, which in turn positively spilt over to the audit quality of existing clients in the acquiring offices.

Highlighting another facet of beneficial synergies, He et al. (2022) examined the impact of industry-specific knowledge transfer on audit performance post-merger. Analyzing 46 Chinese mergers spanning from 1998 to 2013, they found an increase in audit quality for clients when the post-merger firm demonstrated greater specialization in the client's industry. This highlights how targeted knowledge transfer can positively influence audit outcomes.

Gong et al. (2016) identified efficiency improvements because of beneficial synergies in a sample of 18 Chinese audit firm mergers between 2005 and 2009. Their findings indicate that economies of scale contributed to enhanced operational efficiencies, as evidenced by a reduction in audit effort. Importantly, this reduction did not compromise

audit quality. Kitto (2023) echoes similar results in the context of 191 non-Big 4 U.S. audit firm mergers between 2004 and 2016, affirming the positive impact of economies of scale on operational efficiency without compromising audit quality. These studies collectively illustrate the diverse ways in which mergers can yield beneficial synergies, contributing to both operational efficiency and audit quality.

An additional dimension to consider in the context of audit-firm mergers is the opportunity presented for the review and management of client portfolios. The restructuring of a merged client portfolio can lead to a reordering of clients based on the size of quasi-rents or risk, potentially altering incentives related to compromising independence for certain clients (Chung and Kallapur, 2003). Partners may seek to discontinue engagements with clients they consider to be the least desirable due to their limited future quasi-rents or risk. Where there is limited opportunity for a client to provide future quasi-rents, or they are risky, the partner will have little incentive to accommodate client demand. Johnstone and Bedard (2004) examine audit firm portfolio management decisions and find a tendency among auditors to discontinue engagements with existing excessively risky clients while accepting engagements from clients perceived as less risky than those being discontinued. This portfolio adjustment phenomenon has also been observed in cases involving restating clients (Huang and Scholz, 2012) and clients with heightened stock price crash risk (Lee, 2022).

In the context of mergers, it is improbable that auditors will immediately resign from client engagements. Under Australian Corporate Law (see Corporations Act 2001, Section 329), the auditor of a public company must obtain consent from the Australian Securities and Investments Commission (ASIC) to resign from an engagement. Therefore, partners seeking to adjust their client portfolio could adopt conservative behaviours to induce clients to depart rather than wait for ASIC approval. If so, clients are likely to face heightened scrutiny (Zimmerman et al., 2022) aimed at strategically prompting them to engage in audit shopping for favourable opinions and practices (Davidson et al., 2006). Partners can resist client lobbying and issue unclean audit opinions without worrying about the loss of a client.

Cahan et al. (2021) examined the impact of alterations in audit market structure arising from mergers. Their study focused on firm mergers that resulted in the formation of the third and fourth-largest audit firms in China, namely Ruihua and BDO Lixin. The merged audit firms themselves did not have a change in post-merger audit quality. However, a noteworthy consequence of these mergers was observed in the behaviour of their competitors, who exhibited a simultaneous decrease in both audit quality and audit fees. This implies that the outcomes observed in

earlier studies, which relied on comparing merged and non-merger firms to discern post-merger changes in audit quality, might be influenced by the reactions of other firms to changes in the market.

The diverse findings on post-merger audit quality in the literature show that the impact of audit firm mergers on audit quality is multifaceted and contingent on various factors. We anticipate that consistent with the independence hypothesis, mergers leading to larger consolidated audit firms may generally result in improved audit quality. However, we also acknowledge the nuanced nature of this relationship. Heterogeneity in merger circumstances, such as office consolidation and industry expertise, may lead to differential effects on audit quality. Furthermore, the pursuit of beneficial synergies through knowledge transfer, operational efficiency gains, and economies of scale, as demonstrated in prior research, can positively influence audit quality post-merger. The restructuring and management of client portfolios post-merger, driven by strategic decision-making around future quasi-rents or risk avoidance, may also influence audit quality. Additionally, external market reactions to changes in audit market structure following mergers, as evidenced by competitors exhibiting simultaneous decreases in audit quality and fees, suggest that broader market dynamics can shape post-merger audit quality outcomes. Therefore, the impact of audit firm mergers on audit quality is a complex interplay of factors.

While it is anticipated that audit firm mergers will affect all partners, we expect that certain merger-related factors, as identified in previous literature, may have different implications for partners from smaller and larger pre-merger firms. Because larger firms are likely to have greater bargaining power in the merger process, they will likely have significant discretion about the operation of the post-merger firm. Their influence is likely to extend to matters including redistribution of clients, client portfolio management and adjustment, and adopted audit procedures and technologies.

First, concerning post-merger partner client portfolio size, it is rational to anticipate a redistribution of clients from large firm partners to small partners. This implies a proportionately more substantial rise in the number of clients overseen by partners originating from smaller audit firms post-merger. Existing evidence at the audit firm level indicates that firms undergoing the most significant size increase post-merger exhibit the most pronounced enhancements in audit quality, a phenomenon ascribed to heightened independence (Chan and Wu, 2011; Gong et al., 2016). Consequently, any positive impact on audit quality resulting from increased independence is likely to be more pronounced for partners originating from smaller pre-merger firms.

However, a larger client portfolio, coupled with the time demands associated with supporting the merger process, could substantially increase the workload, particularly for partners originating from smaller firms. Theory suggests that an increase in an audit partner's workload will lead to a decline in audit quality. This stems from the recognition that human cognitive capacities are finite, and individuals are prone to deviate from rationality and exhibit behavioural biases when tasked with processing and acting upon a large amount of information (Kahneman, 1973). Studies delving into the determinants of auditor behaviour provide empirical evidence in line with this theory (Lo et al., 2022). To the extent that partners find themselves with limited time to execute audits for both their existing and potential new clients in the post-merger period, there is a plausible risk that the quality of their audits may diminish.

Second, in terms of beneficial synergies, partners originating from smaller merging firms are more likely to benefit compared to those from larger merging firms. Smaller audit firms are more likely to be affected by resource constraints, operational efficiencies, and a lower likelihood of possessing high-quality human capital in comparison to their larger counterparts (Dopuch and Simunic, 1980a, b) The prevailing literature on mergers and acquisitions indicates that target firms, typically smaller entities, tend to exhibit lower market values, operational efficiency, and financial resources (Javanovic and Rousseau, 2002; Cremers et al., 2009; Erel et al., 2015). Moreover, this body of literature underscores that target firms experience a post-merger transformation characterized by enhanced productivity, efficiency, and reduced financial constraints (Li, 2013; Maksimovic et al., 2013; Erel et al., 2015).

Third, the extent of post-merger disruptions is expected to be more pronounced for smaller audit firms than for large ones. The range of potential challenges associated with integration in the context of mergers encompasses issues such as cultural disparities, challenges in knowledge transfer, and difficulties in coordination and resource allocation (Ashkanasy and Holmes, 1995; Empson, 2001; Lindquist, 2007; Bell et al., 2015). Larger audit firms are identified as generally having superior audit quality (DeFond and Zhang, 2014) and may have standardized internal working rules in-house (Francis et al., 2014). Because larger firms are likely to have greater bargaining power in the merger process, partners from the smaller merging firms are more likely to be adversely impacted by integration challenges. Smaller audit firms' partners may find themselves compelled to integrate into the larger entities' audit practices, leading to a more challenging assimilation process. In contrast, it is reasonable to expect that partners from the larger merged firms will have less need to change or compromise in the post-merger firm setting.

In summary, the size of a partner's originating audit firm is anticipated to be linked to post-merger audit quality. A notable increase in the number of clients audited by partners from smaller audit firms is expected following the merger. Consequently, the positive effects on audit quality stemming from increased independence are projected to be more pronounced for partners from smaller pre-merger firms. However, given the anticipated higher post-merger workloads for partners from smaller firms compared to their counterparts from larger firms, we anticipate that the negative workload effects will be more pronounced for partners from the smaller merging firms. Nevertheless, partners from smaller firms are also expected to derive more significant benefits from merger-related synergies, capitalizing on positive externalities generated by the merger. Conversely, the magnitude of post-merger disruptions is expected to be more substantial for partners from smaller firms than those from larger ones. Overall, there are contrasting expectations regarding how merger-related factors affect partners originating from smaller and larger pre-merger firms. Therefore, our hypotheses concerning merger effects on audit quality for partners from small and large merging firms are stated in the null form as follows:

H1: The audit quality for partners originating from smaller merging firms remains unchanged after an audit office merger event.

H2: The audit quality for partners originating from larger merging firms remains unchanged after an audit office merger event.

3. Data and Methodology

We obtain data on mergers from newspapers, audit firms' websites, auditor's LinkedIn pages, audit firms' transparency reports and companies' annual reports for the period 1995 through 2022. Our search resulted in 97 audit firm mergers. Two 1995 mergers were dropped because lagged data was unavailable. Mergers can be examined at the firm or office levels, but we choose the office because prior research indicates that auditor quality varies by office size within the firm (Francis and Yu, 2009; Choi et al. 2010). We dropped 16 consolidator mergers¹ because they occurred in a nine-year period precluding meaningful pre- and post-merger analyses, 40 where only one firm audited listed clients in the year before the merger year, and eight that didn't merge offices. The final sample comprises 31 audit firm (40 audit office) mergers.

We obtained partner and other auditor data from clients' annual reports and stock data from Datastream. Table 1 shows some statistics for audit-firm mergers, alliances and name changes for our office-level mergers. Panel A presents the aggregate sizes of audit firms in the year they experienced the various types of activity. Mergers in the same city between firms with listed clients (Office Mergers – listed clients), the focus of the present study, comprise the largest percentage by number of clients, at about 4.5%. The largest percentage by assets is Office Mergers – listed clients, at about 2.2%, driven by Big N firms acquiring small firms. Panel B shows the distribution of our mergers over time. There are 26 firms in the total of 31 because five are serial acquirers. Panel C presents some statistics for our office-level mergers by merger size. The distributions of merger size, based on the number of partners or clients, or total client assets; are heavily right-skewed. These skewed distributions are caused by the 1998, Price Waterhouse and Coopers and Lybrand (hereafter PWCL) and the 2002 Ernst and Young and Arthur Andersen (hereafter EYAA) mergers. We examine the effect of these large mergers below in the robustness tests section. Relative size is measured by the total clients' assets of the merger firms at t-1 divided by the total client assets of the largest (smallest) merger firm at t-1. Half of the small-sized firms join newly merged firms that are over eight times their own firm's sizes the prior year.

We define each merger event period from three years before the merger year to four years after. We trace back all audit offices involved in the merger, taking care when the audit firm changes its name. If an office experiences another merger within seven years of its merger year, we drop all observations in the overlapping period from both

¹ Consolidator mergers is the term given to publicly owned accounting firms acquiring other, usually small-sized accounting firms.

mergers. Since our sample comprises merger years from 1996 to 2019, we searched the Australian Financial Review, company annual reports and newspapers online, for mergers between 1991 and 1994 for overlapping merger years.²

We use two samples, - an only-merger-clients sample and a matched sample. The former permits a comparison of the audit quality of partners from the largest merging firms (big partners), with those from the smallest merging firms (small partners) and partners new to the merged firm (new partners). The latter compares the audit quality of big, small, and new partners to the merged firm with control group partners. After deleting overlapping office years and clients without a full set of controls, the final client merger sample totals 6,729 client years. Our control sample is constructed by matching without replacement each client audited by one of the merging offices (merger client) with a client that was not involved in an audit firm merger from 1995 through 2022 (nonmerger client).³ Following Gong et al. (2016), nonmerger clients are matched with merger clients, in the year before the merger year (hereafter t-1) by assets and GICS Industry sector code. There are 503 merger and nonmerger clients at t-1, and the difference between their asset means (distributions) is insignificant ($t\text{-stat} = 0.040$, $p = 0.964$, Wilcoxon Z-stat = -0.145, $p = 0.885$). We include client-related characteristics that prior research has shown are related to audit quality; namely, complexity proxies (client size (LASS), client age (FAGE)), profitability proxies (return on assets (ROA), operating cashflows over assets (OCF), stock returns (RET)), efficiency proxy (sales turnover (SALE)), risk proxies (leverage (LEV), current ratio (CACL), return volatility (SDR), lagged unclean audit opinions (LUAO)), auditor size proxies (Arthur Andersen and Coopers and Lybrand and Deloitte Touche Tohmatsu and EY and KPMG and Price Waterhouse and PricewaterhouseCoopers (BIGN) and audit office size (OFF)). Mergers are expected to occur more often in less concentrated markets, so we include the Herfindahl-Hirschman Index (HHI). For the matched sample, we “stack” each merger client’s observations on its matched nonmerger clients for the event period, for all mergers. After deleting observations where clients changed audit firms (other than to the newly merged firm) or offices, the final sample totals 5,676 client years (2,880 merger client years and 2,796 nonmerger client years).⁴

² We do not have access to annual reports before 1995. We found one potentially overlapping office merger in the AFR, so we deleted the overlapping years. Specifically, the 1993 Deloitte and Duesbury Sydney merger, shares three overlapping years with the 1999 Deloitte and Greenwood Challoner and Co. Sydney merger event period, namely 1995, 1996 and 1997.

³ We examined the Australian Financial Review and online sources for mergers before 1995 and removed clients audited by audit offices involved in those mergers.

⁴ Overlapping periods occur when a client switches audit firms and both the former and new audit firm are involved in a merger or an audit office merges more than once, within a seven-year range.

Table 2 shows descriptive statistics of the regression variables. For some variables, such as ROA and CACL, the standard deviations are large, indicating the presence of extreme values. Therefore, the ratio variables are ranked, and ranks are divided by the sample sizes (Kane and Meade, 1998) to reduce outlier effects. Ranked variables are denoted with an “R” prefix.

Figure 1 (a) shows trends in the proportion of unclean opinions for the merger and non-merger client groups. Before the merger year, the lines move in unison quite well. After the merger, the declining merger-line trends can be attributed to different causes, such as a decline in audit quality (Christensen et al. 2022) or a change in average client risk, for example. The nonmerger trend is close to the trend for the listed client population.⁵ Figure 1 (b) shows the trends for big and small partners. After moving in unison, in the merger year the big partners’ line ‘spikes’ for the first time above the small partners’ one, and then it declines more steeply. Figures (c) and (d) show little differences between big, small and control client partners’ behaviours around mergers, except that small partners generally have higher rates of restatement errors.⁶ Partners’ client portfolio sizes increase for both big and small partners measured by median client assets (in 2022 dollars), as Figure 1(e) shows. While the size of small partners’ client portfolios measured by the median number of clients increased post-merger; big partners’ client portfolios declined over the last three post-merger years, as Figure 1(f) shows.

To examine formally the relationship between partner merger years and audit quality, we use three audit quality variables. First, we estimate the following logistic regression model (client and year subscripts are omitted):

$$\begin{aligned} \text{UAO} = & \alpha_0 + \beta_1 \text{BPAR} + \beta_2 \text{SPAR} + \beta_3 \text{NPAR} + \beta_4 \text{MY0} + \beta_5 (\text{BPAR} \times \text{MY0}) + \\ & \beta_6 (\text{SPAR} \times \text{MY0}) + \beta_7 (\text{NPAR} \times \text{MY0}) + \beta_8 \text{MY1234} + \beta_9 (\text{BPAR} \times \text{MY1234}) + \\ & \beta_{10} (\text{SPAR} \times \text{MY1234}) + \beta_{11} (\text{NPAR} \times \text{MY1234}) + \gamma X + \kappa_j + \lambda_t + \varepsilon \end{aligned} \quad (1)$$

where UAO is equal to one if the auditor issued a qualified or going concern opinion and zero otherwise (“unclean audit opinion”). We chose this dependent variable as we are interested in examining independence following Chan and Wu (2010). X are the control variables expected to affect UAO, and they are defined in

⁵ The gradient for the population is obtained by regressing the proportion of *UAOs* for a year on *TIME*, where *TIME* equals the year 1996 through 2019 on the entire sample of listed clients ($N = 39,949$).

⁶ The ‘spike’ in error proportions up to about 0.15 in t+4 for small partners is due to that proportion having the smallest number of client years ($N = 53$) and second largest number of errors ($N = 8$) than other relative years.

Appendix Table A1. Year and industry fixed effects denoted by κ_j , and λ_t respectively, are included to control for time and industry effects on UAO.

Our second measure of audit quality is restatement errors (RES) following Gong et al. (2016) and Christensen et al. (2022). The following logistic regression model (client and year subscripts are omitted) is estimated:

$$\begin{aligned} \text{RES} = & \alpha_0 + \beta_1 \text{BPAR} + \beta_2 \text{SPAR} + \beta_3 \text{NPAR} + \beta_4 \text{MY0} + \beta_5 (\text{BPAR} \times \text{MY0}) + \\ & \beta_6 (\text{SPAR} \times \text{MY0}) + \beta_7 (\text{NPAR} \times \text{MY0}) + \beta_8 \text{MY1234} + \beta_9 (\text{BPAR} \times \text{MY1234}) + \\ & \beta_{10} (\text{SPAR} \times \text{MY1234}) + \beta_{11} (\text{NPAR} \times \text{MY1234}) + \gamma X + \kappa_j + \lambda_t + \varepsilon \end{aligned} \quad (2)$$

where RES is equal to one if, during the fiscal year, the client had an error that was subsequently restated and zero otherwise.

Our final audit quality measure is the absolute value of discretionary accruals from the Jones (1991) model as modified by Kothari et al. (2005). The following model is estimated on all listed firms by financial year and GICS industry sector with at least 10 observations per industry sector year:

$$\text{TA} = \alpha_0 + \beta_1 \text{SALES} + \beta_2 \text{PPE} + \beta_3 \text{NI} \quad (3)$$

where TA is total accruals (net profit or loss less operating cashflows for the fiscal year); SALES is total sales for the fiscal year; PPE is gross property, plant, and equipment at fiscal year-end and NI is net profit or loss for the fiscal year. All variables are divided by lagged total assets. Our audit quality variable is the absolute value of the residuals from equation (3) as in Christensen et al. (2022). Our discretionary accruals are winsorized at -0.999 and +0.999 to reduce the effect of outliers. The following OLS regression model (client and year subscripts are omitted) is estimated:

$$\begin{aligned} \text{AAA} = & \alpha_0 + \beta_1 \text{BPAR} + \beta_2 \text{SPAR} + \beta_3 \text{NPAR} + \beta_4 \text{MY0} + \beta_5 (\text{BPAR} \times \text{MY0}) + \\ & \beta_6 (\text{SPAR} \times \text{MY0}) + \beta_7 (\text{NPAR} \times \text{MY0}) + \beta_8 \text{MY1234} + \beta_9 (\text{BPAR} \times \text{MY1234}) + \\ & \beta_{10} (\text{SPAR} \times \text{MY1234}) + \beta_{11} (\text{NPAR} \times \text{MY1234}) + \gamma X + \kappa_j + \lambda_t + \varepsilon \end{aligned} \quad (4)$$

where ADA is the absolute value of discretionary accruals derived from equation (3).

Our test variables, MY0 and MY1234 and BPAR, SPAR and NPAR are indicators capturing the merger year (MY0) and the first four years after the merger year (MY1234), and the audit partners' pre-merger firm of origin, (if

any), BPAR, SPAR and NPAR. More specifically, BPAR is equal to 1 if the audit partner signed an audit report in any fiscal year from MY0 to the end of the merger period and in one of the three years before MY0, from the audit firm that contributed the largest total of client assets to the merger and zero otherwise; SPAR is equal to 1 if the partner signed an audit report in any year from MY0 to the end of the merger period and in one of the three years before MY0 from the audit firm that did not contribute the largest total of client assets to the merger and zero otherwise; and NPAR is equal to 1 if the audit partner signed an audit report in MY0 or MY1234 for the newly-merged firm and did not sign an audit report in any of the merged firms in the three years before MY0 and zero otherwise.

4. Main Results

Table 3 reports the results from estimating equations 1, 2 and 4. Odd-numbered columns show results using the merger client sample, and even-numbered ones show results using the matched sample. For unclean opinions, the coefficient on MY0 in column 1 is significantly positive (coeff = 0.437, p = 0.030). In contrast, the coefficients for the interactions of SPAR and NPAR with MY0 are negative and significant and insignificant respectively. Big partners (small partners) have higher (lower) log odds of issuing UAOs in MY0. In terms of economic magnitudes, holding other variables at their medians, partners from larger firms have a probability of about 8.6% of issuing a UAO in MY0; compared to about 6.4% for small partners. Before and after the merger year, big partners have lower probabilities than small ones. Pre-merger the big (small) partner's probability is 4.8% (5.4%) and post-merger the big (small) partner's probability is 5.7% (7.1%). From the pre-merger period to the merger year, there is an economically significant rise in the probability of 3.7 percentage points for big partners and a 1 percentage point rise for small partners. We find no evidence of a change in the likelihood of UAO issuance in the post-merger period. Results in column 2 are qualitatively the same as column 1, although the increase in probability for issuing a UAO for big partners is about 2.3 times that of small ones, from the pre-merger period to the merger year. Results for restatements shown in columns 3 and 4 show that none of the merger partner coefficients are significant. The positive, significant coefficient for MY1234 reflects the upward trend in restatement errors in Australia over time, as seen in Figure 1(c). We find no relations between our partner experimental variables and discretionary accruals (columns 5 and 6).⁷ Together, these results are more consistent with big partners being temporarily more conservative (in the merger year)

⁷ For the merger client sample, the probability of having a restatement error is 0.6% for Big Partners and 0.7% for Small partners in the post-merger period, with controls held at their medians. The equivalent probabilities for the matched sample are 3.0% and 4.8%.

than with improvements in audit quality. This evidence is also not consistent with DeAngelo's (1981) theory; as our only significant evidence for small partners is a lower likelihood of UAO issuance in the merger year in the merger-client-only sample. The significant coefficients for the control variables are generally in line with expectations. In the next section, we conduct robustness tests and in the following section, we explore possible explanations for these results.

5. Robustness Tests

In this section, we discuss our robustness tests of the results shown in Table 3.

First, we test the suitability of our non-merging clients (hereafter NMCs) as controls. About 28 per cent of our matched sample client years are audited by partners working in the same city as their matches (untabulated). Therefore, we examine if NMC's auditors respond to mergers in their city.⁸ To address these concerns, we create an indicator variable that equals one if the NMC is matched in the same city as its merger counterpart and zero otherwise (SC). To examine the effect of same-city matches, we estimate the following models using the sample of non-merging clients:

$$\text{Auditquality} = \alpha_0 + \beta_1 \text{SC} + \beta_2 \text{MY0} + \beta_3 \text{SC} \times \text{MY0} + \beta_4 \text{MY1234} + \beta_5 \text{SC} \times \text{MY1234} + \gamma X + \kappa_j + \lambda_t + \delta_t + \varepsilon \quad (5)$$

where Auditquality is either UAO, RES or ADA and other variables are as defined above.

A response to a merger is indicated by the significance of any of the coefficients: β_2 , β_3 , β_4 or β_5 .

Because Cahan et al. (2021) report that large non-merging audit firms respond to large mergers in China, and the PWCL and EYAA mergers comprise about 35 per cent of our matched sample client years (untabulated); there is also a concern that the matches for those merger clients are unsuitable. We create another variable that is equal to one if the non-merging client is matched to a client from the PWCL or EYAA mergers, and zero otherwise (PCEA). To examine the response to large mergers, we interact PCEA with the two-way interactions in model (5).⁹

The baseline results explaining UAOs, presented in Table 4 column 1 show that the likelihood of issuing an UAO by auditors of non-merging clients does not change after mergers. Nor do they react to mergers in the same city (column 2), nor when the merger is in the same city and the merger is large (column 3). Regarding restatement errors, the three-way interaction coefficients are significant, indicating a reaction to large mergers. For discretionary accruals,

⁸ Using cities to delineate audit markets is appropriate for Australia because about 97% of listed clients (98% of our sample) are audited by an office in Adelaide, Brisbane, Melbourne, Sydney or Perth, and the shortest distance between any of them, namely Melbourne and Adelaide; is about 650 kilometres.

⁹ All models with interactions are hierarchically well formulated in this paper.

the results for the three-way interactions in the post-merger period indicate higher audit quality by auditors of NMCs, which is inconsistent with Cahan et al. (2021). To check robustness, we estimate the models excluding all PWCL and EYAA merger clients and their non-merger matches. We also estimate the models with client fixed effects. Because the mean of RES is only 0.043, a linear probability model is estimated when client fixed effects are included. The results, shown in Panel B of Table 4 provide the same inferences for BPAR as our main results. We also find that big partners are less (more) likely to issue UAOs in the pre- (post)-merger period and small partners have clients with higher discretionary accruals in the merger year. This evidence suggests that big partners from smaller mergers change their behaviours more than those from larger mergers. We return to this issue in the additional tests section below. We conclude that there is no solid evidence our results are affected by reactions to mergers from non-merger clients' auditors.

Second, we address concerns that omitted, client characteristics could affect our inferences. For big partners, the small firm's clients are analogous to accepting new clients. These clients likely increase the diversity of the portfolio in the newly merged firm. Client-specific stable characteristics associated with risk, such as cultures or strategies, might be more strongly correlated with audit quality during a merger than at other times. A partner might lower the risk threshold for issuing a going concern opinion to a risky client when new, less risky clients just joined the firm than at other times, for example. We therefore estimate the models with client fixed effects. The results, shown in Table 5 provide the same inferences for BPAR at MY0 as our main results. The MY0 coefficient in column 1 and the $BPA \times MY0$ coefficient in column 2 are positive and significant at the 0.01 level. We again find a higher likelihood of UAO issuance by big partners in the post-merger period in both samples, but only at the 0.10 level. Results for SPAR and NPAR indicate only lower audit quality by them.

Third, following Chan and Wu (2010) and Gong et al. (2016), we use a continuous measure of relative changes in the sizes of the partners' firms of origin. If small partners improve their independence more than other partners, the relation between relative size and audit quality should be positive. We measure RLSIZE as $RSIZE_i = \frac{\sum_{i=1}^n SIZE_{i-1}}{SIZE_{i-1}}$, where $SIZE_{i-1}$ is total assets of listed clients of audit firm i at the start of MY0; and $\sum_{i=1}^n SIZE_{i-1}$ is the sum of SIZE for the n audit firms in the merger. Each big and small partner is assigned the RSIZE measure for the eight-year merger period. Because of extreme values and to facilitate interpretation, we rank transform and mean centre RSIZE, denoted

as RRSIZE.¹⁰ The following regression models are estimated with and without client fixed effects (client and year subscripts are omitted):

$$\text{Auditquality} = \alpha_0 + \beta_1 \text{RRSIZE} + \beta_2 \text{MY0} + \beta_3 (\text{RRSIZE} \times \text{MY0}) + \beta_4 \text{MY1234} + \beta_5 (\text{RRSIZE} \times \text{MY1234}) + \gamma X \\ + \kappa_j + \lambda_t + \varepsilon \quad (6)$$

When explaining UAO (RES, ADA), positive (negative), significant coefficients on the interaction terms β_3 and β_5 are consistent with higher audit quality by partners working in larger firms than their firms of origin pre-merger. Because RSIZE is undefined for NPAR and for partners of nonmerger clients, only the merger client sample is used excluding new partners ($N = 5,758$). We first calibrate RRSIZE by regressing it on BPAR. We obtain a significant negative coefficient (coeff = -0.525, $p < .001$) and an R-squared of 0.72, indicating that RRSIZE is a good proxy for BPAR. Summary results are shown in Panel A of Table 6. Column 1 shows that the coefficient for MY0 is MY0 is marginally significant ($p = 0.104$) and the MY0 x RRSIZE coefficient is insignificant ($p\text{-value} = 0.13$). Importantly, the addition of the MY0 x RRSIZE variable increases the model's Chi-square statistic by about 6.4, which is significant ($p = 0.001$); indicating the presence of a moderating effect of RRSIZE on the relation between UAO and the merger year. The post-merger interaction coefficient is highly insignificant. In Panel B we report predicted probabilities at three quartiles. For the merger year, the probabilities decline as one moves up the quartiles, consistent with higher audit quality or conservatism by big partners. The probabilities for the pre-and post-merger periods are quite stable. As there is always a higher probability of UAO issuance in the merger year, the evidence is more consistent with conservative behaviour from big partners, particularly when relative size is lower.

Fourth, as Shipman et al. (2017) recommend, we examine if our inferences from the matched sample are robust to a different matching method. We use the propensity score method. We match merger and nonmerger clients without replacement, by probabilities predicted from a logistic regression explaining merger clients at t-1 using the explanatory variables from model 1, except for the lagged unclean audit opinion. Results of the first stage model are presented in Panel A of Table 7. Column 1 shows that merger clients are smaller, more profitable, have lower cash flows to assets, have higher sales turnover, older and audited in more concentrated markets. There are 541 merger and 541 non-merger clients at t-1, and untabulated test results show that the differences between the groups' probabilities are insignificant ($t\text{-stat} = -0.07$, $p = 0.95$, $Z\text{-score} = -0.12$, $p = 0.91$). Results from the audit quality regressions, shown in Panel B, are

¹⁰ The maximum value of RSIZE is 9,021 (see Table 1 Panel C) and the mean and median values are 0.461 and 0.466 respectively (untabulated).

qualitatively unchanged from those in Table 4 for the merger year. We find that big partners are more likely to issue a UAO in the post-merger years when client fixed effects are included. We address this issue in the additional tests section below.

Fifth, prior research reports an increase in auditor conservatism shortly after Enron's demise (Cahan and Zhang, 2006; Feldmann and Read 2010). Because about 20.3 % (33%) of the merger client years are from the EYAA merger, the results for BPAR explaining UAOs could be driven by events related to Enron's collapse. To address this concern, we remove all observations relating to the EYAA merger (the nonmerger matches are also removed in the matched sample). Untabulated results are qualitatively the same as the main results and the client fixed effects results shown in Table 5; the MY0 and BPAR \times MY0 coefficients are significant at the 0.05 level or better. The one insignificant coefficient occurs in the merger client sample without client fixed effects for the MY0 coefficient, suggesting that stable over time, client-specific characteristics are important omitted variables for that sample. Auditor conservatism after Enron does not explain the BPAR behaviour in MY0.

Finally, we show in Table 8 that in the post-merger period, big partners reduce audit fees and their clients' audit reporting lags increase compared with matched non-merger clients.¹¹ These results are inconsistent with a reduction in fees from a reduction in audit effort. There is no difference between audit fees and reporting lags for small or new partner's clients with their matched counterparts. We posit that report lags could be increased in response to the increase in big partner's client portfolio sizes and responsibilities associated with the merger, for example.¹² Audit fees might be reduced to appease clients. We provide evidence consistent with this argument below. Nevertheless, these results support the idea that partners' are not under undue pressure in the post-merger period.

6. Additional Tests

6.1. Big, Small and New Partner Behaviours for all years

In this section, we explore possible reasons for the issuance of unclean opinions in the merger year by big partners. Under Australian Corporate Law, an auditor of a public company must obtain the ASIC's consent to resign from an engagement, but the ASIC's consent is not required for a client's dismissal of its auditor. Partners seeking a speedy portfolio change could issue more UAOs than normal to induce clients to depart rather than wait for ASIC approval.

¹¹ These models use the same controls as model 1,2 and 4 except that OFF is replaced by the natural logarithm of the number of clients in the office at year t in the regressions using the natural logarithm of audit fees as the dependent variable to avoid a mechanical relationship.

¹² Figures 1(e) and (f) show that, in the post-merger period big partners generally have larger sized portfolios than small partners.

Xu and Kalkelar (2020) provide evidence that auditor dismal rates rise with Type I errors. While we are not aware of any direct evidence, we speculate that there are at least two reasons why partners might use UAOs in this way. First, the post-merger period is likely a busier one, and dealing with ASIC could take time. Second, resignations from engagements could be seen by incumbent clients and competitor auditors as a failure of the merger process. A ramification could be a higher risk of auditor dismissal from higher quality clients.

Since we do not have access to data about the terms of the merger, such as the remuneration of the partners; big partners may be behaving consistently with DeAngelo's (1981) theory; at least for the results of unclean audit opinions. For example, if small partners were, on average, remunerated only by fixed salary post-merger, then the significant positive coefficient observed for big partners in MY0 in the main results could be due to more independent behaviour from them. One would also expect them to behave more independently for the years after the initial one. A similar argument is made by Gong et al. (2016) (Gong et al., 2016, p. 474). Alternatively, big partners' behaviour might evolve after a merger. They could be more conservative in earlier years to induce clients to depart their firm, but not in later ones; lest they alarm all their clients. To test these contentions, we perform several tests.

First, we explore possible differential behaviour around mergers within the partner types for UAO issuance. We estimated the models with various partitions of the MY1234 variable. For the matched sample, untabulated results consistently showed the coefficients for BPAR with the merger year (MY0) to be positive and significant, and no evidence of significant coefficients for post-MY0 variable interactions with BPAR. The SPAR interaction coefficients were never positive and significant, and once it was negative and significant at 0.05 (for MY2). The NPAR interaction coefficients were insignificant. If we include client fixed effects, in addition to the positive, significant (at 0.01) coefficients for the interaction of BPAR with the merger year (MY0), only the coefficient for the interaction of BPAR with the year after the merger year (MY1), is significant ($\text{coeff} = 0.797$, $p=0.070$). Regarding the other partner types, only the coefficient for the interaction of NPAR with the year after the merger year (MY1), is significant ($\text{coeff} = 1.828$, $p=0.033$). These results are consistent with temporarily conservative behaviour by the big partners in the merger year and little changes around mergers in behaviours by the small and new ones. As noted, we find significant positive coefficients for the post-merger years for big partners when large mergers are excluded from the sample. To formally test for a merger size effect on the partner types, we include the variables: BPAR / SPAR / NPAR \times MY1234 \times PCEA (and all lower-order interactions) in the models. Their coefficients are never significant (untabulated). A partner type's audit quality does not differ by merger size.

Second, we examine the link between this temporary big partner behaviour with client switches away from the firm. If clients switched away when their big partner issued a UAO in the merger year, it supports the idea that the client switched because it believed it was treated unfairly. We estimate a model based on Landsman et al. (2009) as follows¹³:

$$\begin{aligned} \text{SWITCHAWAY}_t = & \alpha_0 + \beta_1 \text{MYL123}_{t-1} + \beta_2 \text{MYL123}_{t-1} \times \text{GC}_{t-1} \\ & + \beta_3 \text{MYL123}_{t-1} \times \text{MODOP}_{t-1} + \beta_4 \text{MY01}_{t-1} + \beta_5 \text{MY01}_{t-1} \times \text{GC}_{t-1} \\ & + \beta_6 \text{MY01}_{t-1} \times \text{MODOP}_{t-1} + \beta_7 \text{MY234}_{t-1} + \beta_8 \text{MY234}_{t-1} \times \text{GC}_{t-1} \\ & + \beta_9 \text{MY234}_{t-1} \times \text{MODOP}_{t-1} + \beta_{10} \text{GC}_{t-1} + \beta_{11} \text{MODOP}_{t-1} + \beta_{12} \text{GROWTH}_{t-1} \\ & + \beta_{13} \text{RAINV}_{t-1} + \beta_{14} \text{LASS}_{t-1} + \beta_{15} \text{RROA}_{t-1} + \beta_{16} \text{LOSS}_{t-1} + \beta_{17} \text{RLEVERAGE}_{t-1} \\ & + \beta_{18} \text{EXPERT}_{t-1} + \kappa_j + \theta_t + \varepsilon \end{aligned} \quad (7)$$

where SWITCHAWAY is equal to one if the client departs the audit firm for another one in year t and zero otherwise. Client switches are uncommon events; about 6 % for the big partner sample and about 7.8% for the small partner one. To reduce estimation problems, we group the merger years: MYL123 is an indicator equal to one if the year is one of the three years before the merger year and zero otherwise, MY01 is an indicator equal to one if the year is the merger year or the year after the merger year and zero otherwise, and MY234 is an indicator equal to one if the year is the second, third or fourth year or the year after the merger year and zero otherwise. In these estimations, we use the entire partner auditing history data, so the reference group is clients audited before and after the eight-year merger period. The control variables are defined as follows: RAINV is receivables plus inventory divided by total assets, and it is rank transformed, GROWTH is total client assets less lagged client assets divided by lagged client assets, and it is rank transformed, GC is equal to one if the client receives a material uncertainty related to going concern opinion in its audit report and zero otherwise, MODOP is equal to one if the client receives a modified audit opinion in its audit report and zero otherwise, LOSS is equal to one if ROA is negative and zero otherwise, EXPERT is equal to one if the audit office has more than five per cent of clients in a GICS industry sector and major capital city, namely Adelaide, Brisbane, Hobart, Melbourne, Sydney or Perth and zero otherwise, and other variables are

¹³ In an untabulated test we also included the ADA variable as a control and its coefficient was highly insignificant; and the results for the test variables were qualitatively the same. The total sample size was 23,085 client years.

defined above. All independent variables are lagged by one year. Although our focus is on big partners, we estimate model 7 on the samples of clients audited by the small and new partners for completeness.

The results for equation 7 are presented in Panel B of Table 11. To see if our control variable estimates are consistent with expectations, we estimate the model on all clients (merger or not) without the merger variables. The results in column 1 show that all the control variable's coefficients are significant and in line with expectations. Results for the big partner audited sample presented in column 2, show that clients are more (less) likely to switch away if they received (did not receive) a material uncertainty about going concern opinion in MY0 or MY1 from a big partner, than any other nonmerger year. In terms of economic magnitude, holding other variables at their medians, the probability of switching increases from 2.6% to 3.3% from the premerger period to the MY01 period, for clients receiving a material uncertainty about going concern opinion from a big partner; but it declines from 1.8% to 1.5% for clients receiving clean opinions. In the MY234 periods, the probabilities are almost identical (2.4% for going concern receivers and 2.3% for clean opinion receivers). This evidence is consistent with temporary conservatism and aggressiveness. In other words, big partners could be issuing (not issuing) going concern opinions to clients whom they would like (not like) to depart the firm.¹⁴ Column 3 shows that small partner's clients are not more likely to depart the firm if they received a material uncertainty about going concern opinion in MY0 or MY1; but they are likely to depart if they receive a modified opinion in the last three years of the merger period. As the mean of MODOP is about 2.2% in this sample, a cautious interpretation of this result is warranted. For new partners, we find a positive coefficient for the interaction variable – MY234 with GC; and a positive (negative) coefficient for the MY01 (MY234) and MODOP interaction variables. Results are qualitatively the same if these models are estimated with a year trend instead of year indicators (untabulated).

Finally, we extend the above tests to other attributes to examine if their sensitivity to client departures differs across the partner groups. Specifically, in model 7 we replace GC and MODOP with the following variables - LASS, RLEV, BRUPTCY, RROA, AFRATIO and then AUDFEE. Before estimating the models, we remove all observations where the unclean opinion and the switch away variables both equal one; to ensure that the unclean opinion is not affecting the switch. Results for the big partner sample are presented in Panel A of Table 10. They show that all pre-

¹⁴ We realize that for clients not receiving a GCO, this evidence is also consistent with other audit firms' unwillingness to accept clients without a GCO. Unfortunately, auditor dismissal and resignation data are not available for our sample period, so teasing out these competing explanations is not possible. Nevertheless, we believe this alternative explanation to be unlikely as a GCO signals higher client risk (Blay et al., 2011), and successor auditors are more likely to accept clients with lower risk.

merger interaction coefficients are insignificant, and the clients of big partners are more likely to depart in post-merger years 2 through 4 if they have higher bankruptcy risk (column 3) and audit fees (column 6); and in the merger year and the one after it if they have higher audit fee ratios (column 5).¹⁵ The MY234 × RLEV interaction coefficient is marginally significant ($p=0.104$). These results are consistent with riskier, lower NAS and higher audit fee clients of big partners departing due to agreements with the big partners. While the MY234 negative coefficient is consistent with the results shown in Table 8, the positive sign on the MY234 × AUDFEE variable indicates that firms that departed were charged higher fees in the post-merger period by big partners. This evidence is consistent with big partners using audit fees to encourage clients to leave. Results for small partners, presented in Panel B, are weaker, showing higher levered clients are less likely to depart in the merger year. These results are consistent with small partners having little ‘say’ in the decision to influence clients to depart. Interestingly, results for new partners, presented in Panel C paint a different picture. Higher audit fee ratio clients are less likely to depart in the merger year and the year after it, and larger and higher ROA and audit fee and lower audit fee ratio clients, are more likely to depart in post-merger years 2 through 4. A possible explanation is that higher quality clients depart in later years when audited by new partners, perhaps because they do not get the standard of service they demand. We leave this question to future research. Results are qualitatively the same if these models are estimated with a year trend instead of year indicators (untabulated).

6.2. Client portfolio characteristics at the office level

If big partners are shedding risky and high audit fee ratio clients in the post-merger period, we expect changes at the office level. In this section, we take the findings from the above section further, by exploring whether departures manifest in changes in the audit office’s client characteristics. We also examine post-merger audit office growth. The following model is estimated at the audit office level:

$$\text{CHAR} = \alpha_0 + \beta_1 \text{MY0} + \beta_2 \text{MY1} + \beta_3 \text{MY2} + \beta_4 \text{MY3} + \beta_5 \text{MY4} + \beta_6 \text{YEARTREND} + \rho_j + \varepsilon \quad (8)$$

Where CHAR is either OSIZE, OROA, OLEV, OBRUPTCY or OGROWTH. OSIZE is the median size of all clients in the audit firm office in year t, OROA is the median ROA of all clients in the audit firm office in year t, winsorized at the 1st and 99th percentiles, OLEV is the median LEV of all clients in the audit firm office in year t, OBRUPTCY is the median of the Zmijewski (1989) bankruptcy score of all clients in the audit firm office in year t,

¹⁵ The results are also insensitive to exclusion of the industry and year dummies (untabulated).

winsorized at the 1st and 99th percentiles, and OGROWTH is the natural logarithm of one plus client gains in year t less the natural logarithm of one plus client losses in year t. Medians of CHAR are used to reduce the effect of outliers. We split MY1234 into four variables because we are interested in examining changes in each post-merger year. We control for trends over time in CHAR by including the variable YEARTREND, measured by the fiscal year, and audit firm fixed effects denoted by ρ .

The results from estimating equation 8 presented in Table 11, show that except for the size and audit fee ratio characteristics, all are insignificant. Column 1 shows that median client portfolios are larger than before mergers in the MY4 year. Untabulated results show that excluding clients gained after the merger results in insignificance for the MY4 coefficient (coeff = 0.078, p=0.488), and other merger year coefficients remain insignificant; consistent with new clients driving the MY4 estimate. Firms have clients with a lower audit fee ratio post-merger; consistent with new clients having larger non-audit services, NAS increasing for incumbent clients, audit fee discounting or combinations of these. Audit fee discounting post-merger does occur, but only by big partners (see Table 8). To tease out the underlying cause, we re-estimate the model excluding clients gained and lost after the merger. Untabulated results show that the MY4 coefficient is insignificant (coeff = -0.045, p=0.300) and other merger year coefficients are insignificant; consistent with new clients driving the MY4 result in column (1) and a preference for lower audit fee ratio clients by the newly merged audit firms. On average, firms lose more clients after mergers than before them.

6.3. Client switching at the office level

Results in Tables 9 and 10 indicate that audit firms lose clients after mergers; particularly when the clients receive an opinion about material uncertainty of their going concern in the merger year from a big partner. If the departing clients are risky ones, we expect them to be more likely to go to the Non BigN, since many studies provide evidence that the BigN have higher audit quality. We examine this issue in this final section.

We examine total gains and losses and those with Big N and non-Big N firms, by estimating the following models at the audit-office level:

LOST, LOSTBIGN, LOSTNONBIGN

$$= \alpha_0 + \beta_1 \text{MY0} + \beta_2 \text{MY1} + \beta_3 \text{MY2} + \beta_4 \text{MY3} + \beta_5 \text{MY4} + \beta_6 \text{YEARTREND} + \beta_7 \text{NUMCLI} + \rho_j + \varepsilon \quad (9)$$

$$\begin{aligned} \text{GAIN, GAINBIGN, GAINNONBIGN} \\ = \alpha_0 + \beta_1 \text{MY0} + \beta_2 \text{MY1} + \beta_3 \text{MY2} + \beta_4 \text{MY3} + \beta_5 \text{MY4} + \beta_6 \text{YEARTREND} + \beta_7 \text{NUMCLI} + \rho_j & \quad (10) \\ + \varepsilon \end{aligned}$$

where LOST is equal to the natural logarithm of one plus the number of clients lost in year t, LOSTBIGN equals the natural logarithm of one plus the number of clients lost to a Big N audit firm in year t, LOSTNONBIGN equals the natural logarithm of one plus the number of clients lost to a Non-Big N audit firm in year t, GAIN is equal to the natural logarithm of one plus the number of clients gained in year t, GAINBIGN equals the natural logarithm of one plus the number of clients gained from a Big N audit firm in year t, and GAINNONBIGN equals the natural logarithm of one plus the number of clients gained from a Non-Big N audit firm in year t. To control for auditor size, we include NUMCLI, defined as the natural logarithm of the sum of clients audited by the merger firms at the start of year t. We also include YEARTREND, denoted ∂ and fixed effects for merger-firm-offices, denoted by ρ .¹⁶

Table 12 presents the results from estimating equations (9) and (10). Columns 1 and 4 show one significant negative coefficient for MY3 for client gains and none for client losses. Therefore, the negative growth shown in Table 11 is due to audit firms gaining fewer clients than before the merger, rather than losing more clients. Specifically, post-merger, firms gain fewer clients only from the Non-Big N, than they did before the merger, as the results in columns 2 and 3 indicate. In columns 5 and 6, the results indicate that clients are less (more) likely to be lost to the Big N (Non-BigN) shortly after mergers. This is consistent with higher-risk clients departing the firm shortly after mergers.

7. Conclusion

In this study, we examine audit quality after audit firm mergers at the partner level. De Angelo (1981) argues that her theory applies at the audit partner level. However, little research exists on this question. Prior research on mergers has provided mixed results, and studies on the post-merger audit quality at the partner level are sparse. This is surprising, as decisions such as client portfolio rebalancing are likely to rest with partners from the larger of the merging audit firms.

Using the period just after the merger date, where endogeneity concerns are not as strong (Chan and Wu, 2010); we find that partners from the largest firm involved in a merger are more likely to issue a UAO in the merger year, but

¹⁶ All audit offices involved in the merger are treated as if they were the same office for the whole eight-year merger period.

partners from the smaller firm and new partners to the merged firm are not. We find evidence of increases in the likelihood of UAO issuance in the post-merger period by big partners, but this result is only found in the year after it and is not as strong as it is. There is no evidence of changes in audit quality, measured by restatement errors and discretionary accruals, after the merger year for big partners. Furthermore, we find only weak evidence of declines in audit quality for small partners and new ones in the post-merger period. Different samples and matching methods are used in robustness tests, with no substantive changes in these results. Subject to small partners also sharing in audit firm profits, these results are not consistent with De Angelo's (1981) theory of auditor size and independence. Rather, they are consistent with big partners being temporarily more conservative in the merger year.

In additional tests, we find that clients are more (less) likely to depart the audit firm when issued (not issued) with a UAO by big partners in the merger year. Big partners seem to be using UAOs to encourage some clients to depart and others to stay. The temporary 'spike' of UAO issuance in the merger year by big partners is not an improvement in audit quality.

Clients departing just after the merger year are more (less) likely to go to the Non-Big N (Big N) audit firms. Clients departing after the merger year are more likely to have higher bankruptcy risk and audit fee ratios only when audited by a big partner. These results are consistent with the risk avoidance theory and profit-seeking strategy by big partners.

Regarding the merged firms' client portfolios, these strategies are somewhat successful. We find an increase in client size and a decrease in audit fee ratios, for the average firm after mergers, but no changes in client risk or profitability. Audit firms lose clients after mergers, driven by fewer gains from the Non-Big N firms. This might be due to defensive strategies by the non-Big N firms.

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Declaration of Authors

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Data availability

Data are publicly available from the sources identified in the text.

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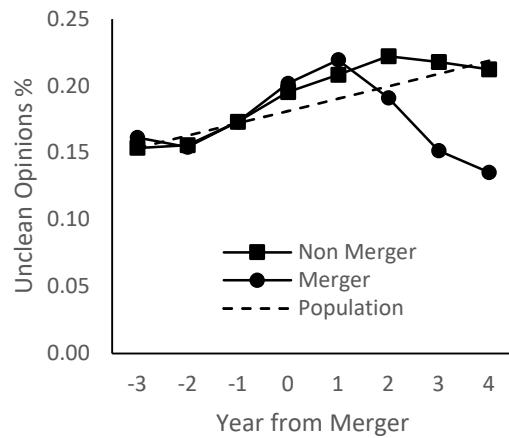
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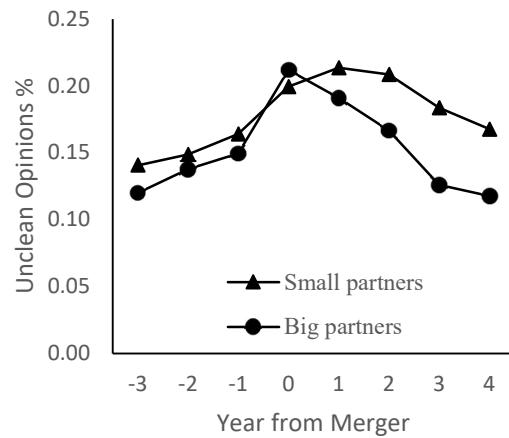
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Fig 1

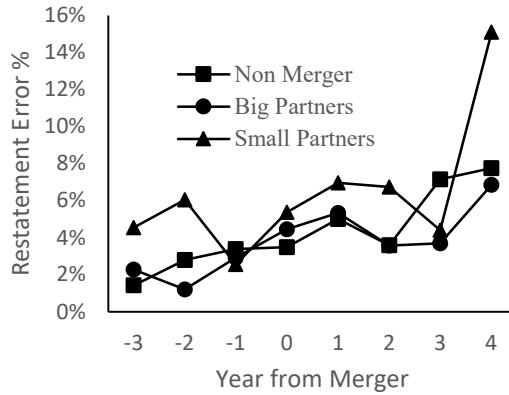
(a) Unclean Opinions (%) for Merger and Nonmerger clients



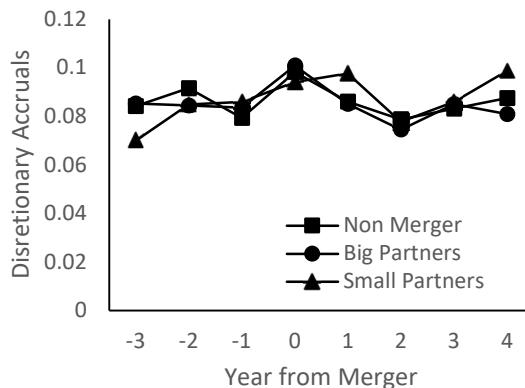
(b) Unclean Opinions (%) for Big and Small Partners



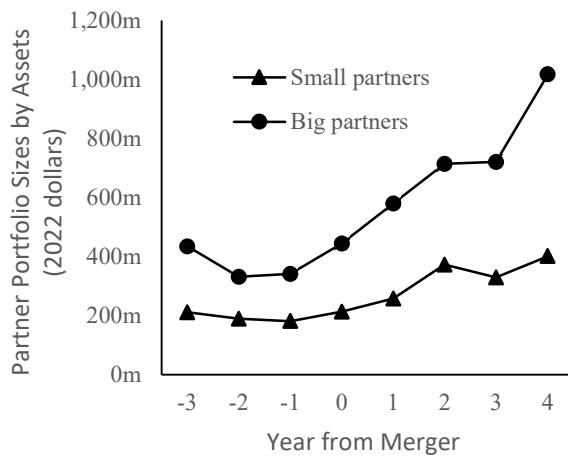
(c) Restatement Errors (%) for Nonmerger, Big and Small Partners' Clients



(d) Discretionary accruals for Nonmerger, Big and Small Partners' Clients



(e) Median Partner Client Portfolio Sizes by Assets (2022 dollars) for Big and Small partners



(f) Median Partner Client Portfolio Size by Clients for Big and Small Partners

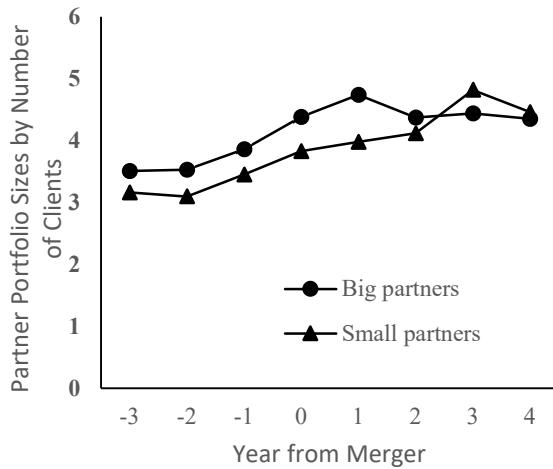


Table 1 Descriptive Statistics for Audit Firm Mergers, Name Changes, and Joining Alliances

Panel A – Statistics for Audit Firm Name Changes, Mergers and Joining Alliances

Type	Client Assets (\$b)*	%	Clients	%
No name change, merger or alliance	127,959.280	95.75	40,871	88.65
Name Changes	116.531	0.09	1,299	2.82
Office merger - listed clients	2,506.070	1.88	2,065	4.48
Office merger - unlisted clients	2,928.041	2.19	789	1.71
Nonoffice merger	109.913	0.08	663	1.44
Joining alliance	14.896	0.01	302	0.66
Consolidator merger	7.183	0.01	117	0.25

Panel B – Number of Mergers by Year

Auditor	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	
Firms	2	1	1	1	1	0	1	3	1	2	1	3	1	1	1	1	1	1	3	1	2	1	0	0	0	1	0	31	
Offices	2	1	5	1	1	0	5	3	1	2	1	3	1	1	1	1	1	2	1	3	1	2	1	0	0	0	1	0	40

Panel C – Statistics for Merger Firms the year before the Merger (N = 31)

Variable	Largest Firms				Smallest Firms			
	Min	Median	Mean	Max	Min	Median	Mean	Max
Partners No.	1	3	13.23	58	1	2	4.35	35
Clients No.	1	11	48.52	189	1	7	15.94	89
Clients' Assets (\$m)	2.771	337.469	39,678.252	546,114.530	2.261	96.444	7,962.800	145,283.601
Relative Size	1.00	1.14	1.26	1.96	2.05	8.23	328.20	9,021.04

*Measured in 2022 dollars using the Reserve bank inflation calculator: <https://www.rba.gov.au/calculator/>.

Panel B shows office mergers of listed clients. In Panel C, Relative Size for the largest (smallest) firm is the sum of clients' assets for all firms involved in the merger at t-1 divided by the sum of clients' assets of the largest (smallest) firms at t-1. All mergers involve two firms.

Table 2 - Descriptive Statistics for the Merger Client and Matched Client Samples

Variable	Merger Client Sample (N = 6,729*)			Matched Sample (N = 5,676*)		
	Median	Mean	Std Dev	Median	Mean	Std Dev
UAO	0	0.181	0.385	0	0.183	0.387
RES	0	0.043	0.202	0	0.043	0.203
DA	-0.010	0.001	0.233	-0.011	0.001	0.223
ADA	0.087	0.148	0.180	0.086	0.143	0.171
MC	1	1	0	1	0.507	0.500
BPAR	1	0.548	0.498	0	0.287	0.452
SPAR	0	0.308	0.462	0	0.163	0.370
NPAR	0	0.144	0.351	0	0.057	0.232
MY0	0	0.135	0.342	0	0.154	0.361
MY1234	1	0.534	0.499	0	0.430	0.495
LASS	17.225	17.518	2.286	17.112	17.279	1.959
ROA	-0.025	-0.374	3.249	-0.039	-0.278	2.058
RROA	0.500	0.500	0.289	0.500	0.500	0.289
LEV	0.323	0.529	3.091	0.268	0.393	1.217
RLEV	0.500	0.500	0.289	0.500	0.500	0.289
OCF	-0.010	-0.159	1.469	-0.021	-0.104	0.707
ROCF	0.500	0.500	0.289	0.500	0.500	0.289
CACL	1.803	7.986	56.261	1.960	7.404	27.242
RCACL	0.500	0.500	0.289	0.500	0.500	0.289
SALE	0.303	0.692	1.277	0.247	0.621	0.943
RSALE	0.500	0.500	0.289	0.500	0.500	0.289
SDR	0.149	0.185	0.145	0.151	0.187	0.144
RET	0.052	0.214	1.003	0.048	0.217	1.025
BIGN	1	0.635	0.481	1	0.505	0.500
FAGE	2.355	2.310	0.779	2.351	2.313	0.802
OFF	15.858	15.510	1.416	14.965	14.842	1.857
HHI	0.236	0.222	0.059	0.242	0.234	0.099
LUAO	0	0.163	0.370	0	0.169	0.374

The matched sample comprises clients of audit office mergers, with available data from 1996 to 2019 matched by assets with clients and partners not involved in mergers from 1991 to 2022. RROA, RLEV, ROCF, RCACL and RSALE are ranked transformed of the ratio variables: ROA, LEV, OCF, CACL and SALE to reduce the effects of extreme values. Table A1 defines the variables. *The number of observations for discretionary accruals (DA) and absolute value of discretionary accruals (ADA) is 5,190 in the merger client sample and 4,558 in the matched sample.

TABLE 3 – Logistic and OLS Regression Results using the Merger Client and Matched Samples

Variable	Unclean Opinions	Restatements	Discretionary accruals			
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	2.474** (1.087)	2.133** (0.945)	-3.642*** (1.260)	-4.536*** (1.300)	0.271*** (0.059)	0.230*** (0.061)
BPAR	- -	-0.252 (0.180)	- -	-0.162 (0.337)	- -	-0.014 (0.010)
SPAR	0.235 (0.169)	0.249 (0.210)	0.356 (0.280)	0.384 (0.325)	0.001 (0.010)	-0.004 (0.012)
NPAR	0.162 (0.152)	-0.105 (0.249)	-0.224 (0.214)	0.177 (0.326)	0.009 (0.010)	0.001 (0.014)
MY0	0.437** (0.206)	0.128 (0.219)	0.424 (0.327)	0.107 (0.341)	-0.008 (0.010)	-0.008 (0.011)
BPAR × MY0	- -	0.913*** (0.331)	- -	0.609 (0.525)	- -	0.016 (0.015)
SPAR × MY0	-0.546* (0.327)	-0.003 (0.450)	-0.554 (0.486)	0.149 (0.550)	0.021 (0.016)	0.029 (0.020)
NPAR × MY0	-0.828 (0.529)	-0.212 (0.801)	-0.738 (1.052)	0.063 (1.166)	-0.032 (0.027)	-0.048 (0.043)
MY1234	-0.178 (0.157)	0.019 (0.144)	0.722*** (0.233)	0.541** (0.254)	-0.001 (0.007)	-0.010 (0.008)
BPAR × MY1234	- -	0.082 (0.245)	- -	0.090 (0.424)	- -	0.011 (0.011)
SPAR × MY1234	-0.108 (0.239)	-0.381 (0.323)	-0.265 (0.329)	0.037 (0.422)	-0.004 (0.012)	0.017 (0.016)
NPAR × MY1234	- -	- -	- -	- -	- -	- -
LASS	-0.184*** (0.044)	-0.167*** (0.044)	0.089* (0.048)	0.105* (0.060)	-0.014*** (0.002)	-0.014*** (0.003)
RROA	-2.105*** (0.261)	-1.479*** (0.262)	0.395 (0.375)	-0.245 (0.425)	0.064*** (0.023)	0.063*** (0.023)
RLEV	0.014 (0.298)	0.085 (0.334)	0.632* (0.373)	0.971** (0.392)	0.111*** (0.018)	0.119*** (0.019)
ROCF	-0.849*** (0.265)	-1.186*** (0.264)	0.012 (0.400)	0.362 (0.437)	-0.124*** (0.025)	-0.125*** (0.026)
RCACL	-2.396*** (0.246)	-2.493*** (0.277)	-0.735** (0.337)	-0.068 (0.333)	0.021 (0.014)	0.035** (0.015)
RSALE	-0.128 (0.247)	-0.636** (0.295)	-0.168 (0.361)	-0.463 (0.400)	0.007 (0.016)	0.037** (0.018)
SDR	1.216*** (0.426)	1.342*** (0.482)	0.215 (0.719)	0.007 (0.642)	0.039 (0.029)	0.038 (0.033)
RET	-0.409*** (0.081)	-0.480*** (0.106)	0.050 (0.091)	-0.236** (0.114)	0.016*** (0.004)	0.012*** (0.004)
BIGN	-0.304* (0.156)	-0.225 (0.166)	-0.513** (0.234)	-0.309 (0.240)	0.004 (0.010)	0.012 (0.010)
FAGE	0.007 (0.065)	-0.040 (0.079)	-0.001 (0.096)	-0.108 (0.107)	-0.005 (0.004)	-0.007* (0.004)
OFF	0.051 (0.058)	0.038 (0.047)	-0.105 (0.078)	-0.056 (0.078)	0.001 (0.003)	-0.001 (0.002)
HHI	-0.247 (0.951)	0.959* (0.565)	-0.144 (1.232)	-0.337 (0.752)	-0.070 (0.055)	-0.014 (0.031)
LUAO	2.436*** (0.117)	2.778*** (0.136)	-0.398** (0.186)	-0.217 (0.208)	0.012 (0.010)	0.001 (0.001)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	34.38	36.00	3.09	2.81	16.05	14.36
N	6,729	5,676	6,729	5,676	5,190	4,558

This table shows results from estimating model 2. Appendix 1 defines the variables. Standard errors, clustered by client, are shown in parentheses. R²s are Pseudo R²s for logistic regressions and adjusted R²s otherwise. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 4 - Regression Results for Nonmerger Client Samples and Results from estimating models using the matched sample excluding merger clients from PWCL and EYAA mergers and their non-merger matches

Panel A - Regression Results for Nonmerger Client Samples

Variable	Unclean Opinions			Restatements			Discretionary accruals		
	Baseline	Same City	Same city large merger	Baseline	Same City	Same city large merger	Baseline	Same City	Same city large merger
SC	-0.153 (0.180)	-0.252 (0.265)	-0.452 (0.325)	-0.064 (0.259)	0.447 (0.440)	0.205 (0.480)	0.021* (0.012)	0.034** (0.017)	0.019 (0.020)
MY0	0.111 (0.249)	0.092 (0.264)	0.115 (0.297)	0.254 (0.360)	0.265 (0.409)	0.130 (0.463)	-0.005 (0.011)	-0.002 (0.012)	-0.008 (0.014)
SC × MY0	0.079 (0.539)	0.599 (0.575)		0.007 (0.787)	0.562 (0.840)		-0.010 (0.025)	0.010 (0.028)	
SC × MY0 × PCEA		-2.027 (1.401)				-14.349*** (1.546)			-0.078 (0.054)
MY1234	0.012 (0.160)	-0.038 (0.188)	0.024 (0.221)	0.632** (0.273)	0.847*** (0.324)	1.085*** (0.373)	-0.005 (0.009)	0.001 (0.011)	-0.015 (0.014)
SC × MY1234	0.192 (0.364)	0.378 (0.447)		0.902 (0.555)	-0.612 (0.579)	-	-0.024 (0.017)	0.001 (0.020)	
SC × MY1234 × PCEA		-0.788 (0.781)				-13.680*** (1.209)			-0.080** (0.038)
All interactions	-	-	Yes	-	-	Yes	-	-	Yes
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R ²	38.12	38.13	38.25	4.35	4.47	4.90	15.82	15.90	16.26
N	2,796	2,796	2,796	2,796	2,796	2,796	2,234	2,234	2,234

the table is continued on the next page

Table 4 continued

Panel B - Results from estimating models using the matched sample excluding merger clients from PWCL and EYAA mergers and their non-merger matches

Variable	Unclean Opinions		Restatements		Discretionary accruals	
	(1)	(2)	(3)	(4)	(5)	(6)
BPAR	-0.258 (0.204)	-1.006** (0.508)	-0.233 (0.360)	-0.073 (0.144)	-0.015 (0.012)	0.019 (0.049)
SPAR	0.199 (0.237)	-0.105 (0.573)	0.414 (0.355)	-0.074 (0.149)	0.006 (0.018)	0.043 (0.061)
NPAR	-0.045 (0.302)	- (-)	-0.257 (0.397)	-0.090 (0.146)	0.014 (0.020)	0.059 (0.053)
MY0	0.255 (0.236)	0.183 (0.307)	0.146 (0.389)	0.003 (0.018)	-0.013 (0.014)	-0.017 (0.017)
BPAR × MY0	0.731* (0.382)	1.215** (0.489)	0.699 (0.583)	0.031 (0.027)	0.021 (0.020)	0.018 (0.021)
SPAR × MY0	-0.178 (0.477)	-0.347 (0.582)	-0.005 (0.642)	0.019 (0.034)	0.055* (0.030)	0.054* (0.033)
NPAR × MY0	-1.395* (0.768)	-2.630** (1.259)	0.612 (1.200)	0.044 (0.060)	-0.091* (0.048)	-0.102 (0.065)
MY1234	0.129 (0.172)	0.086 (0.307)	0.691** (0.291)	0.030** (0.017)	-0.014 (0.011)	-0.023 (0.018)
BPAR × MY1234	0.307 (0.298)	0.850** (0.423)	-0.121 (0.465)	-0.009 (0.022)	0.009 (0.013)	0.004 (0.018)
SPAR × MY1234	-0.361 (0.380)	-0.159 (0.515)	0.065 (0.457)	0.034 (0.029)	0.013 (0.021)	0.006 (0.029)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Client fixed effects	No	Yes	No	Yes	No	Yes
R ²	38.96	10.63	2.81	21.10	13.05	30.29
N	3,666	1,607	3,666	3,666	3,012	3,012

Panel A reports the results of logistic and OLS regressions for clients who were not involved in a merger. SC is an indicator variable equal to 1 if the client was matched with a merger client from the same city and zero otherwise. PCEA is an indicator variable that equals to 1 if the client was matched with a merger client from the Coopers and Lybrand and Price Waterhouse or Ernst and Young and Arthur Andersen mergers and zero otherwise. All other control variables are defined in Table A1. Year and GICS Industry Sector fixed effects are included in all regressions. Regressions with 3-way interactions are hierarchically well formulated. None of the untabulated lower-order interaction coefficients are significant. McFadden's R² is reported for logistic regressions.

Panel B shows the results from estimating models using the matched sample excluding merger clients from PWCL and EYAA mergers and their non-merger matches. Appendix 1 defines the variables. Standard errors, clustered by client, are shown in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 5 – Summary Results from estimating logistic regression, linear probability and OLS regression models including client fixed effects using the Merger Client and Matched Samples

Variable	Unclean Audit Opinion (1)	Unclean Audit Opinion (2)	Restatement Errors (3)	Discretionary accruals (1)	Discretionary accruals (2)	Discretionary accruals (3)
BPAR	-	-1.022** (0.411)	-	-0.002 (0.008)	-	-0.025 (0.083)
SPAR	0.337 (0.262)	-0.325 (0.458)	0.009 (0.008)	0.012 (0.011)	0.011 (0.012)	-0.010 (0.085)
NPAR	-0.154 (0.233)	-	-0.010 (0.010)	0.008 (0.018)	0.036*** (0.010)	0.004 (0.084)
MY0	0.713*** (0.259)	0.201 (0.255)	0.009 (0.011)	0.003 (0.011)	0.013 (0.010)	0.004 (0.010)
BPAR × MY0	-	1.190*** (0.403)	-	0.018 (0.017)	-	0.011 (0.016)
SPAR × MY0	-0.678* (0.369)	0.341 (0.474)	-0.017 (0.016)	0.008 (0.023)	0.023 (0.016)	0.034 (0.020)
NPAR × MY0	-1.403** (0.577)	-1.105 (0.861)	-0.010 (0.018)	0.003 (0.041)	-0.034 (0.027)	-0.059 (0.038)
MY1234	0.398* (0.238)	0.311 (0.237)	0.024*** (0.007)	0.021** (0.010)	0.007 (0.009)	-0.008 (0.009)
BPAR × MY1234	-	0.648* (0.346)	-	-0.002 (0.014)	-	0.002 (0.013)
SPAR × MY1234	-0.863*** (0.317)	0.244 (0.400)	-0.005 (0.013)	0.011 (0.022)	0.006 (0.013)	0.018 (0.016)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	No	No	No	No	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Client fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	8.00	8.01	2.29	1.63	44.47	40.35
N	2,365	2,121	6,729	5,676	5,190	4,558

Robust standard errors, clustered by client are shown in parentheses. Pseudo R²'s are shown for the models explaining UAOs, otherwise adjusted R²'s are shown. Linear Probability models are estimated to explain restatement errors and logistic regression models are estimated to explain unclean audit opinions. The lagged unclean audit opinions variable (LUAO) is excluded from the control variables in the models explaining UAO, otherwise, it is included. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 6 – Summary Regression Results using Relative Size of Partners' Firms of Origin and the Merger Client Sample excluding New Partners

Variable	Unclean Opinions		Restatements		Discretionary accruals	
	(1)	(2)	(3)	(4)	(5)	(6)
RRSIZE	0.160 (0.279)	0.274 (0.479)	0.345 (0.428)	0.005 (0.024)	0.007 (0.015)	-0.004 (0.021)
MY0	0.274* (0.169)	0.578** (0.233)	0.183 (0.257)	-0.001 (0.011)	0.001 (0.009)	0.013 (0.010)
RRSIZE × MY0	-0.771 (0.515)	-1.035* (0.634)	-0.716 (0.707)	-0.012 (0.030)	-0.019 (0.028)	-0.003 (0.026)
MY1234	-0.181 (0.135)	0.159 (0.231)	0.591 (0.193)	0.026** (0.010)	-0.005 (0.007)	0.018* (0.009)
RRSIZE × MY1234	-0.077 (0.404)	-1.360** (0.553)	-0.326 (0.516)	0.017 (0.026)	-0.009 (0.018)	0.043* (0.022)
Client fixed effects	No	Yes	No	Yes	No	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	No	Yes	No	Yes	No
R ²	34.57	7.29	3.45	30.82	15.46	48.63
N	5,758	1,914	5,758	5,758	4,456	4,456

Panel B – Predicted Probabilities at the 25th, median and 75th percentiles for RRSIZE explaining Unclean Audit Opinions

	25 th	Median	75 th
Pre-Merger Period	5.5%	5.9%	5.7%
Merger Year	8.4%	7.4%	6.5%
Post Merger Period	4.7%	4.8%	4.9%

Panel A shows results from estimating the models using relative size instead of the audit partner indicators to measure the relative size of the partners' firms of origin and the merger client sample excluding new partners. Columns 1,2 and 3 are logistic regression estimates. Columns 4, 5 and 6 are OLS regression estimates. Lagged unclean audit opinion (LUAO) is excluded from the controls in the client fixed effects regressions. $RRSIZE_i = \frac{\sum_{i=1}^n SIZE_{i,-1}}{SIZE_{i,-1}}$, where $SIZE_{i,-1}$ is total assets of listed clients of audit firm i at the start of MY0; and $\sum_{i=1}^n SIZE_{i,-1}$ is the sum of SIZE for the n audit firms in the merger. RRSIZE is ranked RSIZE and is mean centered. Appendix 1 defines the variables. Standard errors, clustered by client, are shown in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively. Panel B shows the predicted probabilities at the 25th, median and 75th percentiles for RRSIZE for the pre-merger, merger year and post-merger periods, explaining unclean audit opinions and holding other control variables at their medians.

Table 7 – Logistic Regression Results predicting merger clients at t-1 and Summary Logistic and OLS Regression Results using the Propensity Score Matched Sample

Panel A - Logistic Regression Results predicting merger clients at t-1

Variable	Coeff	Std Error	Variable	Coeff	Std Error
Intercept	9.095***	(1.003)	SDR	-0.522	(0.380)
LASS	-0.053**	(0.025)	RET	-0.025	(0.052)
RROA	0.524**	(0.211)	BIG4	0.109	(0.100)
RLEV	0.199	(0.220)	FAGE	0.291***	(0.051)
ROCF	-0.516**	(0.220)	OFF	-0.068	(0.045)
RCACL	-0.041	(0.191)	HHI	-6.420***	(0.668)
RSALE	1.037***	(0.186)			
Industry Fixed Effects		Yes			
Year Fixed Effects		Yes			
R ²		8.29			
N		11,105			

Panel B - Logistic and OLS Regression Results using a matched sample based on propensity scores

Variable	Unclean Audit Opinion		Restatement Errors		Discretionary accruals
BPAR	-0.177 (0.177)	-0.333 (0.415)	-0.158 (0.299)	0.084 (0.140)	-0.006 (0.010)
SPAR	0.311 (0.203)	0.866* (0.452)	0.245 (0.327)	0.095 (0.141)	0.008 (0.012)
NPAR	-0.247 (0.278)	- (-)	0.512 (0.329)	0.114 (0.141)	0.023 (0.017)
MY0	0.160 (0.225)	-0.034 (0.267)	0.148 (0.274)	0.007 (0.012)	-0.010 (0.010)
BPAR × MY0	0.593* (0.317)	1.230*** (0.443)	0.396 (0.495)	0.016 (0.018)	0.007 (0.015)
SPAR × MY0	-0.034 (0.466)	0.060 (0.462)	0.080 (0.515)	0.016 (0.022)	0.020 (0.020)
NPAR × MY0	-0.442 (0.881)	-0.976 (0.780)	0.228 (0.838)	0.017 (0.038)	-0.041 (0.039)
MY1234	-0.036 (0.142)	-0.080 (0.226)	0.197 (0.234)	0.017* (0.009)	-0.010 (0.009)
BPAR × MY1234	0.067 (0.261)	0.990** (0.386)	0.354 (0.405)	0.017 (0.014)	0.002 (0.012)
SPAR × MY1234	-0.647* (0.335)	-0.260 (0.408)	0.430 (0.433)	0.035* (0.018)	-0.004 (0.016)
Control variables	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	No	Yes	No	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Client fixed effects	No	Yes	No	Yes	No
R ²	34.96	7.58	2.75	22.84	16.81
N	6,147	2,160	6,147	6,147	4,690
					4,690

In Panels A and B, robust standard errors, clustered by client are shown in parentheses. Pseudo R²'s are shown for the models explaining UAOs, otherwise adjusted R²'s are shown. The Lagged unclean audit opinions variable (LUAO) is excluded from the control variables in the client fixed effects regression explaining UAO, otherwise, it is included. In Panels A and B *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 8 – Summary OLS Regression Results for Audit Fees and Auditing Reporting Lag for the Matched Sample

Dependent variable =	AUDFEE	AUDLAG		
Variable				
BPAR	0.120*** (0.031)	0.069 (0.042)	0.030*** (0.011)	-0.022 (0.014)
SPAR	-0.025 (0.040)	0.028 (0.050)	0.010 (0.014)	-0.003 (0.017)
NPAR	0.013 (0.053)	- (0.015)	0.041*** -	-
MY0	0.013 (0.037)	0.061** (0.027)	-0.005 (0.013)	-0.002 (0.010)
BPAR × MY0	-0.052 (0.055)	-0.058 (0.041)	0.026 (0.020)	0.030** (0.014)
SPAR × MY0	-0.083 (0.068)	-0.076 (0.051)	0.022 (0.026)	0.010 (0.017)
NPAR × MY0	-0.150 (0.130)	-0.096 (0.094)	0.029 (0.045)	0.044 (0.033)
MY1234	0.008 (0.031)	0.091*** (0.024)	-0.012 (0.010)	0.004 (0.008)
BPAR × MY1234	-0.108** (0.046)	-0.076** (0.034)	0.019 (0.016)	0.024** (0.011)
SPAR × MY1234	0.021 (0.054)	-0.002 (0.044)	0.026 (0.021)	0.015 (0.015)
Control variables	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	No	Yes	No
Year fixed effects	Yes	Yes	Yes	Yes
Client fixed effects	No	Yes	No	Yes
R ²	70.18	89.98	26.23	74.92
N	5,676	5,676	5,676	5,676

This table reports OLS regression results explaining the logarithm of audit fees and the logarithm of auditing reporting lag using the same control variables as in model 1 except we remeasure the audit office control variable as the natural logarithm of the number of clients in the office at year t in the audit fee regressions to avoid a mechanical relationship with the dependent variable. Robust standard errors, clustered by client are shown in parentheses. AUDFEE = the natural logarithm of audit fees for year t. AUDLAG = the natural logarithm of the number of days from the client's fiscal year-end until the audit report date. Other variables are defined in Appendix Table A1. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 9 – Logistic Regression Results for Client Losses for all Clients and for Big partners, Small partners and New Partners from 1996 through 2019

Variable	All Clients	BPAR	SPAR	NPAR
Intercept	-1.403*** (0.295)	-1.949* (1.123)	-1.295* (0.758)	-0.106 (0.896)
MYL123	- -	-0.255 (0.167)	0.288 (0.176)	- -
MYL123 × GC	- -	0.253 (0.332)	0.123 (0.331)	- -
MYL123 × MODOP	- -	0.276 (0.540)	-0.094 (0.741)	- -
MY01	- -	-0.418** (0.194)	0.136 (0.204)	-0.193 (0.303)
MY01 × GC	- -	0.645* (0.346)	-0.151 (0.432)	0.178 (0.567)
MY01 × MODOP	- -	0.156 (0.607)	0.031 (0.904)	1.768** (0.744)
MY234	- -	-0.284 (0.173)	-0.126 (0.209)	-0.422** (0.205)
MY234 × GC	- -	0.184 (0.349)	0.406 (0.378)	0.829*** (0.321)
MY234 × MODOP	- -	0.844 (0.561)	1.614** (0.758)	-1.893* (1.108)
GC	0.207*** (0.056)	0.135 (0.196)	-0.213 (0.221)	0.142 (0.185)
MODOP	0.602*** (0.097)	0.387 (0.355)	0.182 (0.495)	0.870*** (0.329)
GROWTH	0.247*** (0.075)	0.317* (0.181)	-0.144 (0.220)	0.032 (0.212)
RAINV	0.147* (0.085)	0.235 (0.215)	-0.243 (0.240)	0.326 (0.235)
LASS	-0.103*** (0.010)	-0.111*** (0.026)	-0.082*** (0.030)	-0.155*** (0.031)
RROA	-0.320** (0.151)	-0.737* (0.385)	-0.253 (0.416)	0.189 (0.441)
LOSS	0.329*** (0.086)	0.193 (0.224)	0.518** (0.237)	0.446* (0.258)
RLEVERAGE	0.187** (0.084)	0.052 (0.210)	0.835*** (0.234)	0.108 (0.239)
EXPERT	-0.172*** (0.061)	-0.445*** (0.148)	-0.123 (0.179)	0.072 (0.135)
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
R ²	1.63	2.53	2.99	4.26
N	36,538	7,346	4,635	4,852
Number of switches away	2,727	443	361	356

This table reports logistic regression results using the samples of clients audited by Big Partners, Small Partners and New Partners over their entire working histories in our database. MYL123 is an indicator variable that equals one if any of the client's fiscal year annual reports are from the three years before the merger year, and zero otherwise. MY01 is an indicator variable that equals any of the client's fiscal year annual reports in the merger year or the year after the merger year, and zero otherwise. MY234 is an indicator variable that equals one if the client's fiscal year annual reports are in the second, the third or fourth years after the merger year, and zero otherwise. SWITCHAWAY is equal to one if the client departs the audit firm for another one in year t and zero otherwise, RAINV is receivables plus inventory divided by total assets, and it is rank transformed, GROWTH is total client assets at t less client assets at t-1 divided by client assets at t-1, GC is equal to one if the client receives a material uncertainty related to going concern opinion in its audit report and zero otherwise, MODOP is equal to one if the client receives a modified audit opinion in its audit report and zero otherwise, LOSS is equal to one if ROA is negative and zero otherwise, EXPERT is equal to one if the audit office has more than five per cent of clients in a GICS industry sector and major capital city, namely Adelaide, Brisbane, Hobart, Melbourne, Sydney or Perth and zero otherwise, and other variables are defined in Appendix Table 1. Robust standard errors, clustered by client are shown in parentheses. Pseudo R²s are shown. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 10 – Logistic Regression Results for Client Losses for Different Client Characteristics Around Mergers for all Clients of Big partners, Small partners and New Partners from 1996 to 2019

	CHAR					
Variable	LASS (1)	RLEV (2)	BRUPTCY (3)	RROA (4)	AFRATIO (5)	AUDFEE (6)
Panel A – Big Partners Sample						
MYL123	-1.324 (1.139)	-0.461 (0.321)	-0.485 (0.316)	-0.322 (0.308)	-1.267* (0.649)	-1.656 (1.225)
MYL123 × CHAR	0.061 (0.065)	0.412 (0.595)	0.463 (0.572)	0.096 (0.545)	1.257 (0.778)	0.126 (0.110)
MY01	1.715 (1.642)	-0.841** (0.399)	-0.747* (0.396)	-0.668* (0.381)	-2.148*** (0.821)	0.135 (1.517)
MY01 × CHAR	-0.126 (0.098)	0.901 (0.707)	0.702 (0.698)	0.525 (0.670)	2.164** (0.963)	-0.050 (0.139)
MY234	-0.840 (1.291)	-0.824** (0.356)	-0.936** (0.369)	-0.186 (0.327)	-0.581 (0.596)	-2.834** (1.266)
MY234 × CHAR	0.029 (0.074)	1.015 (0.624)	1.238* (0.640)	-0.323 (0.592)	0.324 (0.731)	0.222** (0.111)
CHAR	-0.164*** (0.034)	0.034 (0.324)	-0.851 (0.632)	-0.675 (0.488)	0.382 (0.404)	0.062 (0.061)
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	3.42	3.42	3.45	3.39	3.61	3.47
N	7,204	7,204	7,204	7,204	7,204	7,204
Panel B – Small Partners Sample						
MYL123	1.058 (1.609)	0.682** (0.314)	0.720** (0.324)	0.047 (0.357)	-0.361 (0.664)	-0.451 (1.279)
MYL123 × CHAR	-0.050 (0.095)	-0.746 (0.545)	-1.024* (0.583)	0.379 (0.630)	0.742 (0.822)	0.056 (1.625)
MY01	-2.247 (1.590)	0.862** (0.342)	0.381 (0.367)	-0.273 (0.409)	0.318 (0.724)	0.016 (0.149)
MY01 × CHAR	0.136 (0.092)	-1.419** (0.629)	-0.662 (0.663)	0.726 (0.739)	-0.313 (0.881)	-0.271 (2.704)
MY234	-2.303 (1.519)	0.191 (0.368)	-0.049 (0.404)	-0.598 (0.417)	-0.906 (0.781)	0.030 (0.246)
MY234 × CHAR	0.122 (0.087)	-0.353 (0.635)	-0.281 (0.694)	0.834 (0.738)	0.917 (0.946)	-2.231 (1.831)
CHAR	-0.165*** (0.054)	1.141*** (0.373)	0.075 (0.666)	-0.686 (0.558)	0.232 (0.464)	0.024 (0.110)
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	5.25	4.05	5.23	5.19	5.25	5.18
N	4,528	4,528	4,528	4,528	4,528	4,528

the table is continued on the next page

Table 10 continued

Panel C – New Partners Sample

MY01	-2.185 (2.821)	-0.948 (0.697)	-0.713 (0.700)	-0.682 (0.622)	1.221 (0.868)	-4.288* (2.590)
MY01 × CHAR	0.111 (0.164)	1.408 (1.164)	0.924 (1.215)	0.771 (1.091)	-1.919* (1.038)	0.367 (0.230)
MY234	-2.925** (1.419)	-0.637 (0.392)	-0.419 (0.382)	-1.135*** (0.379)	1.085 (0.678)	-4.147*** (1.512)
MY234 × CHAR	0.146* (0.081)	0.406 (0.658)	-0.047 (0.639)	1.435** (0.623)	-1.922** (0.788)	0.333** (0.132)
CHAR	-0.221*** (0.046)	0.163 (0.369)	0.424 (0.633)	-0.879 (0.604)	1.337*** (0.507)	0.005 (0.067)
Other Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	5.60	5.57	5.56	5.65	5.75	5.68
N	4,722	4,722	4,722	4,722	4,722	4,722

This table reports summary logistic regression results using the samples of clients audited by Big Partners, Small Partners and New Partners over their entire working histories in our database, excluding clients that received an unclean audit opinion in year t-1 and departed the audit firm in year t. CHAR represents one of the five variables: LASS, RLEV, BRUPTCY, RROA or AFRATIO. BRUPTCY is the ranked adjusted Zmijewski (1984) bankruptcy score also used by Carey and Simnett (2006) with Australian data. AFRATIO is audit fees for year t divided by the sum of audit and non-audit fees for year t. AUDFEE is the natural logarithm of audit fees for year t. Other variables are defined in Table A1. All models are hierarchically well-formulated. Robust standard errors, clustered by audit firm are shown in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 11 – Characteristics of Audit Firm Client Portfolios After Mergers

Variable	Client size (1)	Leverage (2)	Bankruptcy risk (3)	ROA (4)	Audit Fee Ratio (5)	Growth (6)
Intercept	8.007*** (0.049)	-0.137 (0.834)	-2.536*** (0.131)	3.245** (1.341)	0.591*** (0.026)	0.105 (0.123)
MY0	-0.010 (0.038)	-0.019 (0.023)	-0.073 (0.171)	-0.010 (0.037)	-0.005 (0.016)	-0.149 (0.126)
MY1	-0.017 (0.051)	0.028 (0.028)	0.392 (0.405)	-0.061 (0.102)	-0.013 (0.012)	-0.155 (0.121)
MY2	0.017 (0.052)	0.017 (0.024)	0.033 (0.346)	-0.030 (0.085)	-0.040* (0.021)	-0.044 (0.126)
MY3	0.057 (0.050)	0.020 (0.028)	-0.115 (0.277)	0.044 (0.071)	-0.038* (0.022)	-0.156* (0.088)
MY4	0.145** (0.056)	0.056 (0.052)	0.249 (0.444)	0.002 (0.079)	-0.049* (0.024)	0.071 (0.166)
Year Trend	-0.007** (0.003)	0.017 (0.034)	-0.026*** (0.008)	-0.137** (0.056)	0.018*** (0.002)	0.105 (0.123)
Audit firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	65.64	42.11	23.72	40.02	73.45	9.81
N	288	288	288	288	288	288

This table reports regression results using the sample of merger audit firm offices. MY1 an indicator variable that equals one if the client's fiscal year annual report is the first fiscal year after the audit firm merger year, and zero otherwise. MY2 an indicator variable that equals one if the client's fiscal year annual report is the second fiscal year after the audit firm merger year, and zero otherwise. MY3 an indicator variable that equals one if the client's fiscal year annual report is the third fiscal year after the audit firm merger year, and zero otherwise. MY4 an indicator variable that equals one if the client's fiscal year annual report is the fourth fiscal year after the audit firm merger year, and zero otherwise. Client size is the median of the natural logarithm of the total assets of clients audited by the audit firm office in year t. Bankruptcy risk is the median of the Zmijewski (1989) bankruptcy risk score of the clients audited by the audit office in year t. ROA is the median of the ratio of net income to total assets of the clients audited by the audit office in year t. Audit Fee ratio is the median of the ratios of audit fees paid by the clients in year t divided by the audit fees plus non-audit fees paid by the clients in year t of the clients audited by the audit office in year t. Growth is the natural logarithm of 1 plus the number of clients gained in year t less the natural logarithm of 1 plus the number of clients lost in year t. Year Trend is the fiscal year of the audit report of the client. Other variables are defined in Table A1. Robust standard errors, clustered by audit firm are shown in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Table 12 – Client Gains and Losses After Mergers

Variable	Client Gains (1)	Client Gains BigN (2)	Client Gains Non BigN (3)	Client Losses (4)	Client Losses BigN (5)	Client Losses Non BigN (6)
Intercept	-1.262*** (0.360)	-0.550*** (0.147)	-1.137*** (0.350)	-1.156*** (0.401)	-0.699*** (0.112)	-0.851* (0.435)
MY0	-0.071 (0.065)	-0.022 (0.101)	-0.068 (0.089)	0.090 (0.116)	-0.152 (0.091)	0.228** (0.083)
MY1	-0.153 (0.092)	-0.073 (0.104)	-0.140** (0.065)	0.015 (0.089)	-0.144** (0.067)	0.122 (0.088)
MY2	-0.059 (0.106)	-0.048 (0.092)	0.015 (0.086)	0.002 (0.104)	-0.116 (0.082)	0.081 (0.087)
MY3	-0.202* (0.111)	-0.033 (0.099)	-0.190** (0.082)	-0.026 (0.098)	-0.070 (0.099)	0.029 (0.082)
MY4	-0.133 (0.122)	-0.027 (0.098)	-0.139 (0.098)	-0.181 (0.140)	-0.099 (0.095)	-0.108 (0.126)
Year Trend	0.016*** (0.005)	0.001 (0.004)	0.019*** (0.006)	0.014 (0.012)	0.001 (0.004)	0.016 (0.013)
Clients	0.646*** (0.089)	0.335*** (0.037)	0.508*** (0.079)	0.592*** (0.077)	0.378*** (0.026)	0.403*** (0.078)
Audit firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	51.04	30.03	42.43	46.27	30.82	39.73
N	288	288	288	288	288	288

This table reports regression results using the sample of merger firm offices. MY1 is an indicator variable that equals to one if the client's fiscal year annual report is the first fiscal year after the audit firm merger year, and zero otherwise. MY2 is an indicator variable that equals to one if the client's fiscal year annual report is the second fiscal year after the audit firm merger year, and zero otherwise. MY3 is an indicator variable that equals to one if the client's fiscal year annual report is the third fiscal year after the audit firm merger year, and zero otherwise. MY4 is an indicator variable that equals to one if the client's fiscal year annual report is the fourth fiscal year after the audit firm merger year, and zero otherwise. Year Trend is the fiscal year of the audit report of the client. Clients is the natural logarithm of the number of clients of the audit office at the start of year t. Pre-merger audit offices are treated as the same audit office as post-merger. Other variables are defined in Table A1. Robust standard errors, clustered by audit firm are shown in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively.

Appendix Table A1 – Definitions of Variables

Variable	Definition
UAO	An indicator variable that equals one if the client received a modified audit opinion or a material uncertainty related to going concern opinion in its audit report in the fiscal year, and zero otherwise.
RES	An indicator variable that equals one in the fiscal year the client had an error that was subsequently restated and zero otherwise.
DA	Discretionary accruals derived from equation (3).
ADA	The absolute value of discretionary accruals.
BPAR	An indicator variable that equals 1 if the audit partner signed an audit report in any fiscal year from MY0 to the end of the merger period and in one of the three years before MY0, from the audit firm that contributed the largest total of client assets to the merger and zero otherwise.
SPAR	An indicator variable equal to 1 if the partner signed an audit report in any year from MY0 to the end of the merger period and in one of the three years before MY0 from the audit firm that did not contribute the largest total of client assets to the merger and zero otherwise.
NPAR	An indicator variable equal to 1 if the partner signed an audit report in any year from MY0 to the end of the merger period and did not sign an audit report in the three years before MY0 from the audit firms involved in the merger and zero otherwise.
RSIZE	Total client assets of the audit partner's firm in the year before the merger plus total client assets of the other merging firm(s) in the year before the merger, divided by total client assets of the audit partner's firm in the year before the merger
RRSIZE	Ranked transformed RSIZE and mean centered.
MY0	An indicator variable that equals one if the client's fiscal year annual report is one of the merger years and zero otherwise.
MY1234	An indicator variable that equals one if the client's fiscal year annual report is one of the four years after the audit firm merger year and zero otherwise.
LASS	The natural logarithm of total assets.
ROA	Net income divided by total assets.
RROA	Ranked transformed ROA.
LEV	Total liabilities divided by total assets.
RLEV	Rank transformed LEV.
OCF	Operating cash flows divided by total assets.
ROCF	Rank transformed OCF.
CACL	Current Assets divided by current liabilities.
RCACL	Rank transformed CACL.
SALE	Sales divided by total assets.
RSALE	Rank transformed SALE.
SDR	The standard deviation of monthly raw returns measured over 12 months to the end of the client's fiscal year-end, winsorized at a maximum value of 10.

RET	Twelve-month raw return measured to the end of the client's fiscal year end winsorized at a maximum value of 10.
BIGN	An indicator variable that equals one if the client is audited by Arthur Anderson, Coopers and Lybrand, Deloitte Touche Tohmatsu, EY, KPMG, Price Waterhouse, or PricewaterhouseCoopers in the fiscal year and zero otherwise.
FAGE	Natural logarithm of the number of years since the client listed on an Australian Stock exchange at the audit report date
OFF	Natural logarithm of total audit fees from listed clients audited by the audit office for the fiscal year
HHI	Herfindahl–Hirschman index, measured by the sum of squared market shares using audit fees, of all audit offices in a city.
LUAO	An indicator variable that equals one if the client received a modified audit opinion or a material uncertainty related to going concern opinion in its audit report in the prior fiscal year, and zero otherwise.