

***"This is the peer reviewed version of the following article: [International Journal of Auditing, 2020] which has been published in final form at [<https://onlinelibrary.wiley.com/doi/10.1111/ijau.12212>] purposes in accordance with [Wiley Terms and Conditions for Self-Archiving](#)."***

# **The quality of other assurance services supplied by accounting firms: Evidence from independent expert reports.**

## **Abstract**

Recent concern has been expressed regarding accounting firms reducing the quality of their assurance services (statutory audit and other assurance services) to gain cross-selling opportunities. While prior studies have focused on the quality of statutory audits, our study examines the quality of other assurance services, in the form of independent expert opinions provided to target firms in Australian takeovers. Specifically, this setting allows us to observe any dissent or consensus in opinions between the accounting firms and their clients regarding the fairness of a takeover offer price, the quality of the independent expert report (valuation range) and fees charged for their services. Our results are inconsistent with accounting firms providing lower quality independent expert reports. However, non-Big 4 accounting firms charge lower fees for their independent expert reports compared to other providers, consistent with potential incentives to cross-sell future services.

**Keywords:** Assurance; Independence; Non-audit Services; Independent Expert Reports

**JEL Classifications:** G34, M42

## 1. Introduction

In recent times, practitioners, the media and regulators worldwide have expressed concerns about the quality of assurance services supplied by accounting firms. For instance, the Australian Senate in August 2019, established a parliamentary inquiry into the regulation of auditing in Australia with a report due by March 1, 2020. The terms of reference for this inquiry include an examination of the conflict of interest between the provision of assurance and other services by the same firm. The subsequent Parliamentary Inquiry has highlighted significant deficiencies in the quality of work conducted by the Big 4 accounting firms. Much of these criticisms stem from the view that accounting firms have economic incentives to gain repeat business or cross-sell other services, hence potentially compromising their ability to provide independent advice (Tadros 2018; Commonwealth of Australia 2019). This sentiment has been echoed by the International Ethics Standards Board (IESB) (2020), with the release of an exposure draft highlighting the independence concerns relating to the provision of multiple assurance services for audit and non-audit assurance clients.<sup>1</sup>

Motivated by these concerns, we investigate whether the quality of other assurance services provided by accounting firms is compromised by cross-selling opportunities. Specifically, we examine the quality and fees of independent expert reports provided as a form of assurance during Australian takeovers.<sup>2</sup> In the Australian setting a target firm must appoint

---

<sup>1</sup> The International Ethics Standards Board (IESB) (2015) discusses assurance engagements other than audits or reviews of historical financial information and defines an assurance engagement as “*An engagement in which a practitioner aims to obtain sufficient appropriate evidence in order to express a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the subject matter information.*” Although this definition typically refers to attestation services such as auditing, assurance engagements also include direct engagements when a practitioner “*measures or evaluates the underlying subject matter against the applicable criteria and the practitioner presents the resulting subject matter information as part of, or accompanying, the assurance report*”. Therefore, we define assurance services as statutory audit and other assurance services that include independent verification of information besides the annual report.

<sup>2</sup> Consistent with the IESB (2015) definition of assurance engagement, we argue that an expert opinion is a form of assurance service, since an independent expert expresses an independent and objective opinion regarding the fairness of a transaction. This opinion is separate to that of the target firm board and is provided in accordance with Australian Securities Exchange (ASX) requirements, regulatory guidelines issued by the Australian Securities and Investments Commission (ASIC) or under the provisions of the Corporations Act.

an independent expert if potential independence issues exist between the bidder and target firm which may bias the takeover recommendation provided by the target firm board.<sup>3</sup> The independent expert produces a report, which provides an independent opinion as to whether the offer price is “fair and reasonable.”<sup>4</sup> This opinion provides shareholders with an independent assessment of the offer price above and beyond the assessment provided by the target firm board. As the majority of independent expert reports are provided by accounting firms (65.29% in our sample),<sup>5</sup> and the output is publicly observable, this setting allows us to examine whether accounting firms compromise the quality of assurance services to gain cross-selling opportunities in the future.<sup>6</sup>

The specific research objectives of this study are threefold. First, we examine whether accounting firms supply lower quality independent expert reports by examining the rate of consensus between the opinion provided by the independent expert and the target firm board. As the target firm board is required to express a view on whether shareholders should accept the takeover offer, a greater rate of consensus between the expert and the directors regarding the adequacy of the takeover offer is suggestive of possible independence issues. Second, we assess the quality of expert reports using the valuation range provided by the expert, with a smaller valuation range being consistent with higher report quality (Bugeja et al., 2005). Third, we examine if accounting firms provide their expert reports at lower fees compared to other

---

<sup>3</sup> An expert is mandated by the Australian Corporations Act if the bidder and target firm share directors or the bidder firm has over 30% ownership stake in the target firm. Many target firms also voluntarily engage an independent expert (Bugeja, 2007).

<sup>4</sup> There are various recommendations that independent experts provide: “Fair and reasonable”, “Not fair but reasonable”, “Nor fair and not reasonable” and “Not in best interests.” In our study, we denote consensus between the target board and independent expert, if the independent expert opinion states the offer is reasonable (“*Fair and reasonable*” or “*Not fair but reasonable*”) and the board of directors recommend shareholders accept the offer, or, the expert opinion states the offer is not reasonable (“*Not fair and not reasonable*” or “*Not in best interests*”) and the board of directors recommend shareholders reject the offer.

<sup>5</sup> There are only 12 instances (4.95%) in our sample where an accounting firm is both the auditor and the independent expert.

<sup>6</sup> The Australian setting differs from the U.S setting whereby fairness opinions are usually provided by investment banks (Kisgen et al. 2009) which also act as the target firm advisor. The joint provision of these services in the U.S. raises concerns regarding an inherent conflict of interest for the fairness opinion provider, as they are also paid a fee contingent on the success of the deal.

experts. Evidence of lower fees would be consistent with potential under-pricing of the expert report used as a conduit to secure the engagement and procure additional services.<sup>7</sup>

Using a sample of 242 takeovers of Australian publicly listed companies between 1997 and 2016, we find no difference in the likelihood that accounting firms issue opinions agreeing with target director recommendations in comparison to other experts. Similarly, the quality of expert report valuations measured using the size of the valuation range do not significantly differ between accounting and non-accounting firm experts. Our analysis of expert report fees documents that accounting firms, particularly non-Big 4 firms, charge lower fees than other experts. Further analysis suggests that these results are strongest when the target and bidder firm size is greater, consistent with more lucrative cross-selling opportunities in these takeovers. The results are robust to correcting for self-selection of accounting firms as experts and the use of a simultaneous equations approach. Overall, our results suggest that although accounting firms do not compromise their independence by agreeing with directors when completing expert reports or provide expert reports with a larger valuation range and hence lower quality, non-Big 4 auditors in particular may lower their expert report fees to encourage cross-selling of other services.

This study makes a number of contributions. Firstly, the study contributes to the ongoing academic debate on whether accounting firms supply lower quality assurance to cross-sell other services. To date, prior research has yielded inconsistent findings and has been conducted on accounting firms providing assurance over financial statements, where the level of dissent between the accounting firm and management are not directly observable (Frankel et al. 2002; Defond et al. 2002; Ashbaugh et al. 2003; Knechel and Sharma, 2012; Causholli et al. 2014). In contrast, in the takeover setting, the independent expert provides an explicit

---

<sup>7</sup> Such an effect is consistent with studies on the pricing of initial audit engagements (Simon and Francis 1988; Ghosh and Lustgarten, 2006; Desir et al. 2014).

opinion, which the target firm's board of directors can either agree or disagree with, in their recommendation to shareholders. Thus, the level of consensus between target firm directors and the independent expert can be directly observed, providing a more reliable measure of independence issues. As a result, we extend debate regarding the quality of services provided by accounting firms beyond the existing focus on the assurance of financial statements.<sup>8</sup>

These findings also have implications for practitioners and regulatory concerns regarding conflict of interest from incentives to cross-sell other services on the quality of assurance services supplied by accounting firms. In particular, our results suggest that regulatory calls for separating accounting firms into their consulting and non-consulting arms are largely unfounded and are thus unlikely to improve the independence and the quality of assurance engagements in the future. Whilst we document lower expert fees for reports provided by non-Big 4 accounting firms suggestive of an attempt at future cross-selling (Causholli et al. 2014), the lower fee is not accompanied by a breach of independence or reduced valuation quality. Our findings suggest that the IESB (2020) independence concerns are not prevalent in this setting although their concern about fees appears relevant in the cross-selling of other services.

Moreover, the Australian Securities and Investments Commission (ASIC), has raised ongoing concerns that independent expert opinions are biased towards favouring client recommendations. There is also a concern that lower expert fees are charged as a means to cross-sell other services. ASIC issued *Regulatory Guide 112: Independence of Experts* (RG112) recommends against the use of independent experts with conflict of interest. However, this mainly focuses on the provision of strategic consulting services (e.g. financial

---

<sup>8</sup> There is an emerging literature examining the assurance of sustainability (Simnett et al. 2009; Martínez-Ferrero & García-Sánchez, 2010) and greenhouse gas reports (Zhou et al. 2016; Green et al. 2017; Datt et al. 2020) by accounting firms. Much of this research however, is focused on examining the determinants of firms' choice to use an accounting firm, rather than the impact of the choice of an accounting firm on assurance quality and fees. Furthermore, this line of research has not examined issues related to the independence of the assurance provider.

and tax planning) but not audit services (ASIC 2011). With the introduction of RG112 came increased scrutiny around independent experts' independence, with ASIC requiring a large publicly listed company to dismiss their independent expert over concerns of "tainted" independence (Maslen-Stannage, 2014). Our findings are therefore also relevant to assessing whether the recommendations of RG112 and ASIC enforcement over the effect of the non-independence of experts on quality are warranted. Our findings suggest that existing requirements in RG112 are sufficient in maintaining the independence of accounting firms in providing independent expert reports.

The remainder of the study is structured as follows. Section 2 outlines the institutional arrangements regarding expert reports in Australia and summarises the findings from prior research, whilst Section 3 presents hypotheses. The description of the sample and research method is provided in Section 4, with results discussed in Section 5. Section 6 concludes the study and provides suggestions for future research.

## **2. Institutional environment and prior research**

### **2.1 Independent experts in Australian takeovers**

The requirement that target firms in Australian takeovers obtain an independent opinion on the adequacy of the offer price was introduced into corporations' legislation in 1980.<sup>9</sup> Under this legislation target firms must obtain an expert report when either or both of the following circumstances are met:

- i) the bidding firm has a share ownership interest of 30% or greater in the target firm at the date of the takeover announcement,
- ii) the target and bidding firm have one or more common directors serving on their respective boards.

---

<sup>9</sup> Currently expert reports are required under Section 640 of the Australian *Corporations Act 2001 (Cwth)* (the Corporations Act).

The role of the expert is to provide a report that expresses an opinion on whether the offer price is “fair and reasonable,” which is needed in the above circumstances due to the conflict of interest and superior bargaining position of the bidder firm. In particular, the expert report is designed to prevent the bidding firm from taking advantage of target firm shareholders by offering a lower price and then recommending that target shareholders accept the offer.

A number of prior studies have examined the effect of Australian independent expert reports and also investigated issues associated with expert independence. Bugeja (2005a) examines whether independent expert reports achieve their purpose of protecting target shareholders from receiving a lower premium. Inconsistent with the purpose of expert reports, the study finds that takeover premiums are significantly lower when an expert report is provided. This result differs to earlier research by Eddey (1993), who finds no difference in premiums between takeovers with and without expert reports.<sup>10</sup> Bugeja (2005a) also finds that, although the likelihood of an increase in offer price is greater when the expert indicates that the offer price is not fair, overall returns to target shareholders are still lower when an expert report is provided. Nguyen (2018) using a more recent sample documents that offer price revisions are larger when an expert issues a not fair and reasonable opinion. That study also finds a positive association between takeover success and a fair and reasonable expert opinion.

Prior research has also examined criticisms raised in the late 1980s (English, 1989; Kohler, 1989; Lonergan and Fenton, 1989) that other business dealings between the expert and target firm results in the expert lacking independence and may lead an expert to provide the report at a non-commercial fee to attract other business from the client. These concerns arise despite Section 648A of the Corporations Act stating that an independent expert must not be an associate of either the target or bidding firm. This section of the Corporations Act also

---

<sup>10</sup> A possible explanation for the difference in findings is that Eddey (1993) restricts his analysis to takeovers which offer cash payment, whilst Bugeja (2005a) uses a sample including both cash and equity bids.



requires that an expert disclose any relationship with the bidder or target, and any financial or other interest that is capable of affecting the expert's ability to give an unbiased opinion. Moreover, the 1993 ASIC Practice Note 42, Independence of Experts' Reports requires: that an expert should decline the appointment if he or she:

- (a) is a substantial creditor or has a financial interest in either party,
- (b) has participated in strategic planning work for either party, or
- (c) acts as lawyer, banker, financial consultant, tax adviser or accountant to either party.

Interestingly, acting as the target or bidder firm auditor does not preclude a firm from serving as an independent expert.

Bugeja et al. (2005) examine the effect of other business dealings between the expert and target firm on expert report fees and report quality proxied through the valuation range provided in the report. The study documents that approximately half of experts from 1990-2000 have other dealings with the target firm, with about 25% of experts being the target firm's auditor. Inconsistent with criticisms that experts with other dealings with the target provide lower quality reports, the study documents that the valuation range is smaller for experts with other dealings with the target firm. Moreover, the study finds no association between expert fees and the use of experts with other dealings with the target (including the target audit firm). The results also show that both large and small accounting firms charge significantly lower fees for expert reports compared to non-accounting firms.

Independence issues between the target firm and independent expert are further examined in Bugeja (2005b) using a sample from 1990 to 2000. Using univariate analyses, the study documents no difference in the rate at which experts with other dealings with the target (including the target auditor), provide an opinion that is consistent with that of the board of directors. The study does, however, document that the market reaction to expert reports

provided by the target firm auditor (but not other associated experts) are significantly lower than for non-associated experts suggesting that expert reports provided by the target auditor lack the appearance of independence.

Our study differs from Bugeja et al. (2005) and Bugeja (2005b) as we use more recent data whereby only 4.74% of independent experts are also target firm auditors, with these instances mainly occurring in the early years of our sample. This compares with Bugeja et al. (2005), and Bugeja (2005b) which report approximately 25% of experts are also the target firm auditor. The lower incidence of independent experts with other dealings in our sample allows us to examine whether fees, valuation range and consensus in opinions of accounting firms differ from other independent experts absent the independence issues arising from other dealings identified by Bugeja et al. (2005) and Bugeja (2005b).

Previous studies have also examined the provision of expert reports by target firms despite there being no legal requirement to commission the report. Bugeja (2007) reports that approximately 25% of target firms over the period 1990-2000 provide a voluntary expert report with this choice being associated with target firm complexity and the use of equity as payment by the bidder. Additionally, voluntary experts are engaged more frequently when the board recommends takeover rejection, suggesting that the board uses the expert report to support their opinion that the offer price is insufficient. Consistent with the expert being used to pressure the bidder to raise their offer price, the study finds a significantly higher likelihood of offer price revisions when an expert report is provided.

ASIC's guidance on the independence of experts was revised in 2011 with the issue of guidance note RG 112 'Independence of experts.'<sup>11</sup> RG 112 highlights (para 112.8) that an expert "must be, and must appear to be, independent" and ASIC will consider regulatory

---

<sup>11</sup> Prior to the issue of RG112, ASIC Practice Note 42 'Independence of experts' reports' expressed analogous views.

intervention if they have concerns regarding expert independence (para 112.10) (ASIC, 2011). Furthermore, the guidance indicates that an expert opinion which is tailored to support the views of the commissioning party is not a genuine opinion (para 112.16). The guidance note also indicates that experts should “seriously consider declining an engagement” when they have participated in strategic planning work for the client or the expert has acted as a lawyer, financial consultant, tax adviser or accountant to the commissioning party (para 112.25). The expert must also disclose in the expert report any current or prior business dealings with the target in the previous two years (para 112.34). Interestingly, the standard does not preclude the independent expert from supplying future services to the client, which is not a requirement to be publicly disclosed.

## **2.2 Independence of audit and non-audit assurance providers**

Following a series of high profile corporate collapses in the early 2000s across multiple countries, the independence of auditors from their clients became the subject of regulatory and professional concern (Carey et al. 2014). Much of this concern related to potential audit independence issues arising from the provision of non-audit services to audit clients. These concerns ultimately led to the introduction of country-specific legislative requirements, which added new restrictions pertaining to auditor independence (e.g., the Sarbanes-Oxley Act (SOX) in the U.S. introduced in 2002 and CLERP 9 in Australia introduced in 2004). Included amongst the CLERP 9 reforms were requirements that: auditors make a formal declaration of independence; increased restrictions on financial and employment relations between a client and their auditor; mandated the disclosure of non-audit service (NAS) fees; mandatory audit partner rotation every five years (Carey et al. 2014).

Regarding the provision of NAS, regulators expressed concerns regarding auditors developing financial dependence toward a client that would impair independence and result in lower quality audit services (Securities and Exchange Commission 2000). A considerable body

of research finds mixed evidence on whether auditors supplying NAS compromise the quality of their audit services when supplying other services. This mixed evidence is related in part to differing proxies for audit quality, the timing of NAS and time periods studied (Frankel et al. 2002; Defond et al. 2002; Ashbaugh et al. 2003; Knechel and Sharma, 2012; Causholli et al. 2014). In Australia, the evidence on non-audit service provision and audit quality suggests a limited association with Ruddock et al. (2006) reporting limited changes in the accounting conservatism of clients when their auditors received NAS in a pre-CLERP9 period. Moreover, Hossain (2013) documents that NAS fees are only significantly associated with lower audit quality in the period prior to CLERP 9.

Many countries also responded to concerns over auditor independence by introducing requirements to rotate audit partners after a specified number of years. The Australian requirements from 2012 mandate audit partner rotation every 5 years, with a possible extension of 2 years (Commonwealth of Australia, 2012). The impact of mandatory audit partner rotation on audit quality has been extensively examined with mixed results. Whilst some studies document improvements in the effect of auditor independence on reporting decisions (Carey and Simnett, 2006; Fargher et al. 2008; Firth et al. 2012; Lennox et al. 2014) after the introduction of mandatory partner rotation, other studies report an insignificant or negative effect (Chen et al. 2008; Manry et al. 2008; Chi et al. 2009; Litt et al. 2014; Gipper et al. 2020). There is also evidence that partner rotation imposes costs on clients through higher audit fees, particularly for clients of non-Big 4 auditors (Sharma et al. 2016; Stewart et al. 2016; Grosse et al. 2018; Ferguson et al. 2019). In the context of the present study, it is noteworthy that it is partners, rather than firms which are required to be rotated.<sup>12</sup> As such, accounting firms providing expert reports retain an incentive to cross-sell future services, including both the

---

<sup>12</sup> Most settings including the United States and China continue to implement a rotation requirement only at the audit partner level with a notable exception of the European Union that adopted mandatory audit firm rotation requirements in 2016.

statutory audit and other services (e.g., remuneration advice, tax and actuarial). Moreover, anecdotally practitioners suggest that the provision of valuation advice provides opportunities for the firm to provide a client with a range of other product needs (Numbers Executive, 2018).<sup>13</sup>

In a related discussion, the International Ethics Standards Board (IESB) (2020) released an exposure draft providing guidance on the independence issues concerning the provision of NAS by multi-service firms. The IESB (2020) proposes a prohibition on firms supplying assurance services to an audit client when a self-review threat exists relating to audit-related matters and imposes strengthened requirements on the presence of other potential independence threats including advocacy. Interestingly, the IESB (2020) impose similar requirements for firms providing multiple services to non-audit assurance clients when a common subject matter is involved, suggesting broader independence issues impacting the quality of other services. The new provisions prevent factors such as immateriality of services as a mitigating factor in bypassing independence concerns, in addition to the requirement to consider whether prior services supplied to the audit client may pose independence issues for the provision of future services. Of particular interest to our study, which considers the quality of expert reports, is the requirement for firms to consider independence issues arising from the reliance placed on the outcome of the service and fees paid to accounting firms who provide independent expert reports.

### **3. Hypothesis Development**

Accounting firms incur significant start-up costs to acquire and provide services to a first-time client, and thus are reliant on generating repeat services from their clients to generate

---

<sup>13</sup> An example of potential cross selling is the unsuccessful takeover attempt of Genesis Resources Ltd by Clancy Exploration Ltd in 2012. Genesis Resources Ltd appointed RSM Australia to provide the independent expert report in which they indicated the offer was not fair and reasonable. Following an unsuccessful takeover, Genesis Resources Ltd subsequently appointed RSM Australia as the external audit firm in 2014.

profits. However, providing repeat services is generally not the case for the provision of independent expert reports, as such services are likely to be one-off as firms are unlikely to be a repeat takeover target. Thus, accounting firms naturally have stronger incentives to cross-sell future services to these clients. This effect is likely to be strongest among non-audit clients, where publicly scrutiny is lower and recent evidence documents accounting firm partners receive higher compensation with increases in consulting revenue procured from non-audit clients (Che et al. 2018). Consistent with practitioner and regulator concerns that accounting firms supply lower quality assurance services in the form of more favourable opinions to increase their cross-selling opportunities, we examine whether accounting firms serving as independent experts issue opinions that are more often in consensus with the target firm board's recommendation to shareholders.

The basis of this conjecture is the view that accounting firms can facilitate the procurement of other future services by providing an opinion supportive of the target firm board's desired takeover outcome. Developing a favourable relationship with directors can benefit an accounting firm, as directors have significant influence over the appointment of auditors and consultants (Seabright et al. 1992). In the case of a successful takeover, although the target firm ceases, the accounting firm can still benefit when directors are appointed to the board of the bidder firm, providing further opportunities to procure future services from a larger merged entity (Harford 2003; Bugeja et al. 2009). Furthermore, a specific director can also benefit an accounting firm beyond their mutual firm, given directors often hold board seats across multiple firms where they can recommend or lobby for certain auditor and consultant appointments (Hossain et al. 2016).

Although the preceding discussion applies equally to accounting and non-accounting firms in the provision of independent expert reports, our objective focuses on whether this issue is more prevalent in accounting firms. Arguably, non-accounting firm experts have a lower

ability to cross-sell services than accounting firms due to a limited range of other service offerings. Also, worth noting are reputation effects, where the stronger brand of accounting firms, particularly Big 4 firms, and greater scrutiny in the form of major audit regulatory reform in CLERP 9 provides disincentives to undermine assurance quality as a means of procuring additional services in the future. Thus, we examine indirectly whether incentive schemes within accounting firms promote cross-selling to a greater extent than within other firms and, thus, lead to a greater likelihood of consensus between the expert and directors, relative to non-accounting firms. On balance however, due to reputation concerns and legislative requirements it is not clear whether accounting firms provide higher or lower quality independent expert reports than other experts, thus we specify our first hypothesis as follows:

*Hypothesis One: The likelihood that an expert expresses an opinion consistent with the target firm board recommendation, is associated with the use of an accounting firm as an expert.*

To further examine whether accounting firms provide a lower quality assurance service, we also consider the size of the valuation range provided in the expert report. The role of an independent expert is to express an opinion on the fairness of the offer price, based on a calculated assessment of the value of the target firm's shares compared to the bidder firm's actual offer price. Typically, the independent expert expresses their valuation of the target firm's shares as a range (*i.e.*, with a high and low estimate), with a larger range reflecting a less accurate valuation from which the expert opinion is derived (Bugeja et al. 2005). If the presence of cross-selling incentives for accounting firms exceeds similar incentives for non-accounting firms it is possible that accounting firms provide a lower quality expert report leading to a larger valuation range.<sup>14</sup>

---

<sup>14</sup> An expert may also provide a larger valuation range due to conservatism. We argue that expert conservatism is unlikely as deliberate conservatism breaches ASIC guidelines. For instance, RG 111 "Content of Expert

There are a number of reasons however, why accounting firms acting as experts would not be expected to provide lower quality reports. The production of lower quality report with a greater valuation range may send a negative signal to the client dissuading them from providing future business to the expert. Also, as highlighted above, reputation effects for accounting firms may dissuade them from providing lower quality expert reports with a greater valuation range. Additionally, prior research (Bugeja et al. 2005) documents that the majority of expert reports are provided by accounting firms, highlighting that accounting firms develop significant expertise in the production of expert reports. This greater expertise raises the possibility that accounting firms become specialised in the completion of expert reports resulting in higher quality and smaller valuation ranges. Due to these competing explanations we specify the second hypothesis without a directional relationship:

*Hypothesis Two: The size of the expert valuation range is associated with the use of accounting firms as independent experts.*

The fees charged by independent experts should reflect the time and effort applied to complete the report. It is also possible the independent expert fee is set at a level consistent with incentives to cross-sell (Bugeja et al. 2005). For instance, critics allege (English, 1989; Lonergan and Fenton, 1989) that if accounting firms provide lower quality services, this typically results in lower effort and thus lower fees being charged for the engagement. Accounting firms may also opt to reduce their fees as an inducement to the client to procure repeat or additional services in the future, consistent with prior studies focused on initial engagement discounting in the auditing literature (Simon and Francis, 1988; Ghosh and Lustgarten, 2006; Desir et al. 2014). In this setting, we expect this issue is more prevalent in

---

Reports” indicates that an expert’s opinion should be based on reasonable assumptions (para. 111.74). Moreover, paragraph 111.79 of RG 111 indicates that the expert should not provide a broad valuation range due to uncertainty as this would undermine the usefulness of the report.



relation to cross-selling other services given takeovers are infrequent for a single target and an expert generally cannot secure repeat expert report services from the same client. If accounting firms utilise the independent expert engagement to cross-sell other future services to the target firm or firms affiliated with the target firm directors, we expect the expert report fee to be lower.<sup>15</sup> Inconsistent with this expectation, the better reputation and brand name of accounting firms may result in these firms charging a fee premium relative to non-accounting firm experts. Due to these contrasting predictions, we specify the third hypothesis as follows:

*Hypothesis Three: Independent expert fees are associated with the use of accounting firms as experts.*

## **4. Research Design**

### **4.1 Sample Selection**

The base sample for this study comprises all takeovers of Australian publicly listed companies between 1997 and 2016 obtained from the *Connect 4 Mergers and Acquisitions* database. This search results in 1,533 takeovers. To ensure sufficient information is available to control for bidder characteristics, we exclude 624 observations where the bidder is a private or non-Australian domiciled firm. We match this initial sample with financial and market capitalization data sourced from AspectHuntley's *Datanalysis Premium* and remove 141 observations where the publicly listed bidder is missing data needed for the empirical analysis. As we need to control for target firm characteristics, we exclude 196 observations with insufficient target firm data.

As our analysis focuses on takeovers where an independent expert report is obtained, we remove 234 observations where the target firm did not engage an independent expert. This

---

<sup>15</sup> An alternative explanation for larger Big 4 (or other) firms achieve economies of scale in producing expert reports given their size and accordingly, may charge lower fees. However, our results are not conducive to that interpretation as we only find that smaller non-Big 4 firms charge lower fees.

yields a final sample of 338 observations. To maintain consistency in the sample size used for all our tests, 25 observations are removed due to a lack of disclosure on the valuation range and 71 observations are removed due to the non-disclosure of the expert fee.<sup>16</sup> This leads to a final sample of 242 observations to test Models (1) to (3). Panel A of Table 1 provides a detailed description of the sample selection process.

## INSERT TABLE 1 HERE

### 4.2 Empirical Models

For analysis of the likelihood of consensus between the independent expert opinion and target firm director recommendation (i.e., *Hypothesis One*), we specify *Model (1)* as a Probit regression model summarised below (firm and year subscripts omitted for convenience). The analysis in *Model (1)* measures the potential independence concern arising from experts having an incentive to comply with a target firm’s preferred recommendation to procure other services (Bugeja, 2005b). In other words, a greater frequency of consensus between an independent expert and target firm directors, infers a lower quality of assurance being supplied.

$$\begin{aligned}
 \text{Consensus} = & \alpha + \beta_1 \text{Accounting Firm} + \beta_2 \text{Compulsory} + \beta_3 \text{Competing} \\
 & + \beta_4 \text{Toehold} + \beta_5 \text{Friendly} + \beta_6 \text{Premium} + \beta_7 \text{Target MTB} \\
 & + \beta_8 \text{Equity Payment} + \beta_9 \text{Board Size} + \beta_{10} \text{Expertise} + \text{YearEffects} \\
 & + \text{IndustryEffects} + \varepsilon
 \end{aligned} \tag{1}$$

The dependent variable, *Consensus*, captures the extent to which the independent expert opinion and target firm board recommendation to shareholders regarding the takeover offer align. *Consensus* is an indicator variable set equal to one if the independent expert opinion states the offer is reasonable (“*Fair and reasonable*”, & “*Not fair but reasonable*”) and the

---

<sup>16</sup> Results remain consistent if the regression models are estimated using the maximum sample size available to estimate each regression model.

board of directors recommend shareholders accept the offer or the opinion states the offer is not reasonable (“*Not fair and not reasonable*” & “*Not in best interest*”) and the board recommends shareholders reject the offer, 0 otherwise. The key independent test variable, *Accounting Firm*, is an indicator variable set to equal one if the independent expert report is prepared by an accounting firm, 0 otherwise. If accounting firms have significant cross-selling interests that reduce the quality of their services by providing opinions that more frequently agree with director recommendations, this will lead to a positive coefficient on  $\beta_1$ .

The control variables included in Model (1) are informed by prior studies. Although independent experts are only required by statute when potential conflicts exist between the bidder and the target firm, some firms’ voluntarily obtain an independent expert. We control for whether the expert report is required under the Corporations Act using an indicator variable coded as one when the expert is mandated, zero otherwise (*Compulsory*) (Bugeja, 2007). All remaining independent variables control for specific takeover characteristics including the acquiring firm ownership at the date of the takeover announcement (*Toehold*) and an indicator variable denoting whether the target firm board recommends takeover acceptance (*Friendly*). The model controls for the bidding firm toehold as bidding firm ownership influences the likelihood that the target firm recommends takeover acceptance (Henry, 2005). Moreover, a friendly attitude of the target firm board is likely to be associated with additional pressure on the expert to provide a “fair and reasonable” opinion.

We also control for the size of the takeover premium (*Premium*), as it is expected that a larger/(lower) premium leads to a greater likelihood that both the expert and target firm board assess the offer as being adequate/(inadequate). The takeover premium is measured as the offer price per share minus the target share price twenty days before the takeover announcement divided by the target share price twenty days before the takeover announcement. We also add an indicator variable denoting the presence of multiple bids (*Competing*), as competing bidders

are likely to result in a higher offer price for the target raising the likelihood of consensus between the target firm board and expert.

We control for the complexity of the valuation task as this may impact the likelihood of consensus. Measures of complexity include: the target firm's growth opportunities measured using the market-to-book-ratio (*Target MTB*) and an indicator variable denoting if the payment consideration offered by the bidder is entirely equity (*Equity Payment*). Equity consideration increases valuation complexity as typically the expert is also required to calculate an independent assessment of the bidding firm's share price. The size of the target board (*Board Size*) is included as a control to capture cross-selling opportunities as arguably larger boards have greater connections with other boards.<sup>17</sup> The expertise of the independent expert (*Expertise*) is controlled for as experts with greater expertise are expected to provide more accurate fairness opinions. Expertise is proxied using the rank of a specific independent expert based on their market share measured using current year deal value.<sup>18</sup> Year and industry fixed effects (using two-digit GICS codes are also included to control for time and industry specific factors). Takeover related characteristics are obtained from the Connect 4 Mergers and Acquisitions database, whilst expert report opinions and details are hand collected from expert reports. Financial data are obtained from the Morningstar *DataAnalysis* Premium database.

To analyse *Hypothesis Two* examining the impact of accounting firms on the valuation range, we specify Model (2) using an OLS regression model. This model replaces the dependent variable in Model (1) with *Valuation Range*. Similar to Bugeja et al. (2005) *Valuation Range* measures the difference between the high and low estimate of the target firm

---

<sup>17</sup> Controls for target size, such as, target market capitalisation and the number of subsidiaries are not included due to multicollinearity concerns with the board size variable. In additional tests (untabulated) we include controls for these alternative measures of target size and the main results remain unchanged.

<sup>18</sup> We also consider alternative specifications of this variable, including a binary variable for the market leader or top 3 experts, and alternative market share measures with the number of current or prior year clients, total accumulated clients across the sample period or prior year deal value. The significance of the expertise variable and the overall results remain unchanged.

value calculated by the independent expert, scaled by the midpoint of the valuation range. Following prior research, a larger valuation range is consistent with a less accurate valuation and lower independent expert report quality (Bugeja et al. 2005). If accounting firms are associated with a larger valuation range, we would observe a positive coefficient on  $\beta_1$ .

*Valuation Range*

$$\begin{aligned}
 &= \alpha + \beta_1 \text{Accounting Firm} + \beta_2 \text{Compulsory} + \beta_3 \text{Competing} \\
 &+ \beta_4 \text{Friendly} + \beta_5 \text{Premium} + \beta_6 \text{Target MTB} + \beta_7 \text{Equity Payment} \\
 &+ \beta_8 \text{Board Size} + \beta_9 \text{Expertise} + \text{YearEffects} + \text{IndustryEffects} \\
 &+ \varepsilon
 \end{aligned}
 \tag{2}$$

As competing takeover bids are likely to reveal greater information on the target firms' 'true' value we include a control for multiple bids (*Competing*). We expect valuation range to be lower in friendly acquisitions (*Friendly*) and acquisitions with compulsory expert reports (*Compulsory*) whereby the target is more likely to be more willing to provide information crucial to the experts in valuing the firm. The takeover premium (*Premium*) is included as a control as the expert may structure the valuation range to potentially include/exclude the offer price from being within the calculated range.

We once more control for valuation complexity using the target market-to-book ratio (*Target MTB*) and the use of equity as the method of payment (*Equity Payment*). We expect that complexity increases the valuation range. We also control for the board size of the target firm (*Board Size*) as larger boards may provide the expert with a greater ability to cross-sell other services. Arguably, experts with more expertise should be able to prepare more accurate valuations and as such we control for the current year expertise based on rank of an expert (*Expertise*).

To test *Hypothesis Three* assessing the impact of accounting firms on expert fees, we specify OLS regression Model (3), which replaces the dependent variable in Model (1) with

*Fees*. This variable provides a joint measure of the cost of the engagement less any premium or discount applied. As such, the independent expert fee represents the effort applied to the engagement by an independent expert and potentially any discount to induce procurement of other services in the future. If an accounting firm reduces expert report fees to induce the target firm and their directors to purchase other services, we would observe a negative coefficient on  $\beta_1$ .

$$\begin{aligned}
 Fees = & \alpha + \beta_1 Accounting\ Firm + \beta_2 Compulsory + \beta_3 Competing + \beta_4 Friendly \\
 & + \beta_5 Premium + \beta_6 Target\ MTB + \beta_7 Equity\ Payment \\
 & + \beta_8 Same\ Industry + \beta_9 Board\ Size + \beta_{10} Expertise + Year\ Effects \\
 & + Industry\ Effects + \varepsilon
 \end{aligned} \tag{3}$$

In terms of the control variables, we include competing bids (*Competing*) as competing offers release additional information regarding target firm value and may reduce the work of the expert resulting in lower fees. The effort exerted by the expert may also be influenced by the attitude of the target firm board (*Friendly*), as an expert may undertake additional analysis to justify an opinion which is not fair and reasonable (Bugeja et al, 2005). Additionally, the conflict of interest present when an expert report is compulsory is likely to influence expert effort and fees (*Compulsory*). A higher/(lower) takeover premium (*Premium*) may reduce the effort required of the expert as it may be apparent that the offer is fair and reasonable/(not fair and reasonable) and lead to lower fees.

Valuation complexity is expected to result in higher fees and is controlled for using target firm growth options (*Target MTB*) and the use of equity consideration (*Equity Payment*) (Bugeja et al. 2005). We also include an indicator variable coded as one if the bidding and target firms operate in the same industry (*Same Industry*), as the estimation of synergies is likely to be more complex and probable in these deals potentially resulting in greater fees. As a control for the potential opportunities to cross-sell services to other firms we once again use

target firm board size (*Board Size*). The effect of greater expert expertise (*Expertise*) may result in higher fees if more experienced experts charge a fee premium. Alternatively, greater expertise may lead to economies of scale and result in lower fees.

## 5. Results

### 5.1 Descriptive Statistics

Table 1 Panel B and Panel C provide the sample distribution by industry and year respectively. By industry, companies operating in the Materials (GICS15) sector are most highly represented (36.78%) followed by the Financials (GICS40) sector (21.07%), which is largely representative of the Australian stock exchange composition. By year, the distribution is evenly spread over time although there are periods of greater merger activity in 2007 and 2014. The use of accounting firms to provide expert opinions peaked in 2006-2009 and again in 2014 and 2015. In all our models, we have controlled for time fixed effects to take into account these fluctuations in the choice of accounting versus non-accounting firms as experts.

Table 2 column (1) presents the descriptive statistics for the full sample. All continuous variables are winsorized at the 1% and 99% levels.<sup>19</sup> Columns (2) and (3) present descriptive statistics for the accounting firm and non-accounting firm samples respectively, whilst a univariate comparison of differences in means across these two groups is provided in column (4). The findings show that 65.3% (158/242) of target firms use an accounting firm as the independent expert, with 57.6% of accounting firms being a BigN firm. On average, independent expert opinions and director recommendations agree (*Consensus*) in 93.8% of takeovers, while the average (median) difference between the high and low valuation estimate (*Valuation Range*) is 24.1% (14%) of the midpoint value. The average (median) independent expert fee is approximately \$195,514 (\$95,000). With respect to the takeover characteristics,

---

<sup>19</sup> We also conduct our analyses using the raw values and the key findings remain unchanged.

38.4% of independent expert reports in our sample are compulsory (*Compulsory*), and most takeovers have only a single bid (*Competing*) (12.0%), are non-hostile (*Friendly*) (77.7%), use equity as payment consideration (*Equity Payment*) (69.4%), and involve a bidder and target firm in the same industry (*Same Industry*) (69.4%). Acquiring firms existing share ownership in the target (*Toehold*) is on average 17.8%. All variables appear consistent with recent Australian studies (Nguyen, 2018).

### **INSERT TABLE 2 HERE**

When comparing the rates of consensus (*Consensus*) between accounting and non-accounting firms, we find that accounting firms (92.4%) are less likely to agree with the target firm directors relative to non-accounting firms (96.4%). The difference in the rate of consensus across the two groups, however, is not statistically significant. This result is inconsistent with accounting firms providing opinions which favour the view of target directors. When comparing the valuation range (*Valuation Range*), accounting firms report a significantly larger valuation range (27.8%,  $t\text{-stat} = 2.915$ ) over non-accounting firms (17.2%). This finding provides initial evidence which potentially corroborates the narrative that accounting firms supply lower quality services in the presence of conflicting economic interests to cross-sell future services. Furthermore, a comparison of independent expert fees shows that accounting firms (\$122,902) charge significantly lower fees ( $t\text{-stat} = 5.007$ ) for their services relative to non-accounting firms (\$332,095). This result provides univariate evidence suggestive of a fee discount being offered by accounting firms potentially to induce the client to purchase other services.

Turning to the control variables, most of the control variables are not statistically different between accounting and non-accounting firms with the exception of *Toehold*, *Board Size* and *Expertise*. Firms that hire accounting firms as their independent expert tend to have a



lower *Toehold* and smaller board size compared to those that hire non-accounting firms (*t-stats* = 1.935 and 2.230, respectively). Finally, our analysis suggest that accounting firms have lower *Expertise* in providing expert reports than non-accounting firms (*t-stat* = 3.509).

## 5.2 Main results

The results in Table 3 report the regression results testing the effect of expert type on *Consensus* (*Hypothesis One*). Columns (1) and (3) present the Probit regression results whereas Columns (2) and (4) report the marginal effects from a bivariate Probit regression with selection correction in the estimates of *Consensus*.<sup>20</sup> The results in columns (1) and (2) of Table 3 show an insignificant association between the use of an accounting firm (*Accounting Firm*) as the expert and the likelihood of consensus (*Consensus*) between the expert opinion and target firm board recommendation. This finding is inconsistent with independence concerns and suggests that accounting firms do not appear to be influenced by the viewpoint of target firm directors when completing the expert report. Amongst the control variables, we find a positive and significant coefficient on *Friendly* suggesting that there is a greater likelihood of consensus when the target board of directors recommend bid acceptance.

### INSERT TABLE 3 HERE

In Columns (3) and (4) we split the *Accounting Firm* variable into two separate indicator variables identifying Big 4 (*Bign Accounting Firm*) and non-Big 4 (*NonBign Accounting Firm*) accounting firms and re-estimate the model. This extra test allows us to identify whether any effect of accounting firms on the likelihood of consensus is restricted to only non-Big 4 firms perhaps due to greater reputational concerns for Big 4 firms. The findings

---

<sup>20</sup> In the first stage (untabulated) we estimate a Probit regression model on the choice of an accounting firm as an independent expert. The control variables are the same variables used in Model (1). In addition, we include driving time (*Drivingtime*) as our instrumental variable, which is expected to explain the choice of an accounting firm and not affect the outcomes. *Drivingtime* is an indicator variable set to equal to one if the driving time from the nearest accounting firm's head office to the target firm's head office is over one hour, zero otherwise. *Drivingtime* is a valid instrument and is significantly associated with the choice of an accounting firm (coeff = 1.73, p-value = 0.083).

reported in Column (3) of Table 3 show an insignificant effect on consensus for large accounting firms. Surprisingly, the results suggest that non-Big 4 accounting firms engaged as experts are less likely to provide an opinion which agrees with the recommendation of the target board. However, this result does not hold once sample selection correction of expert type is included in estimating the *Consensus* regression (column 4).

Table 4 provides the results from estimating regression Model (2) to test *Hypothesis Two*. Columns (1) and (3) reports the ordinary least squares (OLS) results. To control for self-selection bias, a two-stage procedure is used whereby the *inverse Mills ratio* is calculated from a first stage regression and included in Columns (2) and (4) to remove selection bias (Heckman, 1979).<sup>21</sup>

#### **INSERT TABLE 4 HERE**

The results in Columns (1) and (2) indicate that the valuation range (*Valuation Range*) is not significantly associated with the use of accounting firms as the expert. Once more, we partition accounting firms into Big 4 and non-Big 4 firms and re-estimate the model and continue to find insignificant results as shown in Columns (3) of Table 4. Column (4) of Table 4 shows a significantly higher valuation range for expert reports prepared by non-Big 4 accounting firms. This suggests that any concerns of lower quality expert reports are restricted to those prepared by small accounting firms.

The findings from estimating regression Model (3) testing the association between accounting firms and expert report fees to test *Hypothesis Three* are provided in Table 5. Columns (1) and (3) reports the ordinary least squares (OLS) results from Model (2). To control

---

<sup>21</sup> We estimate the *inverse Mills ratio* from a first stage selection regression on the probability of choosing an accounting firm as an expert. In the first stage regression, we use the same control variables as in Model (2). In addition, we include driving time (*Drivingtime*) as our instrumental variable which is expected to explain the choice of an accounting firm and not affect the outcomes. *Drivingtime* is an indicator variable set to equal to one if the driving time from the nearest accounting firm's head office to the target firm's head office is over one hour, zero otherwise. Estimates from the first stage regression are used to calculate the *inverse Mills ratio* which is included in Model (2).

for self-selection bias, the two-stage Heckman (1979) procedure is used whereby the inverse Mills ratio is calculated from a first stage regression and included in columns (2) and (4) to remove selection bias.

### **INSERT TABLE 5 HERE**

In Columns (1) and (2) of Table 5, we find a negative and significant coefficient on *Accounting Firm*, suggesting that accounting firms charge significantly lower fees (*Fees*) than non-accounting firms. This finding is consistent with a possible reduction in fees by the expert to encourage the cross-selling of other future services. In Columns (3) and (4) of Table 5, when the accounting firm variable is partitioned into Big 4 and non-Big 4 firms, the results are only significant for non-Big 4 firms. As such, perhaps the greater reputational capital of larger accounting firms potentially discourages them from selling their services at a discount.

The results on the control variables document that lower expert fees are charged when the expert report is required by the Corporations Act (*Compulsory*), the target and bidder firm are in the different industries (*Same Industry*) and there are competing bidders (*Competing*) (except in Column (3)). In contrast, expert reports fees are significantly higher when equity is offered as payment (*Equity Payment*), consistent with greater complexity leading to higher expert report fees. We also find lower fees in the presence of a larger board (*Board Size*). Interestingly, we find that independent experts with greater experience in providing expert opinions (*Expertise*) charge higher fees.<sup>22</sup>

## **5.3 Additional Analysis and Robustness Testing**

### **5.3.1 Redefining *Consensus***

The construction of the variable *Consensus* used in the primary analysis is measured as an indicator variable set to equal one if the independent expert opinion states the offer is

---

<sup>22</sup> Our *Expertise* measure is the rank of the expert based on deal value. A lower rank (e.g rank 1) indicates higher expertise whereas a higher rank (e.g rank 5) indicates lower expertise.

reasonable (“*Fair and reasonable*” or “*Not fair but reasonable*”) and the board of directors recommends acceptance of the offer, or, the opinion states the offer is not reasonable (“*Not fair and not reasonable*” or “*Not in best interest*”) and the board recommends rejection of the offer, zero otherwise. However, it is ambiguous as to whether shareholders should accept or reject an offer when the expert opinion is “*Not fair but reasonable*”. To ensure that our results are not sensitive to how we classify instances where a “*Not fair but reasonable*” opinion is provided, we exclude such opinion in the construction of an alternative measure of *Consensus*. *Consensus\_redefined* is as an indicator variable set to equal one if the independent expert opinion states the offer is reasonable (“*Fair and reasonable*”) and the board of directors recommend acceptance of the offer or the opinion states the offer is not reasonable (“*Not fair and not reasonable*” or “*Not in best interests*”) and the board recommends rejection of the offer, zero otherwise. With this new definition, we re-run the primary analysis presented in Table 3 (untabulated) and find our results remain qualitatively and statistically consistent with the main results.

### **5.3.2 Instances where the independent expert is also the external auditor**

RG 112 requires that an independent expert declines an engagement if there is a conflict of interest that would impact on the “independence” of their fairness opinion. Interestingly there is no explicit prohibition on the target firm auditor preparing the expert report. As the presence of the target firm’s auditor also acting as the independent expert could impact on the interpretation of our findings, we examine the frequency of this joint role occurring in our sample. We find only 12 instances (4.95%) where this joint role is present. As a robustness test, we exclude these 12 instances from our sample. Our main results remain unchanged whereby the coefficient on *Accounting Firm* remains insignificant in the *Consensus* and *Valuation Range* regressions and is negative and significant in the *Fees* regression.

### **5.3.3 Seemingly unrelated regression**

To address the possibility that our regression models are interrelated (error terms in the regression models are correlated), we perform a seemingly unrelated regression. The results are reported in Table 6. Similar to the main results we continue to find a negative and significant association between *Accounting Firm* with *Fees* and do not find an association between *Accounting Firm* and *Consensus* and *Valuation Range*.

### **INSERT TABLE 6 HERE**

#### **5.3.4 Does the independent expert become the auditor?**

An interesting question arising from our study is whether the independent expert subsequently becomes the auditor of either the target or bidding firm after the takeover. To address this question, we first examine the frequency of independent experts becoming the auditor of the merged entity after a successful takeover. Of the successful acquisitions in our sample, we find no instances of the independent expert acting as the auditor of the consolidated entity within three years of the acquisition. We also examine the frequency of the independent expert becoming the auditor of the target firm following an unsuccessful acquisition. Within our sample there are 25 observations where the expert is an accounting firm and the merger is unsuccessful. Amongst these observations we only document a single instance of the expert commencing as the external auditor of the target firm within three years.

#### **5.3.5 Consensus agree and disagree**

In the main analysis the *Consensus* variable classifies the expert and target firm board as being in agreement irrespective of whether the board recommends takeover acceptance or rejection. As an additional test we examine whether accounting firms are more likely to agree with director recommendations when the target firm board recommends “*acceptance*” or “*rejection*” of an offer. This investigation is informed by prior research (Henry, 2005) which shows that the recommendation of target firm directors is one of the main factors which

determines Australian takeover success or failure. Moreover, this analysis provides evidence pertinent to whether the accounting firm is focused on cross-selling to the target firm or other firms, particularly the bidder firm. If the accounting firm only agrees with target directors that recommend takeover acceptance, the accounting firm is largely focused on cross-selling to the bidder firm as the target firm is likely to cease existence following a successful acquisition. Alternatively, if the accounting firm is only more likely to agree with target directors that recommend “*reject*”, the accounting firm is focused on cross-selling to the target firm post-takeover completion which is likely to be unsuccessful.

In columns (1) and (2) of Table 7 we respecify regression model (1) with the dependent variable coded as one when the target firm board recommends takeover acceptance and the expert indicates that the offer price is reasonable (*Consensus=Agree*). In contrast, in columns (3) and (4) of Table 7 the dependent variable is coded as one when the target firm board recommends takeover rejection and the expert indicates that the offer price is not reasonable (*Consensus=Disagree*). The control variable, *Friendly*, is excluded from these regressions due to the high degree of correlation between the director recommending an “*accept*” and a friendly takeover. The results in Columns (1)-(2) of Table 7 indicate that accounting firms, both *Bign Accounting Firms* and *nonBign Accounting Firms*, are not associated with a higher likelihood of consensus when directors recommend “*accept*” to the takeover offer. Similarly, Column (3)-(4) show that accounting firms, both *Bign Accounting Firms* and *nonBign Accounting Firms*, are not associated with a higher likelihood of consensus when the directors recommend “*reject*” to the takeover offer. Thus, the findings are inconsistent with accounting firms providing an opinion, which agrees with the target firm board to encourage cross-selling of other services. Overall, our results from testing *Hypothesis One* suggest that accounting firms are no more likely to agree with target director recommendations than other independent experts.

**INSERT TABLE 7 HERE**

### **5.3.6 Expert fees partitioned by size of the bidder and target firm**

As an additional test we consider whether the fees charged by accounting firms vary based on the economic utility of cross-selling to either or both the bidder and target firm. When the bidder and target firm are large, the potential economic benefits of cross-selling are greater. This conjecture is tested by partitioning the sample at the median of target and bidding firm market capitalisation. The findings from splitting the sample using bidding firm size are presented in columns (1) through (2) of Table 8. Focusing firstly on relatively smaller bidders, the findings in column (1) document an insignificant effect on fees of accounting firms. In contrast, in column (2) we find after partitioning auditors by size that only non-Big 4 firms charge lower fees when the bidder is relatively small. In contrast, the findings for takeovers with larger bidding firms provide evidence consistent with accounting firms charging lower expert report fees. This result holds for the overall sample (column 3) and for both large and small accounting firms (column 4).

#### **INSERT TABLE 8 HERE**

The results from partitioning the sample using target firm size are presented in columns (5) through (8) of Table 8. The findings for relatively small target firms are consistent with non-Big 4 accounting firms charging lower fees as the results are insignificant for the full sample (column 5) and positive and significant for non-Big 4 accounting firms (column 6). The results for the larger segment of target firm size mirror the findings for bidding firms. That is, we document that for the complete sample accounting firms charge significantly lower expert report fees, and this result exists for both large and small accounting firms. Overall, the results of this additional testing are consistent with all accounting firms lowering their expert report fees when the potential benefit of cross-selling are greater (i.e., the bidder and target firm are larger in size).

### 5.3.7 Other robustness tests

We conduct a battery of additional tests to ascertain the robustness of our results. First, we assess if our results are robust to alternative specifications of the *Expertise* variable. In untabulated results, we measure *Expertise* alternatively using a count or rank of deals in the prior years of our sample. We also alternatively measure expertise using prior or current year market share based on deal value. Our main findings remain unchanged to these alternative variable specifications. Second, we consider whether consensus is achieved by increasing the valuation range by controlling for *Valuation Range* in the consensus regression (Model 1). The coefficient on valuation range is negative but not significant. Third, to examine whether expert *Fees* are a determinant of the valuation range, we include expert fees as an additional control variable in the valuation range regression (Model (2)). The coefficient on *Fees* is not significant. Fourth, we exclude the period 1997-2000 from our analysis as this period coincides with prior expert report research and the results remain robust. Fifth, we replace our year fixed effects indicator variables with *CLERP9*, an indicator set to equal one if the acquisition occurred after the year 2004, 0 otherwise. We find that *CLERP9* is positively associated with *Consensus* and *Fees*. Importantly, our main findings remain unchanged. Finally, we consider whether the fee results hold for target firms where there are more directors with multiple directorships that have access to other firms that provide cross-selling opportunities. We use board size as proxy for the cross-selling opportunities present in directors having other directorships and find the lower fees associated with *Accounting Firm* is only significant for larger boards and the lower fees associated with *NonBign Accounting Firm* holds across both the large and small board subsamples.

## 6. Conclusion

In this study, we examine whether accounting firms serving as independent experts to target firms in takeovers provide lower quality expert reports and charge lower fees. Motivating



this study is the ongoing regulatory and practitioner concern about independence issues impacting the quality of assurance services supplied by accounting firms due to their incentives to repeat and cross-sell their services and the lack of evidence in the non-audit setting. In a setting where we can identify dissent in opinions between the accounting firm and client, we find no evidence that accounting firms more frequently provide opinions which agree with the recommendation of the target board. Similarly, we find that expert report quality, as proxied using the valuation range, provided by accounting firms are not statistically different from those provided by other experts. Our findings, however, show that non-Big 4 accounting firms provide expert reports at lower fees than other experts, which is potentially suggestive of incentives to cross-sell future services. Overall, our results contribute to the regulatory debate regarding the independence of assurance services (IESB, 2020; ASIC, 2011) and suggest that the push to prohibit or limit the provision of non-audit services by auditors do not appear to be justified.

Our study is subject to several limitations. Most notably, we are unable to directly capture the cross-selling incentives of accounting firms and can only infer their general incentives given accounting firms are all multi-service providers with reliance on multiple year engagements to derive economic benefits. Similarly, we are unable to document the success of accounting firms in procuring future services given the provision of other services to the bidder are not required to be publicly disclosed unless the accounting firm also serves as, the auditor or compensation consultant.<sup>23</sup>

---

<sup>23</sup> The current regulatory landscape in Australia only requires other services supplied in conjunction with engagements involving external auditors and compensation consultants to be publicly disclosed (Carey et al. 2014; Grosse et al. 2020).

## References

- Amir, E., Guan, Y., & Livne, G. (2019). Abnormal Fees and Timely Loss Recognition—A Long-Term Perspective. *Auditing: A Journal of Practice & Theory*, 38(3), 1-22.
- Ashbaugh, H., LaFond, R., & Mayhew, B. W. (2003). Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review*, 78(3), 611-639.
- Australian Securities and Investments Commission (ASIC) (2011). RG 112 Independence of experts. <https://asic.gov.au/regulatory-resources/find-a-document/regulatory-guides/rg-112-independence-of-experts/>.
- Bugeja, M. (2005a). Effect of Independent Expert Reports in Australian Takeovers. *Accounting and Finance*, 45, 519–536.
- Bugeja, M. (2005b). The Independence of expert opinions in corporate takeovers: Agreeing with directors recommendations. *Journal of Business, Finance & Accounting*, 32, 1861-1885.
- Bugeja, M. (2007). Voluntary Use of Independent Valuation Advice by Target Firm Boards in Takeovers. *Pacific-Basin Finance Journal*, 15, 368–387.
- Bugeja, M., Da Silva Rosa, R., & Lee, A. (2009). The impact of director reputation and performance on the turnover and board seats of target firm directors. *Journal of Business Finance & Accounting*, 36(1-2), 185-209.
- Bugeja, M., Da Silva Rosa, R., & Walter, T. (2005). Expert reports in Australian takeovers: fees and quality. *Abacus*, 41 (3), 307-322.
- Carey, P. J., Monroe, G. S., & Shailer, G. (2014). Review of post-CLERP 9 Australian auditor independence research. *Australian Accounting Review*, 24(4), 370-380.
- Causholli, M., Chambers, D. J., & Payne, J. L. (2014). Future nonaudit service fees and audit quality. *Contemporary Accounting Research*, 31(3), 681-712.
- Che, L., Langli, J. C., & Svanström, T. (2018). Are Audit Partners Rewarded for Selling Consulting Services to Audit and Non-Audit Clients?. *Available at SSRN 3095965*.
- Commonwealth of Australia (2019). Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry Volume 2: Case Studies. <https://www.royalcommission.gov.au/sites/default/files/2019-02/fsrc-volume-2-final-report.pdf>
- Commonwealth of Australia (2012). Corporations Act 2001 - SECT 324DA, [http://www5.austlii.edu.au/au/legis/cth/consol\\_act/ca2001172/s324da.html](http://www5.austlii.edu.au/au/legis/cth/consol_act/ca2001172/s324da.html)
- DeFond, M.L., Raghunandan, K. and Subramanyam, K.R. (2002). Do non-audit service fees impair auditor independence? Evidence from going concern audit opinions. *Journal of accounting research*, 40(4), 1247-1274.
- Desir, R., Casterella, J. R., & Kokina, J. (2014). A reexamination of audit fees for initial audit engagements in the post-SOX period. *Auditing: A Journal of Practice & Theory*, 33(2), 59-78.
- Eddey, P. H. (1993). Independent Expert's Reports in Takeover Bids. *Accounting and Finance*, 33, 1–18.
- English, L. (1989). Experts' reports under fire. *Australian Accountant*, February, 47-51.
- Ferguson, A., Lam, P., & Ma, N. (2019). Further evidence on mandatory partner rotation and audit pricing: a supply-side perspective. *Accounting & Finance*, 59(2), 1055-1100.

- Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review*, 77(s-1), 71-105.
- Ghosh, A., & Lustgarten, S. (2006). Pricing of initial audit engagements by large and small audit firms. *Contemporary Accounting Research*, 23(2), 333-368.
- Gipper, B., Hail, L., & Leuz, C. (2020). On the Economics of Mandatory Audit Partner Rotation and Tenure: Evidence from PCAOB Data. *The Accounting Review*, 0000-0000.
- Grosse, M., Ma, N., & Scott, T. (2018). Interim reviews and the association between partner rotations and audit fees. *International Journal of Auditing*, 22(2), 214-229.
- Grosse, M., Ma, N., & Scott, T. (2020). Evidence on compensation consultant fees and CEO pay. *Australian Journal of Management*, 45(1), 15-44.
- Harford, J. (2003). Takeover bids and target directors' incentives: The impact of a bid on directors' wealth and board seats. *Journal of Financial Economics*, 69(1), 51-83.
- Heckman, J. J. (1979). Sample selection as a specification error. *Econometrica*, 47, 153-161.
- Henry, D. (2005). Directors' recommendations in takeovers: An agency and governance analysis. *Journal of Business Finance & Accounting* 32(1/2), 129-159.
- Hossain, S. (2013). Effect of regulatory changes on auditor independence and audit quality. *International Journal of Auditing*, 17(3), 246-264.
- Hossain, S., Monroe, G. S., Wilson, M., & Jubb, C. (2016). The effect of networked clients' economic importance on audit quality. *Auditing: A Journal of Practice & Theory*, 35(4), 79-103.
- International Ethics Standards Board (IESB) (2013). *International Standard On Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other Than Audits Or Reviews Of Historical Financial Information*, <https://www.iaasb.org/publications/international-standard-assurance-engagements-isa-3000-revised-assurance-engagements-other-audits-or-0>
- International Ethics Standards Board (IESB) (2020). *ISAE 3000 (Revised), Assurance Engagements Other Than Audits Or Reviews Of Historical Financial Information*, <https://www.ifac.org/system/files/publications/files/FINAL-IESBA-ED-Proposed-Revisions-to-the-NAS-Provisions-of-the-Code.pdf>
- Kisgen, D. J., Qian J., & Song, W. (2009). Are fairness opinions fair? The case of mergers and acquisitions. *Journal of Financial Economics* 91, 179-207.
- Knechel, W. R., & Sharma, D. S. (2012). Auditor-provided nonaudit services and audit effectiveness and efficiency: Evidence from pre-and post-SOX audit report lags. *Auditing: A Journal of Practice & Theory*, 31(4), 85-114.
- Kohler, A., (1989). Shareholders Deserve Deal on Expert Reports. *Australian Financial Review*, 23 June.
- Lonergan, W., and Fenton, T. (1989). Making Sure the Price is Right: How Expert Are the Independent Experts? *JASSA*.
- Maslen-Stannage, (2014). Experts Nervous on Independence and Process Post Billabong. May 29, 2014, <https://www.herbertysmithfreehills.com/latest-thinking/experts-nervous-on-independence-and-process-post-billabong>

- Nguyen, G. (2018). The role of independent expert reports in Australian M&A market. *International Review of Finance* 18, 149-167.
- Numbers Executive (2018). Lifting The Lid On The Big 4 Corporate Finance Teams – Valuations, <https://www.numbersexecutive.com.au/news-articles/2018/8/2/lifting-the-lid-on-the-chartered-accounting-firms-corporate-finance-teams-valuations>, August 2.
- Ruddock, C., Taylor, S. J., & Taylor, S. L. (2006). Nonaudit services and earnings conservatism: Is auditor independence impaired? *Contemporary Accounting Research*, 23(3), 701-746.
- Seabright, M. A., Levinthal, D. A., & Fichman, M. (1992). Role of individual attachments in the dissolution of interorganizational relationships. *Academy of Management Journal*, 35(1), 122-160.
- Simon, D. T., & Francis, J. R. (1988). The effects of auditor change on audit fees: Tests of price cutting and price recovery. *The Accounting Review*, 255-269.
- Tadros, E. (2018). Revealed: EY's multiple 'independent' roles at ANZ. *Australian Financial Review*. November 13. <https://www.afr.com/companies/professional-services/revealed-eyes-multiple-independent-roles-at-anz-20181113-h17tt9>

**Table 1: Sample derivation***Panel A: Sample derivation*

	<i>N</i>
Takeovers of Australian publicly listed target firms from 1997 to 2016	1,533
Less: Private or foreign acquirers	-624
Less: Missing bidder firm data for control variables	-141
Less: Missing target firm data for control variables	-196
Less: Target firms that did not use an independent expert	-234
Less: Missing expert valuation range data	-25
Less: Missing expert fee data	-71
Subsample used to run Models (1)-(3)	242

*Panel B: Sample distribution by target industry*

<i>GICS</i>	<i>Industries</i>	<i>N</i>	<i>% of sample</i>
10	Energy	20	8.26%
15	Material	89	36.78%
20	Industrials	17	7.02%
25	Consumer discretionary	21	8.68%
30	Consumer staples	9	3.72%
35	Health care	7	2.89%
40	Financials	51	21.07%
45	Information technology	11	4.55%
50	Telecommunication services	8	3.31%
55	Utilities	2	0.83%
60	Real estate	7	2.89%
Total		242	100%

*Panel C: Sample distribution by year*

<i>Year of takeover announcement</i>	<i>Full sample</i>		<i>Accounting Firms=1</i>		<i>Accounting firms=0</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
1997	4	1.65%	0	0.00%	4	4.76%
1998	7	2.89%	2	1.27%	5	5.95%
1999	7	2.89%	5	3.16%	2	2.38%
2000	12	4.96%	5	3.16%	7	8.33%
2001	7	2.89%	6	3.80%	1	1.19%
2002	5	2.07%	3	1.90%	2	2.38%
2003	13	5.37%	8	5.06%	5	5.95%
2004	11	4.55%	9	5.70%	2	2.38%
2005	11	4.55%	6	3.80%	5	5.95%
2006	16	6.61%	13	8.23%	3	3.57%
2007	24	9.92%	15	9.49%	9	10.71%
2008	17	7.02%	11	6.96%	6	7.14%
2009	15	6.20%	15	9.49%	0	0.00%
2010	12	4.96%	7	4.43%	5	5.95%
2011	10	4.13%	7	4.43%	3	3.57%
2012	12	4.96%	10	6.33%	2	2.38%
2013	8	3.31%	5	3.16%	3	3.57%
2014	20	8.26%	13	8.23%	7	8.33%
2015	17	7.02%	10	6.33%	7	8.33%
2016	14	5.79%	8	5.06%	6	7.14%
Total	242	100%	158	65.29%	84	34.71%

Table 1 provides a description of the sample selection criteria (Panel A) resulting in the final sample of 242 Australian takeover deals to estimate the regression models. The table also shows a breakdown of the sample by year across the full sample (242 observations), the sample of firms that appointed an accounting firm as their independent expert (158 observations) and the sample that appointed a non-accounting firm as their independent expert (84 observations).

**Table 2: Descriptive statistics**

	<i>(1)</i> <i>Full sample</i>						<i>(2)</i> <i>Accounting firms=1</i>			<i>(3)</i> <i>Accounting firms=0</i>			<i>(4)</i> <b>Statistical difference (3)-(2)</b>
	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>	<i>N</i>	<i>Mean</i>	<i>Median</i>	
<i>Accounting Firm</i>	242	0.653	1.000	0.477	0.000	1.000							
<i>Bign Accounting Firm</i>	242	0.376	0.000	0.485	0.000	1.000	158	0.576	0.496				
<i>Consensus</i>	242	0.938	1.000	0.242	0.000	1.000	158	0.924	1.000	84	0.964	1.000	1.236
<i>Valuation Range</i>	242	0.241	0.140	0.276	0.000	1.654	158	0.278	0.166	84	0.172	0.122	-2.915***
<i>Fees</i>	242	11.503	11.462	1.097	9.616	14.483	158	11.293	11.290	84	11.899	11.775	4.232***
<i>Fees (\$)</i>	242	195,514	95,000	324,495	15,000	1,950,000	158	122,902	80,000	84	332,095	130,000	5.007***
<i>Compulsory</i>	242	0.384	0.000	0.487	0.000	1.000	158	0.367	0.000	84	0.417	0.000	0.755
<i>Competing</i>	242	0.120	0.000	0.325	0.000	1.000	158	0.114	0.000	84	0.131	0.000	0.388
<i>Friendly</i>	242	0.777	1.000	0.417	0.000	1.000	158	0.753	1.000	84	0.821	1.000	1.214
<i>Relative Size</i>	242	0.597	0.278	0.844	0.001	4.943	158	0.538	0.283	84	0.707	0.258	1.489
<i>Premium</i>	242	0.268	0.187	0.658	-0.843	4.480	158	0.283	0.198	84	0.240	0.184	-0.487
<i>Target MTB</i>	242	2.163	1.380	2.605	-3.691	14.760	158	2.081	1.261	84	2.317	1.591	0.669
<i>Equity Payment</i>	242	0.694	1.000	0.462	0.000	1.000	158	0.728	1.000	84	0.631	1.000	-1.557
<i>Same Industry</i>	242	0.690	1.000	0.463	0.000	1.000	158	0.671	1.000	84	0.726	1.000	0.886
<i>Toehold</i>	242	0.178	0.125	0.217	0.000	0.879	158	0.158	0.099	84	0.215	0.160	1.935*
<i>Board size</i>	242	5.818	5.000	1.924	3.000	11.000	158	5.620	5.000	84	6.190	6.000	2.230**
<i>Expertise</i>	242	3.880	3.000	2.439	1.000	12.000	158	4.272	4.000	84	3.142	2.500	-3.509***

Table 2 reports univariate statistics on a sample of 242 Australian takeover deals. The sample is split into two subsamples based on whether the independent expert is an accounting firm ( $N=158$ ), or a non-accounting firm ( $N=84$ ). Statistical differences between the subsamples are provided. A  $t$ -test is used for continuous variables and a  $z$ -test for binary variables. All continuous variables are winsorized at the 1% and 99% levels. Definitions of the variables are provided in the Appendix.

**Table 3: Accounting firms as independent experts and *Consensus***

	(1)	(2)	(3)	(4)
	<b>Probit</b>	<b>Bivariate probit</b>	<b>Probit</b>	<b>Bivariate probit</b>
	Coeff.	Marginal effect	Coeff.	Marginal effects
<i>Variables</i>	(z-stats)	(z-stats)	(z-stats)	(z-stats)
<i>Accounting Firm</i>	-0.256 (-0.765)	-0.024 (-0.277)	-	-
<i>Bign Accounting Firm</i>	-	-	-0.019 (-0.045)	-0.015 (-0.093)
<i>NonBign Accounting Firm</i>	-	-	-0.804** (-2.193)	-0.059 (-0.412)
<i>Compulsory</i>	-0.114 (-0.240)	-0.014 (-0.169)	-0.233 (-0.476)	-0.020 (-0.245)
<i>Competing</i>	-0.280 (-0.608)	-0.096 (-1.072)	-0.273 (-0.580)	-0.095 (-1.062)
<i>Toehold</i>	2.254 (1.289)	-0.046 (-0.241)	2.275 (1.354)	-0.048 (-0.251)
<i>Friendly</i>	1.519*** (4.513)	-0.001 (-0.010)	1.547*** (4.203)	-0.001 (-0.011)
<i>Premium</i>	-0.193 (-0.713)	-0.019 (-0.388)	-0.214 (-0.738)	-0.020 (-0.401)
<i>Target MTB</i>	-0.069 (-1.384)	-0.013 (-1.097)	-0.086* (-1.704)	-0.013 (-1.154)
<i>Equity Payment</i>	-0.043 (-0.104)	0.017 (0.246)	-0.160 (-0.361)	0.011 (0.154)
<i>Board Size</i>	0.025 (0.271)	-0.017 (-1.058)	0.042 (0.431)	-0.016 (-1.001)
<i>Expertise</i>	-0.018 (-0.263)	0.016 (1.215)	0.062 (0.712)	0.020 (1.456)
Constant	5.694*** (6.911)	-	5.323*** (6.267)	-
<i>Observations</i>	242	242	242	242
<i>Industry controls</i>	Yes	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes	Yes
<i>Pseudo R2</i>	0.370		0.383	
<i>Prob&gt;chi2</i>		0.917		0.931
<i>Wald Chi2</i>		0.011		0.008

Table 3 Columns (1) and (3) report the Probit regression results from Model (1). Columns (2) and (4) report the marginal effects from a bivariate Probit regression with sample selection which corrects for sample selection in the estimates of *Consensus*. In the first stage (untabulated) we estimate a Probit regression model on the choice of an accounting firm as an independent expert. The control variables are the same variables used in Model (1). In addition, we include driving time (*Drivingtime*) as our instrumental variable which is expected to explain the choice of an accounting firm and not affect the outcomes. *Drivingtime* is an indicator variable set to equal to one if the driving time from the nearest accounting firm's head office to the target firm's head office is over one hour, zero otherwise. The key variables of interest are *Accounting Firm*, *Bign Accounting Firm* and *NonBign Accounting Firm*. All continuous variables are winsorized at the 1% and 99% levels. z-statistics are provided in the parentheses. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. Definitions of the variables are provided in the Appendix.



**Table 4: Accounting firms as independent experts and *Valuation Range***

	(1)	(2)	(3)	(4)
	<b>OLS</b>	<b>Correcting for self- selection</b>	<b>OLS</b>	<b>Correcting for self- selection</b>
<i>Variables</i>	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)
<i>Accounting Firm</i>	0.027 (1.019)	0.029 (1.407)	-	-
<i>Bign Accounting Firm</i>	-	-	0.014 (0.521)	0.017 (0.522)
<i>NonBign Accounting Firm</i>	-	-	0.056 (1.409)	0.056** (2.428)
<i>Compulsory</i>	-0.029 (-0.876)	-0.041* (-2.091)	-0.028 (-0.852)	-0.039* (-2.043)
<i>Competing</i>	0.014 (0.311)	-0.001 (-0.045)	0.011 (0.255)	-0.003 (-0.096)
<i>Friendly</i>	-0.023 (-0.463)	-0.041 (-0.890)	-0.022 (-0.435)	-0.037 (-0.855)
<i>Premium</i>	0.085* (1.815)	0.084 (1.498)	0.085* (1.790)	0.085 (1.491)
<i>Target MTB</i>	-0.002 (-0.278)	-0.004 (-1.341)	-0.001 (-0.169)	-0.003 (-1.067)
<i>Equity Payment</i>	0.013 (0.397)	0.022 (0.391)	0.013 (0.411)	0.021 (0.365)
<i>Board Size</i>	-0.021 (-1.703)	-0.023 (-0.964)	-0.021 (-1.629)	-0.023 (-0.954)
<i>Expertise</i>	0.002 (0.420)	0.006 (1.547)	-0.001 (-0.090)	0.002 (0.420)
<i>Inverse Mills ratio</i>	-	0.093 (0.764)	-	0.081 (0.700)
Constant	0.339*** (3.080)	0.308* (2.099)	0.349*** (3.050)	0.321* (2.066)
<i>Observations</i>	242	242	242	242
<i>Industry controls</i>	Yes	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes	Yes
<i>R2</i>	0.262	0.263	0.264	0.265

Table 4 Columns (1) and (3) report the OLS regression results from Model (2). To address self-selection issues in Model (2), we estimate the *inverse Mills ratio* from the first stage selection regression on the probability of choosing an accounting firm as an expert. In the first stage regression, we use the same control variables as in Model (2). In addition, we include driving time (*Drivingtime*) as our instrumental variable which is expected to explain the choice of an accounting firm and not affect the outcomes. *Drivingtime* is an indicator variable set to equal to one if the driving time from the nearest accounting firm's head office to the target firm's head office is over one hour, zero otherwise. Estimates from the first stage regression are used to calculate the *Inverse Mills ratio* is included in Columns (2) and (4) to remove selection bias in the *Valuation Range* regression. The key variables of interest are *Accounting Firm*, *Bign Accounting Firm* and *NonBign Accounting Firm*. All continuous variables are winsorized at the 1% and 99% levels. z-statistics are provided in the parentheses. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. Definitions of the variables are provided in the Appendix.

**Table 5: Accounting firm as independent experts and Fees**

	(1)	(2)	(3)	(4)
	OLS	Correcting for self- selection	OLS	Correcting for self- selection
<i>Variables</i>	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)
<i>Accounting Firm</i>	-0.279** (-2.274)	-0.284** (-2.284)	-	-
<i>Bign Accounting Firm</i>	-	-	-0.138 (-0.935)	-0.136 (-0.878)
<i>NonBign Accounting Firm</i>	-	-	-0.636*** (-4.714)	-0.626*** (-4.581)
<i>Compulsory</i>	-0.280* (-1.996)	-0.323** (-2.209)	-0.288** (-2.127)	-0.352** (-2.613)
<i>Competing</i>	-0.286** (-2.354)	-0.329* (-1.952)	-0.250* (-1.918)	-0.314* (-1.883)
<i>Friendly</i>	0.033 (0.244)	-0.074 (-0.487)	0.012 (0.098)	-0.124 (-0.910)
<i>Premium</i>	-0.001 (-0.010)	-0.068 (-1.011)	-0.018 (-0.274)	-0.076 (-1.185)
<i>Target MTB</i>	0.026 (1.480)	0.018 (0.754)	0.017 (1.114)	0.005 (0.262)
<i>Equity Payment</i>	0.451*** (4.367)	0.507*** (3.785)	0.426*** (4.137)	0.490*** (3.716)
<i>Same Industry</i>	0.180*** (5.092)	0.176*** (4.962)	0.176*** (5.058)	0.169*** (4.966)
<i>Board Size</i>	-0.281** (-2.421)	-0.303** (-2.329)	-0.240** (-2.265)	-0.290** (-2.370)
<i>Expertise</i>	-0.235*** (-10.498)	-0.209*** (-6.416)	-0.198*** (-10.512)	-0.166*** (-6.291)
<i>Inverse Mills ratio</i>	-	0.478 (0.837)	-	0.666 (1.231)
<i>Constant</i>	11.742*** (34.668)	11.300*** (18.320)	11.636*** (35.986)	11.076*** (18.752)
<i>Observations</i>	242	227	242	227
<i>Industry controls</i>	Yes	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes	Yes
<i>R2</i>	0.613	0.606	0.631	0.624

Columns (1) and (3) report the OLS regression results from Model (3). To address self-selection issues in Model (3), we estimate the *inverse Mills ratio* from the first stage selection regression on the probability of choosing an accounting firm as an expert. In the first stage regression, we use the same control variables as in Model (3). In addition, we include driving time (*Drivingtime*) as our instrumental variable which is expected to explain the choice of an accounting firm and not affect the outcomes. *Drivingtime* is an indicator variable set to equal to one if the driving time from the nearest accounting firm's head office to the target firm's head office is over one hour, zero otherwise. Estimates from the first stage regression are used to calculate the *Inverse Mills ratio* is included in Columns (2) and (4) to remove selection bias in the *Fee* regression. The key variables of interest are *Accounting Firm*, *Bign Accounting Firm* and *NonBign Accounting Firm*. All continuous variables are winsorized at the 1% and 99% levels. *z*-statistics are provided in the parentheses. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. Definitions of the variables are provided in the Appendix.

**Table 6: Seemingly unrelated regression**

	(1) <i>Consensus</i>	(2) <i>Valuation Range</i>	(3) <i>Fees</i>
<i>Variables</i>	Coeff. (z-stats)	Coeff. (z-stats)	Coeff. (z-stats)
<i>Accounting Firm</i>	-0.027 (-0.840)	0.027 (0.770)	-0.281*** (-2.721)
<i>Compulsory</i>	-0.004 (-0.109)	-0.028 (-0.842)	-0.247** (-2.483)
<i>Competing</i>	-0.026 (-0.581)	0.014 (0.284)	-0.266* (-1.856)
<i>Toehold</i>	0.088 (0.987)	-	-
<i>Friendly</i>	0.189*** (5.223)	-0.023 (-0.581)	0.061 (0.527)
<i>Premium</i>	-0.007 (-0.333)	0.085*** (3.568)	-0.014 (-0.197)
<i>Target MTB</i>	-0.010* (-1.707)	-0.002 (-0.321)	0.027 (1.470)
<i>Equity Payment</i>	-0.004 (-0.126)	0.014 (0.384)	0.446*** (4.195)
<i>Same Industry</i>	-	-	-0.289*** (-2.650)
<i>Board Size</i>	0.000 (0.034)	-0.021** (-2.372)	0.177*** (6.981)
<i>Expertise</i>	-0.002 (-0.256)	0.002 (0.301)	-0.237*** (-11.232)
<i>Constant</i>	0.869*** (10.464)	0.340*** (3.701)	11.598*** (38.688)
<i>Observations</i>	242	242	242
<i>Industry controls</i>	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes
<i>R2</i>	0.182	0.262	0.617

Table 6 Columns (1), (2) and (3) reports the results of estimating using seemingly unrelated regression for models (1), (2) and (3) respectively. All continuous variables are winsorized at the 1% and 99% levels. t-statistics are provided in the parentheses. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. Definitions of the variables are provided in the Appendix.

**Table 7: Accounting firms as independent experts and partitioning *Consensus***

<i>Variables</i>	(1)	(2)	(3)	(4)
	<i>Consensus=Agree</i>	<i>Consensus=Agree</i>	<i>Consensus=Disagree</i>	<i>Consensus=Disagree</i>
	Coeff.	Coeff.	Coeff.	Coeff.
	(z-stats)	(z-stats)	(z-stats)	(z-stats)
<i>AccountingFirm</i>	-0.252 (-0.932)	-	0.116 (0.422)	-
<i>Bign Accounting Firm</i>	-	-0.174 (-0.665)	-	0.092 (0.351)
<i>NonBign Accounting Firm</i>	-	-0.464 (-1.238)	-	0.182 (0.461)
<i>Compulsory</i>	0.107 (0.312)	0.085 (0.249)	-0.146 (-0.358)	-0.140 (-0.344)
<i>Competing</i>	-0.624** (-2.351)	-0.600** (-2.245)	0.472* (1.727)	0.464* (1.697)
<i>Toehold</i>	0.785* (1.667)	0.817* (1.727)	-0.269 (-0.512)	-0.275 (-0.521)
<i>Premium</i>	-0.031 (-0.185)	-0.038 (-0.225)	0.016 (0.114)	0.019 (0.138)
<i>Target MTB</i>	-0.028 (-0.671)	-0.035 (-0.782)	-0.014 (-0.315)	-0.012 (-0.253)
<i>EquityPayment</i>	0.647*** (3.276)	0.629*** (3.297)	-0.591*** (-3.284)	-0.584*** (-3.377)
<i>Board Size</i>	-0.055 (-0.947)	-0.055 (-0.943)	0.055 (0.759)	0.055 (0.763)
<i>Expertise</i>	0.010 (0.192)	0.037 (0.603)	-0.014 (-0.325)	-0.022 (-0.424)
Constant	1.440** (2.253)	1.370** (2.120)	-1.302* (-1.804)	-1.284* (-1.781)
<i>Observations</i>	242	242	242	242
<i>Industry controls</i>	Yes	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes	Yes
<i>Pseudo R2</i>	0.130	0.134	0.0968	0.0971

Table 7 Columns (1) and (2) report the Probit regression results from estimating Model (1) with *Consensus=Agree* as the dependent variable. *Consensus=Agree* is a binary variable coded as one if the target firm board of directors recommend takeover acceptance and the independent expert indicates that the offer price is reasonable. Columns (3) and (4) report the Probit regression results from estimating Model (1) with *Consensus=Disagree* as the dependent variable. *Consensus=Disagree* is a binary variable coded as one if the target firm board of directors recommend takeover rejection and the independent expert indicates that the offer price is not reasonable. The key variables of interest are *Accounting Firm*, *Bign Accounting Firm* and *NonBign Accounting Firm*. All continuous variables are winsorized at the 1% and 99% levels. z-statistics are provided in the parentheses. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. Definitions of the variables are provided in the Appendix.

**Table 8: Accounting firm as independent experts and Fees sample partitioned by firm size**

Sample:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>Bidder Market Capitalization &lt;Median</i>		<i>Bidder Market Capitalization &gt;Median</i>		<i>Target Market Capitalization &lt; Median</i>		<i>Target Market Capitalization &gt; Median</i>	
<i>Variables</i>	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)	Coeff. (t-stats)
<i>Accounting Firm</i>	<b>-0.013</b> <b>(-0.079)</b>		<b>-0.526***</b> <b>(-3.027)</b>		<b>-0.013</b> <b>(-0.079)</b>		<b>-0.526***</b> <b>(-3.027)</b>	-
<i>BignAccountingFirm</i>	-	0.259 (1.027)	-	-0.424* (-2.037)	-	0.259 (1.027)	-	-0.424* (-2.037)
<i>NonBignAccountingFirm</i>	-	-0.294* (-2.046)	-	-0.957*** (-5.818)	-	-0.294* (-2.046)	-	-0.957*** (-5.818)
<i>Compulsory</i>	-0.395*** (-3.191)	-0.405*** (-3.614)	-0.194 (-0.858)	-0.216 (-0.935)	-0.395*** (-3.191)	-0.405*** (-3.614)	-0.194 (-0.858)	-0.216 (-0.935)
<i>Competing</i>	-0.345** (-2.167)	-0.295* (-2.010)	-0.419* (-1.912)	-0.407* (-1.797)	-0.345** (-2.167)	-0.295* (-2.010)	-0.419* (-1.912)	-0.407* (-1.797)
<i>Friendly</i>	-0.060 (-0.366)	-0.013 (-0.078)	-0.001 (-0.007)	-0.074 (-0.347)	-0.060 (-0.366)	-0.013 (-0.078)	-0.001 (-0.007)	-0.074 (-0.347)
<i>Premium</i>	0.052 (0.377)	0.009 (0.076)	-0.104 (-0.912)	-0.077 (-0.692)	0.052 (0.377)	0.009 (0.076)	-0.104 (-0.912)	-0.077 (-0.692)
<i>TargetMTB</i>	0.004 (0.241)	-0.004 (-0.251)	0.029 (0.925)	0.029 (0.892)	0.004 (0.241)	-0.004 (-0.251)	0.029 (0.925)	0.029 (0.892)
<i>EquityPayment</i>	0.346** (2.695)	0.295*** (2.971)	0.749*** (5.415)	0.722*** (4.920)	0.346** (2.695)	0.295*** (2.971)	0.749*** (5.415)	0.722*** (4.920)
<i>Boardsize</i>	0.063 (1.365)	0.061 (1.268)	0.186*** (4.526)	0.188*** (4.798)	0.063 (1.365)	0.061 (1.268)	0.186*** (4.526)	0.188*** (4.798)
<i>Expertise</i>	-0.177* (-2.022)	-0.146 (-1.458)	-0.329* (-1.760)	-0.312* (-1.927)	-0.177* (-2.022)	-0.146 (-1.458)	-0.329* (-1.760)	-0.312* (-1.927)
<i>SameIndustry</i>	-0.139*** (-4.664)	-0.091*** (-3.069)	-0.304*** (-13.724)	-0.279*** (-10.373)	-0.139*** (-4.664)	-0.091*** (-3.069)	-0.304*** (-13.724)	-0.279*** (-10.373)
Constant	11.671*** (27.540)	11.320*** (28.043)	11.870*** (26.393)	11.820*** (27.540)	11.671*** (27.540)	11.320*** (28.043)	11.870*** (26.393)	11.820*** (27.540)
<i>N</i>	121	121	121	121	121	121	121	121
<i>Industry controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Year controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.545	0.583	0.747	0.761	0.545	0.583	0.747	0.761

Table 8 provides the results of OLS regressions with the dependent variable the natural log of the independent expert fees (*Fees*). The key variables of interest are *AccountingFirm*, *BignAccountingFirm* and *NonBignAccountingFirm*. All continuous variables are winsorized at the 1% and 99% levels. \*\*\*, \*\* and \* denote significance at the 1%, 5% and 10% level respectively. *t*-statistics are provided in the parentheses. Columns (1)-(2) and (3)-(4) partition the sample by the bidder's market capitalization and Columns (5)-(6) and (7)-(8) partition the sample by the target's market capitalization

**Appendix**  
**Variable definition**

<b>Variable Name</b>	<b>Description</b>
<i>Accounting Firm</i>	An indicator variable set to equal one if the independent expert report is prepared by an accounting firm, 0 otherwise;
<i>Consensus</i>	An indicator variable set to equal to one if the independent expert opinion states the offer is reasonable (“ <i>Fair and reasonable</i> ”, & “ <i>Not fair but reasonable</i> ”) and the board of directors recommend shareholders accept the offer or the opinion states the offer is not reasonable (“ <i>Not fair and not reasonable</i> ” & “ <i>Not in best interest</i> ”) and the board recommends shareholders reject the offer, 0 otherwise;
<i>Consensus=Agree</i>	An indicator variable set to equal to one if the independent expert opinion states the offer is reasonable (“ <i>Fair and reasonable</i> ” & “ <i>Not fair but reasonable</i> ”) and the board of directors recommend shareholders accept the offer, 0 otherwise;
<i>Consensus=Disagree</i>	An indicator variable set to equal to one if the independent expert opinion states the offer is not reasonable (“ <i>Not fair and not reasonable</i> ” & “ <i>Not in best interest</i> ”) and the board recommends shareholders reject the offer, 0 otherwise;
<i>Valuation Range</i>	The difference between the high-point and the low-point of the valuation range, divided by the mid-point;
<i>Fees</i>	The natural log of the fees charged by the independent expert for the independent expert opinion;
<i>Compulsory</i>	An indicator variable set to equal one if the independent expert report is compulsory, 0 otherwise;
<i>Competing</i>	An indicator variable set to equal one if there are competing bidders, 0 otherwise;
<i>Friendly</i>	An indicator variable set to equal one if the initial recommendation of the board of directors is to accept the offer, 0 otherwise;
<i>Premium</i>	The offer price per share minus the target share price twenty days before the takeover announcement divided by the target share price twenty days before the takeover announcement;
<i>Target MTB</i>	The market value of target equity divided by the book value of target equity measured at the financial year-end prior to the takeover announcement;
<i>Equity Payment</i>	An indicator variable equal to one if a deal is paid for using entirely equity, zero otherwise;
<i>Same Industry</i>	An indicator variable equal to one if the target and the acquirer operate in the same industry, zero otherwise;
<i>Toehold</i>	The acquirer’s ownership stake in the target at the time of the takeover announcement;
<i>Board Size</i>	The board size of the target firm;
<i>Expertise</i>	The rank of the independent expertise using deal value in the current year.