

# **Audit Partner Rotation, Earnings Quality and Earnings Conservatism**

Jane Hamilton  
University of Technology, Sydney  
and  
Capital Markets CRC Ltd

Caitlin Ruddock  
University of New South Wales

Donald Stokes  
University of Technology, Sydney  
and  
Capital Markets CRC Ltd

Stephen Taylor<sup>\*</sup>  
University of New South Wales  
and  
Capital Markets CRC Ltd

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\* Contact Author:  
School of Accounting  
University of New South Wales  
Sydney NSW 2052  
Australia  
S.Taylor@unsw.edu.au

## **Audit Partner Rotation, Earnings Quality and Earnings Conservatism**

### **Abstract**

We provide evidence of an association between audit partner rotation and the quality of earnings. It is a requirement for Australian firms that the engagement partner be identified by name in the annual report. Using a sample of 3,621 firm-years between 1998 and 2003, we show that audit partner changes most likely reflecting partner rotation (i.e., they are not due to a switch of audit firm) are associated with lower signed unexpected accruals, and that for Big 5 clients this relation is driven by smaller positive unexpected accruals following partner changes. This result is consistent with more conservative reporting following a rotation of audit partner, and this interpretation is further supported by evidence suggesting a significant increase in the asymmetrically timely recognition of economic losses when firms have a change of audit partner. Our tests also show that these effects occur predominantly among clients of Big 5 audit firms, and that any effect is concentrated in the latter part of our sample period, when partner rotation was a professional requirement. We therefore conclude that audit partner rotation is associated with incrementally greater conservatism in financial reporting, but only in circumstances where the ability of client firms to resist partner rotation is reduced by mandatory partner rotation requirements.

## 1. Introduction

As public concerns about instances of alleged accounting and audit failure have increased, so has the interest of political and regulatory organizations in the promulgation of rules impacting on the scope of the audit, as well as aspects of the auditor-client engagement. Particular attention has been given to aspects of the auditor-client relationship that could impact on auditor independence, whether in fact or in appearance. For example, the provision of non-audit services (NAS) is now severely restricted in many countries. Auditor tenure has also been subject to regulatory intervention, on the basis that longer tenure is likely to result in reduced independence, and hence a lower quality of auditing. Restrictions on auditor tenure have been considered at two levels. First, there have been calls to restrict the length of time that an audit firm can audit a specific client, although this has largely been resisted, with explicit recognition of the potentially high costs of mandatory audit firm rotation.<sup>1</sup> Second, it has been alleged that key audit personnel, such as the engagement partner, should be periodically rotated off the audit. Consequently, requirements have been put in place that require the mandatory rotation of the partner most responsible for overseeing the audit (i.e., the engagement partner).<sup>2,3</sup>

This legislative intervention is despite pre-existing professional standards expressing the need to ensure at least some degree of partner rotation, as well as recent revisions to these standards to require partner rotation. In the case of Australia, there is now a statutory requirement that rotation should occur no less than every five years.<sup>4</sup> However, the regulatory and professional push to require audit partner rotation has occurred despite an almost complete absence of systematic evidence on the extent to which partner rotation has any impact on audit quality and ultimately, the quality of

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<sup>1</sup> A detailed review of these arguments is contained in the study published by the United States General Accounting Office (2003).

<sup>2</sup> In many domains the term “lead” partner is used. We use the more common term “engagement” partner.

<sup>3</sup> For example, in the United States, Section 203 of the Sarbanes-Oxley Act (2003) requires that the partner having primary responsibility for the audit (and the reviewing partner) cannot perform these duties for more than five consecutive years.

<sup>4</sup> Following amendments in 2004, the Corporations Act 2001 s324DA requires that individuals who play a significant role (defined as lead/engagement/review auditor) in the audit of a listed company must be removed from that role for at least two subsequent years. Amendments in 2004 to Australian Professional Statement F1 (para. 2.50) echo this requirement.

the data provided in audited financial reports. Our paper addresses this concern. We take advantage of a long-standing Australian requirement that requires the engagement partner to be named in the annual report.<sup>5</sup> We are able to identify instances of partner rotation (as distinct from just audit firm changes) and then examine the possible effect of partner rotation on the quality of earnings. By focussing our analysis on the period in which rotation applies, we attempt to isolate the impact of audit partner rotation on the quality of audited financial reports.

In contrast to existing evidence, our paper provides some support for the view that audit partner rotation is associated with a reduction in relatively aggressive accounting. For clients of Big 5 audit firms, we initially find no systematic association between unexpected accruals and audit partner rotation. However, when we estimate this relation separately for instances of positive and negative unexpected accruals, we find that while positive unexpected accruals are significantly lower following a partner switch, there is no discernible effect for instances where unexpected accruals are negative. This is consistent with audit partner rotation by Big 5 auditors constraining relatively aggressive accruals, but having little impact on the extent to which unusually negative accruals occur. On the other hand, for non-Big 5 clients we find some evidence of lower unexpected accruals at the time of partner rotation, but this result is concentrated among observations where unexpected accruals are negative. The findings are robust to alternative measures of unexpected accruals, as well as inclusion of a variety of control variables associated with variation in unexpected accruals.

One way of interpreting our accruals-based results is that partner rotation is associated with more conservative financial reporting. We further investigate this explanation by examining if partner rotation is associated with an increase in the extent to which earnings asymmetrically reflects the timely recognition of losses versus gains (i.e., “conditional” conservatism).<sup>6</sup> Most of the implied criticism directed at the effect of reduced auditor independence on the quality of financial data seems to be premised on

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<sup>5</sup> Australian Corporations Act (2001) s.324(10).

<sup>6</sup> Ball and Shivakumar (2005) use the term “conditional” conservatism to describe the asymmetrically timely recognition within income of economic losses as compared to economic gains. Other terms used to describe this process include “news-based” conservatism (Basu 1997) and “ex post” conservatism (Pope and Walker 1999). For simplicity, we use the term conservatism to describe this attribute of accounting.

instances of overly aggressive reporting, whereby the underlying deterioration in the profitability of collapsing firms has been concealed. It then follows that the timeliness of economic loss recognition is an important attribute of earnings quality, at least to those who have made such criticisms. We use the reverse regression approach outlined in Basu (1997) and an accruals-based test suggested by Ball and Shivakumar (2005) to identify whether audit partner rotation is associated with an incremental increase in earnings conservatism. Our results are consistent with increased conservatism in the period in which auditor rotation occurs, particularly for Big 5 clients.

The differences in our results for clients of Big 5 and non-Big 5 auditors potentially lends some support to concerns that have been expressed about “one size fits all” requirements for audit partner rotation. Further, when we separate our data into observations prior to and following the introduction of a professional requirement for mandatory audit partner rotation (Australian Professional Standard F1), we find that the identifiable effects of audit partner rotation are largely confined to the latter sub-period.<sup>7</sup> This result is consistent with the argument that mandatory partner rotation requirements could result in weakened client resistance to audit firm proposals for partner rotation. To the extent that client firms could have resisted audit-firm initiatives directed at partner rotation prior to the introduction of a professional requirement, we would expect that instances of voluntary partner rotation would be less likely to be associated with observable differences in earnings quality. Of course, the introduction of a professional requirement for mandatory partner rotation could also have played a role in encouraging newly appointed engagement partners to adopt a more conservative stance. Indeed, heightened regulatory and political attention on issues of auditor independence generally, and partner rotation specifically, could also have changed the broader financial reporting environment.

Our evidence makes a number of contributions. First, we separately identify the effect of audit partner rotation, as distinct from measuring audit firm tenure. Second, we utilize multiple proxies for earnings quality (unexpected accruals and asymmetrically

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<sup>7</sup> Prior to legislative action in 2004, Professional Statement F1 was initially reformed in November 2001 to require seven year partner rotation. Following changes to the Corporations Act in 2004 as part of the Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004, F1 was subsequently changed as discussed in footnote 4.

timely recognition of economic losses) that directly address the claims that audit partner rotation will constrain instances of relatively aggressive accounting. Third, we control for the effect of audit firm size, which is expected to reflect variation in the extent to which auditor independence, and hence, audit quality is threatened (DeAngelo 1981). Finally, we provide evidence that the association between audit partner rotation and earnings quality is largely restricted to the period that coincides with the introduction of professional requirements mandating audit partner rotation.

The remainder of the paper proceeds as follows. In section two we briefly review key arguments and prior evidence related to the possible relation between auditor independence, auditor rotation, audit quality and ultimately, earnings quality. We contrast the prior focus on length of tenure with our interest in identifying the contemporaneous effects associated with partner rotation. In section three we describe our data collection procedures and experimental design, as well as the measures used to capture variation in the quality of audited financial reports (i.e., earnings quality). Section four reports our primary results, while section five summarizes several additional tests undertaken to ensure the robustness of our results. Section six concludes and considers some of the policy implications of this research.

## **2. Background**

### *2.1 Rotation costs and benefits*

As we have noted, arguments about the possible effect of auditor tenure on audit quality focus on the possible effect of lengthy tenure on auditors' independence. This argument can be applied at either the audit firm level, or with respect to the person or persons most responsible for planning and/or executing the audit. Typically, the argument is that auditor independence is adversely affected by the auditor's long term relationship with the client. Mandatory rotation of the audit firm, or of key personnel, is therefore argued to promote greater independence and consequently, higher quality auditing. This effect could be on independence in fact, or simply on independence in appearance. However, there are also costs attached to mandatory auditor rotation, and these costs are likely to be higher where it is the audit firm, rather than an existing partner, who is removed from the audit. Apart from direct financial costs associated

with a new audit firm (i.e., an entirely new audit team) familiarizing itself with the client's business environment, internal controls and financial reporting policies, there are also the potential costs associated with reduced familiarity, namely a less competent and hence, lower quality audit. At the partner level, it can be argued that the costs associated with a change are considerably less, as the audit team could continue largely unchanged, but with overall direction and responsibility being delivered with "fresh eyes". It is therefore not surprising that regulatory reform (including revised professional standards) has focussed on the imposition of mandatory partner rotation, rather than mandatory audit firm rotation.

In addition to the differing costs, audit firm and audit partner changes are conceptually distinct. Unless the client becomes unacceptably risky or otherwise ceases to fit the audit firm's existing client portfolio, it is unlikely that an audit firm will propose that the client make a change of audit firm.<sup>8</sup> In contrast, an audit firm is likely to propose a change of audit partner to a client firm if the change helps the audit firm manage and further develop key staff and partners. For example, a newly appointed partner may be given a small, relatively simple client rather than a large, complex one. As partners gain further experience, they might be progressed to larger clients with more complex accounting issues. More experienced partners can be rotated onto problem clients to restrain aggressive accounting and minimize audit risk.

On the other hand, client firms could be unwilling to voluntarily change audit partners if they foresee disruption to the smooth running of the audit, or potential difficulties in gaining approval of contentious accounting policies and estimates. We expect that client ability to resist audit partner change is greater in an unregulated environment compared to a regulated environment (such as our post F1 period) because mandatory audit partner rotation requires that the client must accept a rotation before the statutory time period elapses. Therefore, in an unregulated environment, we would also expect those changes that do occur to be those least resisted by client firms and hence have minimal association with identifiable variations in earnings quality.

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<sup>8</sup> Audit firm resignations are distinct from audit firm changes initiated by clients (Shu 2000; Krishnan and Krishnan 1997).

Any expectation of an identifiable association between audit engagement partner rotation and attributes of earnings quality is premised on the assumption that there will be some difference in a new partner's perspective, and that this will materially impact on the financial statements. At least two considerations work against this assumption, namely the absence (in general) of a specific need for the engagement partner to impose additional restrictions, and the extent to which audit partners within the same audit firm can be expected to take a similar point of view, be it from similar training, interaction, or reliance on audit firm-wide resources for resolving technical accounting issues (including oversight from managing and/or practice-leading partners). Ultimately, the extent to which such factors are likely to attenuate any expected effects of partner rotation is an empirical question. We are only able to observe the net effect of partner rotation, rather than the specific effects reflecting either the costs or the benefits of partner rotation.

Our examination of proxies for earnings quality reflects a maintained assumption that the quality of audited financial data is a joint product of the underlying attributes of management representations and audit quality. Our approach also reflects the model of audit quality proposed by DeAngelo (1981), whereby audit quality is comprised of auditor competence (i.e., the probability that an auditor will detect a breach) and independence (i.e., the probability that, having found a breach, the auditor will report it). Although this model indicates a specific role for auditor independence as part of the broader audit quality construct, it also serves to highlight that independence could play a second order role behind competence. In this case, the attention given to possible determinants of auditor independence such as auditor rotation could overstate its importance.

## *2.2 Prior evidence*

Existing research examining the relation between auditor changes and the quality of financial reporting focuses almost exclusively on tenure of the audit firm, rather than the responsible partner. Several studies have examined the effect on measures of earnings quality associated with a switch of audit firm. For example, DeFond and Subramanyam (1998) show that firms which switch from Big 6 to non-Big 6 audit firms appear to implement more liberal accounting, as evidenced by higher

unexpected accruals. However, this result does not distinguish between the effects of a change in audit firm per se, and the change in audit quality widely held to be associated with the Big 6/non-Big 6 distinction (Craswell et al. 1995). More recent studies have focussed specifically on the length of the audit firm's tenure. Johnson et al. (2002) find that, relative to firms having had the same auditor for four to eight years, those firms where the auditor has been engaged for two or three years have lower quality of earnings, where earnings quality is proxied by the absolute value of unexpected accruals and the persistence of working capital accruals. Myers et al. (2003) yield similar evidence suggesting that audit firm tenure is positively associated with earnings quality. These results are at odds with the claim that audit (and ultimately accounting) quality declines as tenure increases.

Further evidence on the possible effect of audit firm tenure is provided by Kim et al. (2004). They examine the relatively unique setting that prevails in Korea, whereby the securities regulator can appoint a designated auditor to replace the incumbent, so that the auditor is not selected by the client firm, but rather by the regulator. Although Kim et al. show that unexpected accruals are lower (i.e., less positive) for firm years following mandatory auditor rotation, the authors concede that the mandatory switch to a designated auditor typically follows and/or coincides with significant financial distress, as well as broader corporate governance issues. However, it is also possible that the effects they observe associated with mandatory audit firm rotation reflect the likelihood that such effects are most likely to be observed where the switch of audit firm is not voluntary. To the extent our investigation of audit partner rotation covers periods of both voluntary and mandatory rotation, these results support our view that the effects of partner rotation are more likely to be visible in the sub-period where professional regulations mandated partner rotation.

Evidence on the effect of audit firm tenure on market perceptions is also mixed. Ghosh and Moon (2005) find that earnings response coefficients increase with the length of audit firm tenure, consistent with earnings having a greater influence on equity prices as auditor tenure increases. They also find that the influence of earnings on Standard and Poors (S&P) stock rankings is increasing with the length of audit firm tenure. However, they are unable to find any evidence of audit firm tenure impacting on the influence of earnings on S&P debt rankings. This result contrasts

with the conclusions of Mansi et al. (2004), who find that increasing auditor tenure is associated with higher S&P debt ratings.<sup>9</sup>

A similar contrast exists for studies which examine the association of auditor tenure with aspects of the actual audit process, as well as studies of audit related outcomes such as litigation and earnings restatements. Deis and Giroux (1992) review audit quality letters produced by a public audit agency and conclude that audit quality declines as tenure increases. On the other hand, Geiger and Raghunandan (2002) find that auditors become more efficient at collecting and evaluating audit evidence as tenure increases. Carcello and Nagy (2004) find that the probability of fraudulent financial reporting is highest early in the audit firm's tenure (i.e., the first three years), and is not significantly higher for instances of longstanding audit engagements. Finally, Myers et al. (2005) show that audit tenure is positively associated with the probability of earnings restatements where the error affects core earnings or overstates income. However, this result is primarily driven by the restatement of quarterly, as opposed to annual earnings.

The mixed evidence on the effect of audit firm tenure could reflect potentially competing effects. As we have already noted above, on the one hand the auditor (in this case the audit firm) is argued to become increasingly "familiar" with the client in a way that reduces auditor independence. On the other hand, newly appointed auditors face potentially higher information asymmetries in respect of the client firm's business models and accounting systems, which could increase the probability that audit errors will occur (i.e., reduced competence). Similar arguments apply to the possible effect of audit partner rotation, but the effects are likely to be less in this case, due to the continuation of audit firm-specific audit methodologies, know-how and most members of the audit team.

In contrast to the extensive literature examining the possible impact of audit firm tenure on the quality (and perceptions thereof) of accounting, we are only aware of a small number of studies that specifically examine the relation between earnings

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<sup>9</sup> One explanation for the differing results is that Mansi et al. (2004) examine the direct impact of auditor tenure on debt ratings, while Ghosh and Moon (2005) examine the effect of tenure via its conditional effect on the role of earnings.

quality and audit partner tenure.<sup>10</sup> Using Australian data for the period 1987-1993, as well as a cross section of data from 1995, Carey and Simnett (2005) examine the probability of a first time going concern opinion, the distribution of earnings (i.e., the extent of benchmark beating) and unexpected working capital accruals. They find some evidence of a negative relation between the probability of a going concern qualification and audit partner tenure, although this is not robust to restricting their tests to those firms most likely to receive a going concern qualification. In tests using either earnings distributions or unexpected accruals as a proxy for the effect of audit quality, Carey and Simnett find no evidence consistent with independence concerns. However, our argument that the effect of partner rotation should be evident around the time of such rotation is in marked contrast to the approach of Carey and Simnett, where it is assumed there is a monotonically increasing degree of earnings management as partner tenure increases. More generally, their data is exclusively drawn from a period which pre-dates recent concerns and legislative and professional actions directed at audit partner tenure.<sup>11</sup>

Further evidence of the possible effects on audit quality of partner rotation is provided by Fargher et al. (2005), who examine the relation between partner tenure and a measure of unexpected accruals for Australian firms between 1990 and 2002. Their evidence suggests that partner tenure is positively associated with the absolute value of unexpected accruals, and negatively associated with signed unexpected accruals. Fargher et al. interpret this as evidence that as partner tenure increases, so does the probability of unexpectedly negative accruals, consistent with the creation of ‘cookie jar’ reserves. However, their approach assumes a linear relation between tenure and reduced earnings quality, so as with Carey and Simnett (2005) the focus is on the

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<sup>10</sup> Daly et al. (2002) examine the effect of partner rotation within Big 5 audit firms on audit fees and audit opinions. They report that rotation to a less competent partner is associated with audit fee discounts in the initial period, but find no relation between partner rotation and the incidence of modified audit opinions.

<sup>11</sup> While Carey and Simnett focus on a binary conversion of absolute value of unexpected working capital accruals, most concern expressed by regulators, politicians and other critics of the accounting profession focus exclusively on earnings overstatements. Further, recent Australian evidence (Coulton et al. 2005) calls into question the usefulness of earnings (or earnings change) distributions as a proxy for earnings quality. Hence, we regard both sets of tests as relatively weak methods of identifying any effect on earnings quality associated with an actual rotation event.

effect of increasing tenure, rather than the effect of rotation at the time that rotation occurs.<sup>12</sup>

Chen et al. (2004) report a negative relation between audit partner tenure and the absolute value of unexpected accruals for a sample of Taiwanese firms from 1990-2001. Although they conclude that concerns about the effect of audit partner tenure could be misplaced, they do not separately examine instances of positive and negative unexpected accruals (i.e., they treat over and under accruing symmetrically). They also exclude the first year of the incoming partner's engagement responsibility, despite the fact that the most marked effect of a rotation might be expected to occur at that time.

Additional evidence of Taiwanese audit partner rotation is provided by Chi et al. (2005). They examine partner rotations occurring under a regime of mandatory rotation introduced from 2004. While they find some results consistent with higher quality auditing for those firms subject to mandatory rotation, this does not hold when these same firms are used as a control (i.e., when results for 2004 are compared to 2003). However, they do identify a consistent pattern in earnings response coefficients which they interpret as evidence of improved auditor independence in appearance, if not in fact.

In contrast to extant research, our concern is whether partner rotation is associated with a contemporaneous change in the quality of audited financial data. If partner rotation represents a set of fresh eyes, then from our perspective the key issue is whether such fresh eyes have an impact on the quality of financial reporting. As with other studies of the link between audit quality and the quality of earnings, we use a measure of unexpected accruals as an initial proxy for earnings quality. Given that most, if not all the arguments in favour of partner rotation typically focus on the alleged increase in aggressive accounting as partner tenure increases, we also extend our analysis to examine whether the extent to which earnings reflects economic losses on a more timely basis than economic gains also varies contemporaneously with

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<sup>12</sup> Fargher et al. also use a relatively restrictive sampling procedure, whereby firm years prior to an observed partner switch during the sampling period are excluded. This results in a substantially smaller sample size than our study, despite the shorter period of time from which we identify our sample firm years.

partner rotation. These tests of incremental conservatism also serve to provide additional validation of our (and others) tests using various measures of unexpected accruals.

### 3. Data and method

#### 3.1 Measuring earnings quality

In order to examine whether audit partner rotation is associated with variation in earnings quality, we require a suitable proxy for variation in earnings quality. We initially rely on a measure of the extent to which the accrual component of annual income is greater or less than expected. Following the arguments and evidence in Kothari et al. (2005), we estimate the magnitude of performance adjusted unexpected accruals. We adjust for performance by including lagged ROA (Ashbaugh et al. 2003).<sup>13</sup> The residual from the model provides our measure of unexpected accruals. The model is estimated in cross-section for each industry code and for each year.<sup>14</sup> All variables (including the intercept) are scaled by lagged total assets. The model is estimated as:

$$TACC = \alpha_1 + \beta_1 (\Delta SALES - \Delta REC) + \beta_2 PPE + \beta_3 LAGROA + \varepsilon$$

Where:

TACC = Operating income less operating cash flows in year  $t$

$\Delta SALES$  = Change in sales in year  $t$

$\Delta REC$  = Change in accounts receivable in year  $t$

PPE = Year-end property, plant and equipment in year  $t$

LAGROA = Return on assets in year  $t-1$

We consider four specifications of our unexpected accruals measure. Our first measure is the absolute value of unexpected accruals as used in prior research (Becker

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<sup>13</sup> For sensitivity we also utilize several alternative models to estimate abnormal accruals, namely the modified Jones model, the lagged model and the growth model (Dechow et al. 2003). The results from tests using these measures are discussed in section 5.

<sup>14</sup> For the purposes of this model, the original 24 ASX industries have been regrouped into 10 industries similar to the GICS coding. Detail of this coding is provided in Appendix I.

et al. 1998; Frankel et al. 2002). This measure ignores the direction but captures the overall magnitude of managerial intervention in the accounting process. However, most, if not all of the recent high profile examples of allegedly fraudulent accounting and associated audit failures have been instances where it is alleged that income has been overstated. As a result, much of the anecdotal evidence on which proponents of mandatory partner rotation rely is not consistent with a symmetric measure of accounting manipulation such as the absolute value of unexpected accruals. We therefore test the relation between audit partner rotation and signed unexpected accruals, and then further refine this test by separately testing instances where unexpected accruals are positive and negative respectively.

We estimate the following model to examine the relation between audit partner rotation and the various measures of unexpected accruals:

$$DACC = \alpha_1 + \alpha_2 PSWITCH + \alpha_3 CFO + \alpha_4 LMVE + \alpha_5 LEV + \alpha_6 EISSUE + \alpha_7 MERGER + \alpha_8 MKTBK + \alpha_9 TOP\ 20 + \alpha_{10} LOSS + \alpha_{11} MRET + \alpha_{12} LAGTACC$$

Where:

|         |  |
|---------|--|
| DACC    | = (i) Signed unexpected accrual, (ii) absolute unexpected accrual, (iii) positive unexpected accrual or (iv) negative unexpected accrual as estimated using the performance adjusted model |
| PSWITCH | = 1 if partner switch (within audit firm) has occurred in year $t$ ; else = 0  |
| CFO     | = Cash flow from operations in year $t$ scaled by total assets in year $t-1$   |
| LMVE    | = Log of the market value of equity in year $t$  |
| LEV     | = Ratio of total liabilities to total assets in year $t$   |
| EISSUE  | = 1 if the firm has issued equity in year $t$ ; else = 0   |
| MERGER  | = 1 if the firm has been involved in a merger in year $t$ ; else = 0   |
| MKTBK   | = Market value of equity divided by book value of equity in year $t$   |
| TOP20   | = Percentage of firm owned by Top 20 shareholders in year $t$  |
| LOSS    | = 1 if operating income is less than 0 in year $t$ ; else = 0  |
| MRET    | = Fiscal year share return adjusted for the All Ordinary Index in year $t$   |
| LAGTACC | = Total accruals in year $t-1$ scaled by total assets in year $t-2$  |

Based on prior evidence, our model examining the relation between partner rotation and unexpected accruals controls for several other factors expected to influence the magnitude and sign of unexpected accruals. Previous research (Dechow 1994) suggests that accruals and cash flow are negatively correlated, so we include cash flow from operations (CFO). We also include last years total accruals (LAGTACC), given prior evidence of a reversal over time (Ashbaugh et al. 2003). Consistent with extant earnings management research (Fields et al. 2001), we also include controls for firm size (LMVE), and several incentives to manage earnings such as leverage (LEV), ownership concentration (TOP20), and certain types of corporate activity, namely equity issuance (EISSUE) and mergers (MERGER). Finally, we include controls for variations in firms' investment opportunity sets (MKTBK), market-adjusted stock returns (MRET) and a dummy variable for instances of loss reporting (LOSS). We do not include a control for audit firm size, as we estimate the model separately for client firm-years with Big 5 and non-Big 5 auditors. This reflects arguments that partner rotation is less likely to be effective within smaller audit firms.

Although our tests using unexpected accruals include separate analysis of instances where unexpected accruals are either positive or negative, such tests do not directly show whether partner rotation is associated with more or less conservative accounting. By earnings conservatism, we refer to the asymmetrically timely recognition of economic losses relative to economic gains. Relative to criticism directed at instances of overly aggressive accounting, it could be argued that conservative accounting is consistent with higher quality accounting (Francis et al. 2005). We therefore investigate the relation between partner rotation and earnings conservatism.

Ball and Shivakumar (2005) note that conservatism in financial reporting can arise in two quite different ways. First, financial reporting can reflect a consistently unfavourable view of uncertainties and hence, the minimization of net assets and income. They describe this as "unconditional" conservatism, and argue that the inclusion of an unconditional bias in financial reports of a known magnitude is unlikely to enhance the contracting role of financial reporting. On the other hand, conditional conservatism, or what Basu (1997) describes as the asymmetrically timely recognition of bad economic news, is argued to be consistent with the contracting

demand for financial reporting and hence, a contributor to the quality of financial reporting. For example, as Watts (2003) notes, conditional conservatism is likely to reduce the probability of inappropriate distributions to claimholders by facilitating the earlier triggering of debt covenants, as well as generally restricting managerial actions in the face of economic losses.

We utilize two alternative methods for identifying the extent of conditional conservatism (hereafter simply “conservatism”) and its variation around the time of partner rotation. Our first test utilizes a reverse regression of annual earnings on contemporaneous stock returns (Basu 1997).<sup>15</sup> The timeliness of earnings is inferred from the responsiveness of accounting income to changes in market value. Conservatism implies that accounting income asymmetrically reflects economic news.<sup>16</sup> Timeliness is measured by the slope coefficient and overall explanatory power in a “reverse” regression with annual earnings as the dependent variable (Beaver et al. 1980). Negative market-adjusted stock returns are used as a proxy for bad news and positive returns are used as a proxy for good news.<sup>17</sup> We include additional intercept and slope coefficients to capture the incremental effect of partner rotation, and estimate the following regression:

$$OI = \alpha_0 + \alpha_1 DRET + \alpha_2 PSWITCH + \alpha_3 DRET * PSWITCH + \beta_0 MRET + \beta_1 MRET * DRET + \beta_2 MRET * PSWITCH + \beta_3 MRET * DRET * PSWITCH$$

Where:

- OI = Operating income in year  $t$  scaled by total assets in year  $t-1$   
DRET = 1 if MRET in year  $t$  is less than 0; else = 0  
MRET = Fiscal year share return adjusted for the All Ordinary Index in year  $t$   
PSWITCH = 1 if partner switch (within audit firm) has occurred in year  $t$ ; else = 0

<sup>15</sup> Other studies that use this approach include Pope and Walker (1999), Ball et al. (2000), Ball et al. (2003) and Givoly and Hayn (2000).

<sup>16</sup> Under the efficient market hypothesis, stock prices efficiently reflect value-relevant information received about a firm. Stock prices reflect information received from sources other than current earnings. Stock prices have been shown to lead accounting earnings by up to four years (Beaver et al. 1980; Kothari and Sloan 1992).

<sup>17</sup> In addition to annual market adjusted stock returns measured over the contemporaneous fiscal year, we also re-perform our analysis using stock returns measured with a lag of 3 months, to allow for the reporting of annual results. Using this alternative return metric yields quantitatively similar results.

If audit partner rotation is associated with increased conservatism, then we would expect the coefficient for  $\beta_3$  to be positive and statistically significant, consistent with the incrementally higher responsiveness of earnings to bad news (i.e., a positive value for  $\beta_1$ ) being further increased where partner rotation has occurred.

Although tests of conservatism using the reverse regression approach of Basu (1997) are used in a variety of settings, this method is not without shortcomings. For example, Gigler and Hemmer (2001) argue that firms with more conservative accounting are less likely to make timely voluntary disclosures, so that contemporaneous stock returns are expected to provide a more timely reflection of economic news for firms with less conservative accounting. Dietrich et al. (2002) argue that a clear interpretation of equation (2) is only possible if returns cause earnings, and not the reverse. An alternative approach (Ball and Shivakumar 2005) reflects the likelihood that timely loss recognition occurs through accruals, rather than cash flows. Although a primary function of much of the accrual process (especially working capital accruals) is to produce a periodic performance measure that is less noisy than cash flow from operations (Dechow 1994), a second role of accruals is to provide timely recognition of economic gains and losses. However, the contracting role of accounting is much more likely to demand the timely recognition of economic losses, and so an asymmetry is expected. In contrast to the smoothing role of accruals, timely recognition of gains and losses creates a positive correlation between accruals and cash flows. An asymmetrically timely recognition of losses means this positive correlation is expected to be greater for economic losses (proxied by cash flows) than for economic gains.

Following Ball and Shivakumar (2005), we estimate the following model of the contemporaneous relation between accruals and operating cash flows. Apart from the predicted interaction effect between the sign of operating cash flow and the extent of accruals, we also include additional interaction terms to capture the effect of contemporaneous audit partner rotation, and estimate the following regression:

$$TACC = \alpha_0 + \alpha_1 DCFO + \alpha_2 PSWITCH + \alpha_3 DCFO * PSWITCH + \beta_0 CFO + \beta_1 CFO * DCFO + \beta_2 CFO * PSWITCH + \beta_3 CFO * DCFO * PSWITCH$$

Where:

TACC = Operating income less operating cash flow in year  $t$ , scaled by total assets in year  $t-1$

CFO = Cash flow from operations in year  $t$  scaled by total assets in year  $t-1$

DCFO = 1 if CFO in year  $t$  is less than 0; else = 0

PSWITCH = 1 if partner switch (within audit firm) has occurred in the current year; else = 0

If partner rotation is associated with a contemporaneous increase in conservatism, we expect the positive correlation between operating cash flow and accruals attributable to conservatism will be enhanced at the time of partner rotation. We therefore expect the coefficient for  $\beta_3$  to be positive.

### 3.2 Data

Our sample consists of 3,621 Australian stock exchange (ASX) listed firm-years from 1998-2003. We begin with a sample of 7,208 firm-years from 1997-2003 with audit firm and partner data. We deleted observations that changed their end of financial year date (60), did not have prior audit firm or partner data (524), were missing required accounting variables (1,451) or return data (50). All financial firms (ASX code 16, 17, 19 or 20) are deleted (1,248) and to control for extreme observations we remove observations in the top and bottom 1% of abnormal accruals, operating income scaled by market capitalization, cash flow from operations scaled by market capitalization or market adjusted fiscal year returns.<sup>18</sup>

As shown in Table 1, approximately 16% of our sample has a rotated audit partner. Big 5 clients are more likely to rotate audit partner (19%) than non-Big 5 clients (10%). Since the Australian professional standard on auditor independence was revised in 2001 to mandate partner rotation after 7 years, it is not surprising that there is evidence of audit partner rotation having increased in the last three years of our sample. For our sample firm years, there is a significantly greater probability of audit

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<sup>18</sup> None of our primary test results are sensitive to these exclusions.

partner rotation in the period following F1 amendments (2001-2003) than for the earlier period (1998-2000), although this is solely attributable to an increased frequency of rotation among Big 5 clients.<sup>19</sup> This is consistent with our arguments that the regulations shifted bargaining power about partner rotations away from the client to their audit firms.

Table 2 summarises the descriptive statistics for our full sample, split into those firm years where partner rotation occurs and all other firm years. Audit firm and partner data are obtained from sample firms' annual reports. Merger and acquisition and equity issue data came from the SDC Platinum database, share price data from the SIRCA CRD share price database, and all other accounting variables from the ASPECT database. Leverage is the only characteristic that is statistically different between the groups for both parametric and non-parametric tests. Firm-years where audit partner rotation has occurred have lower leverage than non-rotators. Although a comparison of means suggests that larger firms are more likely to rotate auditors, it is apparent that this reflects a greater degree of skewness in the distribution.

## 4. Results

### 4.1 Magnitude of unexpected accruals

Table 3 reports the findings from our unexpected accrual tests.<sup>20</sup> We report separate estimates of the model for Big 5 clients (Panel A) and non-Big 5 clients (Panel B). The first two columns of each panel report results using the signed and absolute value of unexpected accruals respectively. For both Big 5 and non-Big 5 clients, there is no evidence of any association between the absolute value of unexpected accruals and audit partner rotation (PSWITCH). Turning to signed unexpected accruals, although there is a consistent negative association with audit partner rotation, this is significant only for non-Big 5 clients. However, an important issue is whether any evidence of an association between unexpected accruals and partner rotation is applicable across the range of positive and negative unexpected accruals. As we have noted, most criticism

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<sup>19</sup> The chi-square value comparing pre and post-F1 rotation frequency is 6.2, which is statistically significant at the 0.01 level. For Big 5 and non-Big 5 clients, the chi-square values are 16.84 and 1.88 respectively.

<sup>20</sup> All reported significance levels in Table 3 and subsequent tables are two-tailed.

of lengthy auditor tenure is directed at the alleged propensity of auditors to allow relatively aggressive accounting, resulting in an overstatement of the firm's current economic condition. We therefore turn to a separate examination of the association between partner rotation and unexpected accruals for those instances where unexpected accruals are positive and negative respectively.

In the latter two columns of Panel A and B of Table 3 we report tests restricted to observations that have positive and negative unexpected accruals.<sup>21</sup> These tests suggest a substantial difference between Big 5 and non-Big 5 clients as to how partner rotation is associated with differences in unexpected accruals. For Big 5 clients, we identify a statistically significant reduction in the extent of positive unexpected accruals, but no discernable effect among instances of negative unexpected accruals. For clients of the Big 5, it would appear that the pooled tests masks a more substantial effect which is concentrated in those instances where accounting can be viewed as relatively aggressive (i.e., unexpected accruals are positive). This is consistent with partner rotation within Big 5 firms acting to constrain aggressive accounting. On the other hand, the results in the last two columns of panel B indicate that the negative relation between unexpected accruals and partner rotation identified for non-Big 5 clients is concentrated among instances where unexpected accruals are negative. Given that these more likely reflect instances where accounting is already relatively conservative, this is perhaps less consistent with partner rotation among the non-Big 5 playing a constraining role. The result for non-Big 5 clients may also reflect the positive correlation between unexpected accruals and performance documented elsewhere (Coulton et al. 2005).

The majority of the coefficients reported for the other variables included in our unexpected accruals tests are consistent with prior research (Fields et al. 2001). Large firms (LMVE) are more likely to have significantly larger absolute unexpected accruals, and also more likely to have more negative signed unexpected accruals. Firms that are relatively more highly levered (LEV) are likely to have significantly lower signed unexpected accruals, as are firms involved in takeover activity

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<sup>21</sup> Partitioning our tests by the sign of the dependent variable likely increases the strength of our tests, due to the increased explanatory power of the independent variables and increased multi-co linearity (which leads to a decrease in the significance of the PSWITCH variable). We thank Philip Brown for pointing this out.

(MERGER). Loss making firms (LOSS) have more negative unexpected accruals, while market adjusted returns (MRET) are positively associated with signed and absolute unexpected accruals. Many of these results also likely reflect some degree of correlation between reported performance and unexpected accruals, consistent with the well documented failure of unexpected accruals measures to fully remove performance effects.<sup>22</sup>

As instances where accruals are unexpectedly high likely include the most egregious examples of aggressive reporting (at least relative to the underlying economic position), it appears that for Big 5 clients, partner rotation is most effective at reducing the extent of aggressive reporting. As the cases of apparent accounting abuses are largely, if not exclusively drawn from this subset, the results could be seen as providing some support for the argument that partner rotation serves to reduce such instances, at least among Big 5 clients. Of course, this interpretation assumes that a contemporaneous reduction in the extent of positive unexpected accruals is a desirable attribute of accounting (i.e., it reflects higher quality accounting). One way of viewing this claim is to simply argue that increased conservatism is desirable, and that such an effect is most likely to arise as a result of audit partner rotation. We turn now to an explicit test of this hypothesis.

#### *4.2 Incremental conservatism*

Given that one interpretation of the results reported in Table 3 is that partner rotation is associated with more conservative accounting, we perform a direct test of whether conservatism is associated with partner rotation. Tables 4 and 5 report results of tests directed at identifying the extent to which earnings incrementally reflects economic losses relative to economic gains.

Panel A of Table 4 reports the initial results of the Basu (1997) timeliness regression. We show the results for all firm-years, and then separately for firm years coinciding with partner rotations and all other firm-years. The initial result is consistent with

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<sup>22</sup> Using a large cross-section of Australian firm-years, Coulton et al. (2005) report evidence of a positive correlation between reported performance and unexpected accruals for each of the methods we use to estimate unexpected accruals.

extant evidence of conservatism in Australian earnings (Ruddock et al. 2006). The coefficient on  $\beta_0$  is negative and significant while the coefficient on  $\beta_1$  is positive and significant. The magnitude of the bad news coefficient ( $\beta_1$ ) is much larger than the good news coefficient ( $\beta_0$ ) suggesting earnings incorporate contemporaneous economic losses on a more timely basis than economic gains. Both sub-samples (i.e., partner rotation and all other firm-years) display evidence of conservative earnings. However, the magnitude of incremental conservatism is approximately twice as great for instances of partner rotation as it is in the estimation confined to all other sample firm-years.

In Panel B of Table 4 we extend the timeliness model to include a partner switch intercept and additional interaction terms. This allows us to determine if partner rotation is specifically associated with incrementally differential timeliness of earnings. The coefficients of interest are  $\beta_2$  and  $\beta_3$ . Although the  $\beta_2$  coefficient is negative but insignificant, the coefficient on  $\beta_3$  is positive and statistically significant. This suggests that earnings are more conservative in the year of partner rotation. Because our test does not also control for audit firm size, Panels C and D reports the regression results for clients of Big 5 and non-Big 5 auditors respectively. Only clients of Big 5 auditors that rotate partners display more conservative earnings than non-rotating firms. Evidence that partner rotation is associated with increased conservatism is restricted to Big 5 clients. This lends some support to the argument that partner rotation should be applied differentially to clients of large and small audit firms.

Table 5 reports the results of our second set of conservatism tests, where accruals are regressed on contemporaneous operating cash flow as suggested by Ball and Shivakumar (2005). In Panel A we report tests of a simplified model that excludes the incremental effect of partner rotation. When we estimate this model for all observations, there is no evidence of conservatism, as the bad news coefficient ( $\beta_1$ ) is negative and statistically significant. However, when we divide our observations into firm years where partner rotation occurs and all other firm years, the results differ markedly. For firm years where no partner switch occurs, we continue to observe evidence inconsistent with conservatism (i.e., the bad news coefficient ( $\beta_1$ ) is negative

and statistically significant). In contrast, when estimation is confined to firm years where partner rotation occurs, we find evidence consistent with accruals and cash flows being positively correlated when there is relatively poor economic news (i.e., the bad news coefficient ( $\beta_1$ ) is positive and statistically significant).

In Panel B of Table 5 we report tests that extend these results to explicitly include the incremental effect on conservatism of partner rotation. For both the pooled sample as well as separate estimations restricted to either Big 5 or non-Big 5 auditors, we find evidence consistent with increased conservatism contemporaneous with partner rotation (i.e., the bad news coefficient specific to partner rotation years ( $\beta_3$ ) is positive and statistically significant). With the exception of the results for non-Big 5 auditors also suggesting incremental conservatism at the time of partner rotation, the Table 5 results are consistent with those reported in Table 4. We therefore view the results as supporting the conclusion that partner rotation is associated with an incremental increase in the extent with which economic losses are asymmetrically reflected in income relative to economic gains.

## **5. Additional analysis**

In order to ensure the robustness of our results, we perform several additional tests. These address the possible effects of our method of measuring unexpected accruals (and more broadly, earnings quality), the potential impact of professional requirements for audit partner rotation (introduced in 2001), longer term effects of partner tenure and the separation of partner and firm rotation effects.

### *5.1 Unexpected accruals and earnings quality*

In our primary analysis summarized in section 3, we rely on unexpected accruals measured using a performance adjustment. There are at least three further popular methods for estimating unexpected accruals, namely the modified Jones model, the lagged model and the sales growth model as outlined in Dechow et al. (2003). Although Coulton et al. (2005) report evidence on the application of these models to Australian data, they do not compare these models with the performance adjusted

approach which we use. Hence, we re-estimate unexpected accruals using each of these approaches, and re-perform the analysis reported in Table 3. However, there are no substantive differences in the conclusions which follow from these tests. We also repeat our performance adjusted accrual tests excluding industries with less than 10 observations in each industry-year (Coulton et al. 2005), and our results hold.

We also recognize that unexpected accruals are not the only method for estimating the likelihood of deliberate earnings management. Recent evidence (Burgstahler and Dichev 1997) has demonstrated that earnings distributions are skewed around alleged benchmarks such as zero earnings and last year's earnings (i.e., zero earnings change).<sup>23</sup> However, Coulton et al. (2005) show that among Australian firms, benchmark beaters do not appear to have high unexpected accruals relative to firms that "just miss" the relevant benchmark. While this could indicate that benchmark beating is a poor proxy for earnings management, a similar conclusion could be reached for the measure of unexpected accruals used in Table 3. Hence, we also consider whether the probability of earnings just beating two key benchmarks (i.e., zero earnings and last year's earnings) is significantly reduced around the point at which partner rotation occurs. We classify firms as benchmark beaters if the increase in earnings or level of earnings is up to two percent of total assets. We compare benchmark beaters against firms that just miss this target, as well as against all firms who miss this target. Our logit model has similar control variables to that used for unexpected accruals in Table 3.<sup>24</sup> While we find no evidence of a significantly reduced probability of avoiding a loss where partner rotation first occurs, we do find that the probability of just beating last year's earnings is significantly lower immediately after partner rotation. This result therefore supports our earlier evidence that partner rotation serves to constrain relatively aggressive accounting.

## 5.2 *Pre-post F1 periods*

Since partner rotation has only been an Australian professional requirement since 2001, we have argued that it is possible that rotation occurring prior to that date is

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<sup>23</sup> Australian evidence of benchmark beating is provided by Holland and Ramsay (2003) and Coulton et al. (2005).

<sup>24</sup> Full details of the tests and results are available from the authors.

more likely where the client firm does not expect any significant disruption to its accounting policies and judgements (i.e., partner rotations are more likely to be restricted to those instances where the client firm finds this acceptable). This could also contribute to the failure of Carey and Simnett (2005) to find effects associated with audit partner tenure, as their sample period pre-dates the 2001 amendments to F1.

In order to better understand the possible effects of the introduction of mandatory professional requirements on the relative bargaining position of audit firms and their clients, we repeat all of our analysis in Tables 3, 4 and 5 on a time partitioned sample. The first sample consists of firm-year observations in 1998-2000, and the second sample consists of firm-year observations that fall in 2001-2003. This partitioning seeks to identify if the effect (if any is detected) varies consistent with the amendment of F1. Our bargaining power argument suggests that prior to the changes to F1, clients were more able to resist audit partner changes that assist the audit firm to restrict aggressive accounting. Table 6 reports results of tests using various measures of unexpected accruals, while Tables 7 and 8 reports tests of earnings conservatism.

The results in Tables 6, 7 and 8 are generally consistent. In Table 6, we restrict our analysis of unexpected accruals to observations for Big 5 clients, as the evidence in Table 3 indicates that any effect of partner rotation for non-Big 5 clients is concentrated among observations where unexpected accruals are negative.<sup>25</sup> From Table 6, it is evident that the constraining effect of partner rotation on positive unexpected accruals is evident only in the period following the introduction of professional requirements for partner rotation. For the sub-period prior to this time, there is no evidence of a statistically significant association between any of the unexpected accrual measures and the incidence of partner rotation. On the other hand, there is evidence that signed unexpected accruals are significantly lower at the time of partner rotation, and this effect is concentrated in those instances where unexpected accruals are positive. This is consistent with the argument that the constraining effect of partner rotation is only likely to arise where such rotations cannot be easily resisted by clients.

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<sup>25</sup> Unreported tests restricted to non-Big 5 clients suggest that evidence of lower negative unexpected accruals at the time of partner rotation is restricted to the earlier sub-period.

In Table 7, significant incremental conservatism at the time of partner rotation (as measured using the Basu (1997) method) only occurs in the latter part of the sample period. Likewise, the concentration of this result among clients of Big 5 auditors is also confined to this latter period. Using the accruals based method of Ball and Shivakumar (2005), Table 8 shows that there is some evidence of incremental conservatism in both sub periods, although for Big 5 clients this is only apparent in the latter time period. Hence, it appears that evidence of partner rotation effects is not consistent across the entire sample period examined. For Big 5 clients, the association between partner rotation and earnings quality is primarily apparent only in the latter time period, coinciding with the introduction of professional requirements for mandatory partner rotation. This suggests that although Big 5 audit firms were more effective at using audit partner rotation to constrain clients' preferences for aggressive accounting, this effect is only evident in an environment where professional requirements for mandatory rotation have made it difficult for clients to resist this process.

### *5.3 Tenure length*

Since we find some evidence that partner rotation improves earnings quality, we are interested in the persistence of the effects. For these tests, we restrict our sample to firms that have maintained the same audit firm for at least six years. We repeat our tests on this restricted sample. We then incrementally increase the period from when partner rotation last occurred, so that the period defined as partner rotation moves from the year of the rotation to the year of rotation or the year following, and so on. We do not detect any significant relation between partner rotation and signed unexpected accruals beyond the initial year of rotation.<sup>26</sup> Although some reduction in income increasing unexpected accruals is detected up to six years post partner rotation, the magnitude of this effect declines monotonically. When tests of conservatism are conducted using lengthened post-rotation intervals, we find some evidence of continued conservatism, but again this is generally (though not monotonically) reducing as the post-rotation interval is lengthened.

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<sup>26</sup> Full details of these tests are available from the authors

#### *5.4 Partner versus firm rotation*

Our focus in this paper is on the contemporaneous effects of audit partner rotation, as distinct from earlier evidence examining the effects of audit firm rotation. In our primary analysis, we simply compare attributes of audited accounting data at the time of partner rotation with all other firm years. Partner rotation is identified as a switch of audit partner without a corresponding switch of audit firm. Hence, the possible effect of audit firm switches being left in our “non-switch” sample of firm years warrants some investigation. To ensure our results are not affected by firm switches, we repeat our tests on a sample that excludes all firm-years that have changed audit firm in the current year. This is a means of examining the possible effect of partner rotation without an offsetting effect of firm switches. However, all of our results reported in Tables 3, 4 and 5 are robust to this change.

### **6. Conclusion**

Although the mandatory rotation of audit partners is now compulsory in the US, Australia and many other jurisdictions, this policy is based on remarkably little evidence. While there are several studies that examine the possible effects of audit firm rotation (a policy rejected by most regulators and strongly resisted by the accounting profession), these results are mixed and do not necessarily inform debate about the desirability of partner rotation. Our paper takes advantage of long-standing Australian requirements that the signing partner must sign by name, rather than simply by firm. We are therefore able to isolate instances of partner change absent any audit firm change. These changes are likely to be largely a result of some form of partner rotation.

Consistent with professional requirements introduced from 2001, we find partner rotation by Big 5 auditors has increased substantially over the 1998-2003 period. We initially find that although the magnitude of unexpected accruals (our proxy for earnings quality) is not significantly different in rotation years, in tests using signed unexpected accruals there is evidence of lower signed unexpected accruals at the time of rotation. Although this result is stronger for non-Big 5 clients, we find that among

these firms the result is driven by lower negative unexpected accruals, which could be consistent with partner rotation coinciding with poor company performance. On the other hand, tests confined to Big 5 clients show that positive (but not negative) unexpected accruals are significantly lower at the time of partner rotation, a result we interpret as being suggestive of partner rotation in Big 5 audit firms being associated with the constraining of otherwise aggressive accounting (i.e., increased conservatism). We provide further evidence by directly testing for incrementally more asymmetric recognition of “economic losses” using two distinct methods from Basu (1997) and Ball and Shivakumar (2005), and find that when partner rotation occurs, contemporaneous earnings are incrementally more conservative.

Notably, in the majority of our tests only clients of Big 5 audit firms that rotate partner display more conservative contemporaneous earnings than non-rotating firms. Evidence that partner rotation is associated with increased conservatism is therefore largely restricted to Big 5 auditors. This lends some support to the argument that partner rotation should be applied differentially to clients of large and small audit firms. While these findings need to be tempered against the limitations of drawing inferences about aggressive accounting using accrual proxies and the models used to test for conservatism, we have carried out supplementary analysis that supports our primary findings. In particular, the triangulation of the unexpected accrual based results and the conservatism tests strengthen our findings.

For Big 5 clients, all our results are concentrated in the latter half of our sample period (i.e., 2001-2004), when partner rotation was a professional requirement. We therefore see our results as lending some support to the argument that the effect of partner rotation could possibly be blunted if such rotations can easily be resisted by client firms. The introduction of a mandatory professional requirement in 2001 enables us to observe whether the effect of partner rotation is dependent on such regulatory initiatives, and it appears as though this could be the case. Our results also potentially explain why studies of auditor tenure (whether partner or firm tenure) fail to observe incrementally conservative accounting where the length of tenure is unregulated. Of course, we recognize that apart from the amendment of the Professional Standard F1, there was very active legislative and regulatory attention given to the issue of partner rotation, and to the accounting profession as a whole. It is not possible to

unambiguously attribute the concentration of observable effects in the latter sub-period solely to the amendments to F1. Indeed, the issue of how the relation between audit quality and the quality of audited financial data is influenced by the regulatory and political environment is worthy of further investigation.

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**Table 1**  
**Partner rotation (within audit firm) frequency**

| <b>Panel A: Partner rotation (within firm) by year</b> |                         |                               |                         |
|--|-------------------------|-------------------------------|-------------------------|
|  | Number<br>of<br>Changes | Number<br>of obs.<br>per year | Percentage<br>of sample |
| 1998   | 29                      | 136                           | 21.3%                   |
| 1999   | 71                      | 568                           | 12.5%                   |
| 2000   | 75                      | 551                           | 13.6%                   |
| 2001   | 117                     | 724                           | 16.2%                   |
| 2002   | 129                     | 808                           | 16.0%                   |
| 2003   | 159                     | 834                           | 19.1%                   |
| Partner Change   | 580                     |                               | 16.0%                   |
| Non-Partner Change                                     | 3,041                   |                               | 84.0%                   |
| Total Obs  | 3,621                   | 3,621                         | 100.0%                  |

  

| <b>Panel B: Partner Rotation (within firm) partitioned by auditor type</b> |                   |                   |                         |                   |                   |                         |
|--|-------------------|-------------------|-------------------------|-------------------|-------------------|-------------------------|
|  | Non-Big 5 Auditor |                   |                         | Big 5 Auditor     |                   |                         |
|  | Number<br>Changes | Number<br>of Obs. | Percent<br>of<br>Sample | Number<br>Changes | Number<br>of Obs. | Percent<br>of<br>Sample |
| 1998   | 2                 | 11                | 18.2%                   | 27                | 125               | 21.6%                   |
| 1999   | 20                | 196               | 10.2%                   | 51                | 372               | 13.7%                   |
| 2000   | 23                | 180               | 12.8%                   | 52                | 371               | 14.0%                   |
| 2001   | 24                | 259               | 9.3%                    | 93                | 465               | 20.0%                   |
| 2002   | 19                | 292               | 6.5%                    | 110               | 516               | 21.3%                   |
| 2003   | 38                | 336               | 11.3%                   | 121               | 498               | 24.3%                   |
| Partner Change   | 126               |                   | 9.9%                    | 454               |                   | 19.3%                   |
| Non-Partner Change   | 1,148             |                   | 90.1%                   | 1,893             |                   | 80.7%                   |
| Total Observations   | 1,274             | 1,274             | 100.0%                  | 2,347             | 2,347             | 100.0%                  |

Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO\_MC, OI\_MC, MRET or P\_DACC have been deleted

CFO\_MC = Cash flow from operations in year  $t$  scaled by market capitalization in year  $t-1$   
OI\_MC = Operating income in year  $t$  scaled by market capitalization in year  $t-1$   
MRET = Fiscal year share return adjusted for the All Ordinary Index in year  $t$   
P\_DACC = Abnormal accruals estimated using the performance model in year  $t$

**Table 2**  
**Descriptive statistics partitioned by partner switch (within firm) in current year**

| Variable  | Partner Switch (within firm) in current year |               |              |                 | No Partner Switch (within firm) in current year |               |              |                 | Sig Tests |         |
|-----------|--|---------------|--------------|-----------------|---|---------------|--------------|-----------------|-----------|---------|
|           | n  | Mean          | Median       | Std Dev         | n   | Mean          | Median       | Std Dev         | T Test    | Z Test  |
| TOT_ASS   | 580  | \$900,071,647 | \$27,140,500 | \$4,891,092,915 | 3,041   | \$545,595,258 | \$28,446,952 | \$3,253,725,368 | -2.19**   | -0.27   |
| MCAP      | 580  | \$654,857,916 | \$21,104,464 | \$3,178,557,342 | 3,041   | \$442,370,678 | \$21,883,305 | \$2,265,473,266 | -1.93**   | -0.17   |
| MRET      | 580  | 0.0184        | -0.1101      | 0.7089          | 3,041   | 0.0520        | -0.0737      | 0.7403          | 1.01      | -1.35   |
| OI        | 580  | \$15,335,218  | -\$455,972   | \$562,641,344   | 3,041   | \$20,482,026  | -\$314,000   | \$171,654,115   | 0.41      | -0.59   |
| OI_MC     | 580  | -0.1871       | -0.0422      | 0.4715          | 3,041   | -0.1591       | -0.0257      | 0.4675          | 1.32      | -1.80*  |
| OI_TA     | 580  | -0.1650       | -0.0382      | 0.5184          | 3,041   | -0.1345       | -0.0222      | 0.3893          | 1.63      | -1.46   |
| CFO       | 580  | \$79,437,994  | \$52,375     | \$509,208,420   | 3,041   | \$46,057,163  | \$102,468    | \$314,704,471   | -2.09**   | 0.10    |
| CFO_TA    | 580  | -0.0493       | 0.0060       | 0.3410          | 3,041   | -0.0443       | 0.0046       | 0.3892          | 0.29      | -0.80   |
| ROA       | 580  | -0.1650       | -0.0382      | 0.5184          | 3,041   | -0.1345       | -0.0222      | 0.3893          | 1.63*     | -1.46   |
| LEV       | 580  | 0.3718        | 0.3826       | 0.2746          | 3,041   | 0.4394        | 0.4129       | 0.9049          | 1.78*     | -2.24** |
| EISSUE    | 580  | 0.3293        | 0.0000       | 0.4704          | 3,041   | 0.3311        | 0.0000       | 0.4707          | 0.09      | -0.09   |
| MERGER    | 580  | 0.2121        | 0.0000       | 0.4091          | 3,041   | 0.1914        | 0.0000       | 0.3935          | -1.15     | 1.15    |
| TOP20     | 580  | 62.4826       | 64.2650      | 20.4188         | 3,041   | 63.6508       | 65.0400      | 19.4458         | 1.32      | -1.10   |
| MKTBK     | 580  | 1.9591        | 1.2886       | 6.9625          | 3,041   | 1.9099        | 1.3205       | 17.5978         | -0.07     | -0.44   |
| TOTACC    | 580  | -\$64,102,776 | -\$1,301,321 | \$651,666,095   | 3,041   | -\$25,575,138 | -\$1,363,148 | \$178,008,646   | 2.77**    | -0.52   |
| TOTACC_TA | 580  | -0.1157       | -0.0590      | 0.2653          | 3,041   | -0.0903       | -0.0567      | 0.3414          | 1.70*     | -1.17   |
| P_DACC    | 580  | -0.0450       | -0.0089      | 0.2278          | 3,041   | -0.0248       | -0.0071      | 0.2223          | 2.00**    | -1.62   |
| ABSP_DACC | 580  | 0.1471        | 0.0856       | 0.1739          | 3,041   | 0.1498        | 0.0893       | 0.1813          | 0.33      | -0.81   |
| AUDFEE    | 580  | \$294,066     | \$50,000     | \$1,006,938     | 3,041   | \$223,825     | \$56,000     | \$733,461       | -1.98**   | 0.48    |
| LOGAUDFEE | 580  | 11.1520       | 10.8198      | 1.4422          | 3,041   | 11.0677       | 10.9331      | 1.4056          | -1.32     | 0.48    |
| NASFEE    | 580  | \$346,631     | \$20,879     | \$1,464,961     | 3,041   | \$263,287     | \$21,801     | \$1,448,301     | -1.27     | -0.13   |
| LOGNASFEE | 580  | 4.1251        | 9.9465       | 13.5011         | 3,041   | 4.7693        | 9.9897       | 12.8342         | 1.10      | -0.13   |
| TOTFEE    | 580  | \$640,697     | \$81,093     | \$2,383,252     | 3,041   | \$487,112     | \$84,916     | \$2,081,040     | -1.59     | 0.47    |
| LOGTOTFEE | 580  | 11.6032       | 11.3034      | 1.6510          | 3,041   | 11.5133       | 11.3494      | 1.5815          | -1.25     | 0.47    |
| RNAS      | 580  | 30.09%        | 26.99%       | 25.13%          | 3,041   | 30.43%        | 28.00%       | 23.89%          | 0.32      | -0.66   |

Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO\_MC, OI\_MC, MRET or P\_DACC have been deleted

TOT\_ASS = Total assets in year *t*  
MCAP = Market capitalization in year *t*  
MRET = Fiscal year share return adjusted for the All Ordinary Index in year *t*

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|           |   |
|-----------|---|
| OI        | = Operating income in year $t$  |
| OI_MC     | = Operating income in year $t$ scaled by market capitalization in year $t-1$              |
| OI_TA     | = Operating income in year $t$ scaled by total assets in year $t-1$                       |
| CFO       | = Cash flow from operations in year $t$   |
| CFO_TA    | = Cash flow from operations in year $t$ scaled by total assets in year $t-1$              |
| ROA       | = Operating income in year $t$ scaled by average total assets in year $t$                 |
| LEV       | = Ratio of total liabilities to total assets in year $t$                                  |
| EISSUE    | = 1 if the firm has issued equity in year $t$ , else = 0                                  |
| MERGER    | = 1 if the firm has been involved in a merger in year $t$ , else = 0                      |
| TOP20     | = Percentage of firm owned by Top 20 shareholders in year $t$                             |
| MKTBK     | = market value of equity divided by book value of equity in year $t$                      |
| TOTACC    | = Total accruals in year $t$  |
| TOTACC_TA | = Total accruals in year $t$ scaled by total assets in year $t-1$                         |
| P_DACC    | = Raw unexpected accruals estimated using the performance adjusted model in year $t$      |
| ABSP_DACC | = Absolute unexpected accruals estimated using the performance adjusted model in year $t$ |
| AUDFEE    | = Audit fee paid to auditor in year $t$   |
| LOGAUDFEE | = Natural log of audit fee paid to auditor in year $t$                                    |
| NASFEE    | = Non-audit service fee paid to auditor in year $t$                                       |
| LOGNASFEE | = Natural log of non-audit service fee paid to auditor in year $t$                        |
| TOTFEE    | = Sum of audit and non-audit service fee paid to auditor in year $t$                      |
| LOGTOTFEE | = Natural log of the sum of audit and non-audit service fee paid to auditor in year $t$   |
| RNAS      | = Ratio of non-audit service fee to total fee paid to auditor in year $t$                 |

\*\*\* Significant at 1% level  
\*\* Significant at 5% level  
\* Significant at 10% level

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**Table 3**  
**Performance adjusted unexpected accruals, partitioned by auditor type**

|             | Panel A: Big 5 clients |                   |                   |                   | Panel B: non-Big B5 clients |                   |                   |                   |
|-------------|------------------------|-------------------|-------------------|-------------------|-----------------------------|-------------------|-------------------|-------------------|
|             | Raw                    | Absolute          | Increase          | Decrease          | Raw                         | Absolute          | Increase          | Decrease          |
| Intercept   | -0.0130<br>(0.79)      | 0.3635<br>(0.00)  | 0.2445<br>(0.00)  | -0.4110<br>(0.00) | 0.1346<br>(0.12)            | 0.4257<br>(0.00)  | 0.4492<br>(0.00)  | -0.3992<br>(0.00) |
| PSWITCH     | -0.0128<br>(0.24)      | -0.0081<br>(0.34) | -0.0174<br>(0.10) | 0.0001<br>(0.99)  | -0.0361<br>(0.08)           | 0.0138<br>(0.36)  | -0.0132<br>(0.46) | -0.0397<br>(0.07) |
| CFO         | -0.1970<br>(0.00)      | -0.0426<br>(0.00) | -0.2179<br>(0.00) | -0.0124<br>(0.45) | -0.0697<br>(0.00)           | -0.0247<br>(0.01) | -0.1678<br>(0.00) | -0.0063<br>(0.60) |
| LMVE        | 0.0028<br>(0.26)       | -0.0126<br>(0.00) | -0.0060<br>(0.01) | 0.0161<br>(0.00)  | -0.0031<br>(0.52)           | -0.0178<br>(0.00) | -0.0170<br>(0.00) | 0.0189<br>(0.00)  |
| LEV         | -0.0206<br>(0.00)      | 0.0015<br>(0.68)  | 0.0091<br>(0.27)  | -0.0024<br>(0.56) | -0.0727<br>(0.00)           | 0.0557<br>(0.00)  | -0.0148<br>(0.35) | -0.0629<br>(0.00) |
| EISSUE      | 0.0017<br>(0.87)       | 0.0187<br>(0.02)  | 0.0131<br>(0.18)  | -0.0224<br>(0.04) | 0.0167<br>(0.22)            | 0.0303<br>(0.00)  | 0.0270<br>(0.02)  | -0.0272<br>(0.07) |
| MERGER      | -0.0257<br>(0.02)      | 0.0262<br>(0.00)  | 0.0070<br>(0.52)  | -0.0342<br>(0.01) | -0.0174<br>(0.32)           | 0.0219<br>(0.09)  | 0.0094<br>(0.52)  | -0.0395<br>(0.05) |
| MKTBK       | -0.0001<br>(0.82)      | 0.0005<br>(0.31)  | 0.0005<br>(0.53)  | -0.0003<br>(0.58) | 0.0008<br>(0.00)            | -0.0007<br>(0.00) | -0.0002<br>(0.78) | 0.0007<br>(0.00)  |
| TOP20       | 0.0003<br>(0.15)       | -0.0004<br>(0.02) | -0.0002<br>(0.50) | 0.0005<br>(0.06)  | 0.0000<br>(0.99)            | -0.0007<br>(0.01) | -0.0004<br>(0.15) | 0.0005<br>(0.22)  |
| LOSS        | -0.1465<br>(0.00)      | 0.0433<br>(0.00)  | -0.0512<br>(0.00) | -0.0870<br>(0.00) | -0.1411<br>(0.00)           | 0.0308<br>(0.01)  | -0.0730<br>(0.00) | -0.0872<br>(0.00) |
| MRET        | 0.0157<br>(0.01)       | 0.0110<br>(0.03)  | 0.0149<br>(0.02)  | -0.0046<br>(0.53) | 0.0185<br>(0.02)            | 0.0108<br>(0.06)  | 0.0163<br>(0.01)  | -0.0056<br>(0.52) |
| LAGTACC     | 0.0043<br>(0.53)       | 0.0000<br>(0.99)  | -0.0090<br>(0.37) | -0.0014<br>(0.82) | 0.0081<br>(0.30)            | 0.0047<br>(0.41)  | 0.0035<br>(0.47)  | 0.0186<br>(0.43)  |
| No. Obs     | 2,347                  | 2,347             | 1,082             | 1,265             | 1,274                       | 1,274             | 612               | 662               |
| R-Square    | 11.08%                 | 9.12%             | 14.35%            | 13.31%            | 10.94%                      | 10.22%            | 19.10%            | 14.74%            |
| F-Statistic | 27.56***               | 22.40***          | 17.47***          | 18.64***          | 15.21***                    | 14.18***          | 14.11***          | 11.39***          |

Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO\_MC, OI\_MC, MRET or P\_DACC have been deleted

Accruals = Unexpected accruals estimated using the performance model in year  $t$   
PSWITCH = 1 if partner switch (within firm) has occurred in year  $t$ ; else = 0  
CFO = Cash flow from operations in year  $t$  scaled by total assets in year  $t-1$   
TOT\_ASS = Total assets in year  $t$   
LMVE = Log of the market value of equity in year  $t$   
LEV = Ratio of total liabilities to total assets in year  $t$   
EISSUE = 1 if the firm has issued equity in year  $t$ ; else = 0  
MERGER = 1 if the firm has been involved in a merger in year  $t$ ; else = 0  
MKTBK = Market value of equity divided by book value of equity in year  $t$   
TOP20 = Percentage of firm owned by Top 20 shareholders in year  $t$   
LOSS = 1 if operating income is less than 0 in year  $t$ ; else = 0  
MRET = Fiscal year share return adjusted for the All Ordinary Index in year  $t$   
LAGTACC = Total accruals in year  $t-1$  scaled by total assets in year  $t-2$   
\*\*\* Significant at 1% level  
p-values in brackets

**Table 4**  
**Conservatism results (market based tests) pooled sample**

| <b>Panel A: Timeliness Tests (All firms)</b>  |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|---|---|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|------------------|---------------------|----------|
| <b>Model 1: <math>OI = \alpha_0 + \alpha_1 DRET + \beta_0 MRET + \beta_1 MRET * DRET</math></b>   |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|   | n   | $\alpha_0$        | $\alpha_1$        | $\beta_0$         | $\beta_1$         | Adj. R <sup>2</sup> | F Stat            |                  |                     |          |
| Predicted sign  |   | (?)               | (?)               | (-)               | (+)               |                     |                   |                  |                     |          |
| All firms   | 3,621   | -0.0460<br>(0.00) | -0.0459<br>(0.05) | -0.0700<br>(0.00) | 0.4280<br>(0.00)  | 4.42%               | 56.81***          |                  |                     |          |
| No partner switch   | 3,041   | -0.0488<br>(0.00) | -0.0520<br>(0.05) | -0.0655<br>(0.00) | 0.3807<br>(0.00)  | 3.72%               | 40.17***          |                  |                     |          |
| Partner Switch  | 580   | -0.0285<br>(0.00) | -0.0166<br>(0.05) | -0.0977<br>(0.00) | 0.6708<br>(0.00)  | 8.52%               | 18.98***          |                  |                     |          |
| <b>Panel B: Timeliness tests including PSWITCH intercept and interaction (All firms, 3,621 observations)</b>  |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
| <b>Model 2: <math>OI = \alpha_0 + \alpha_1 DRET + \alpha_2 PSWITCH + \alpha_3 DRET * PSWITCH + \beta_0 MRET + \beta_1 MRET * DRET + \beta_2 MRET * PSWITCH + \beta_3 MRET * DRET * PSWITCH</math></b> |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|   | $\alpha_0$  | $\alpha_1$        | $\alpha_2$        | $\alpha_3$        | $\beta_0$         | $\beta_1$           | $\beta_2$         | $\beta_3$        | Adj. R <sup>2</sup> | F Stat   |
|   | (?)   | (?)               | (?)               | (?)               | (-)               | (+)                 | (?)               | (+)              |                     |          |
|   | -0.0488<br>(0.00)   | -0.0520<br>(0.04) | 0.0203<br>(0.62)  | 0.0354<br>(0.58)  | -0.0655<br>(0.00) | 0.3807<br>(0.00)    | -0.0321<br>(0.43) | 0.2901<br>(0.02) | 4.52%               | 25.48*** |
| <b>Panel C: Non-Big 5 Sample (1,274 observations)</b>   |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|   | -0.1165<br>(0.00)   | -0.0654<br>(0.16) | -0.0470<br>(0.63) | 0.0465<br>(0.76)  | -0.0607<br>(0.02) | 0.3059<br>(0.00)    | 0.0049<br>(0.94)  | 0.0194<br>(0.94) | 2.04%               | 4.8***   |
| <b>Panel D: Big 5 Sample (2,347 observations)</b>   |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|   | -0.0159<br>(0.38)   | -0.0435<br>(0.14) | 0.0189<br>(0.67)  | 0.0293<br>(0.67)  | -0.0602<br>(0.00) | 0.3944<br>(0.00)    | -0.0532<br>(0.34) | 0.3746<br>(0.01) | 5.74%               | 21.39*** |
| Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO_MC, OI_MC, MRET or P_DACC have been deleted   |   |                   |                   |                   |                   |                     |                   |                  |                     |          |
| OI  | = Operating income in year $t$ scaled by total assets in year $t-1$           |                   |                   |                   |                   |                     |                   |                  |                     |          |
| DRET  | = 1 if MRET in year $t$ is less than 0; else = 0                              |                   |                   |                   |                   |                     |                   |                  |                     |          |
| MRET  | = Fiscal year share return adjusted for the All Ordinary Index in year $t$    |                   |                   |                   |                   |                     |                   |                  |                     |          |
| PSWITCH   | = 1 if partner switch (within audit firm) has occurred in year $t$ ; else = 0 |                   |                   |                   |                   |                     |                   |                  |                     |          |
| ***   | Significant at 1% level   |                   |                   |                   |                   |                     |                   |                  |                     |          |
|   | p-values in brackets  |                   |                   |                   |                   |                     |                   |                  |                     |          |

**Table 5**  
**Conservatism results (accruals based tests) pooled sample**

| <b>Panel A: Timeliness Tests (All firms, 3,621 observations)</b>  |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|---|--|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|------------------|---------------------|-----------|
| <b>Model 1: <math>TACC = \alpha_0 + \alpha_1 DCFO + \beta_0 CFO + \beta_1 DCFO * CFO</math></b>   |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|   | n  | $\alpha_0$        | $\alpha_1$        | $\beta_0$         | $\beta_1$         | Adj. R <sup>2</sup> | F Stat            |                  |                     |           |
| Predicted sign  |  | (?)               | (?)               | (-)               | (+)               |                     |                   |                  |                     |           |
| All firms   | 2,346  | -0.0547<br>(0.00) | -0.1420<br>(0.00) | -0.2311<br>(0.00) | -0.1770<br>(0.00) | 15.96%              | 230.09***         |                  |                     |           |
| No partner switch   | 3,041  | -0.0571<br>(0.00) | -0.1610<br>(0.00) | -0.2084<br>(0.00) | -0.3314<br>(0.00) | 26.47%              | 365.88***         |                  |                     |           |
| Partner switch  | 580  | -0.0238<br>(0.19) | -0.0092<br>(0.70) | -0.5006<br>(0.00) | 1.0064<br>(0.00)  | 32.13%              | 92.22***          |                  |                     |           |
| <b>Panel B: Timeliness tests including PSWITCH intercept and interaction (All firms, 3,621 observations)</b>  |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
| <b>Model 2: <math>TACC_t = \alpha_0 + \alpha_1 DCFO + \alpha_2 PSWITCH + \alpha_3 DCFO * PSWITCH + \beta_0 CFO + \beta_1 CFO * DCFO + \beta_2 CFO * PSWITCH + \beta_3 CFO * DCFO * PSWITCH</math></b> |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|   | $\alpha_0$   | $\alpha_1$        | $\alpha_2$        | $\alpha_3$        | $\beta_0$         | $\beta_1$           | $\beta_2$         | $\beta_3$        | Adj. R <sup>2</sup> | F Stat    |
|   | (?)  | (?)               | (?)               | (?)               | (-)               | (+)                 | (?)               | (+)              |                     |           |
|   | -0.0571<br>(0.00)  | -0.1610<br>(0.00) | 0.0333<br>(0.18)  | 0.1518<br>(0.00)  | -0.2084<br>(0.00) | -0.3314<br>(0.00)   | -0.2922<br>(0.04) | 1.3377<br>(0.00) | 27.07%              | 192.98*** |
| <b>Panel C: Non-Big 5 Sample (1,274 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|   | 0.0027<br>(0.89)   | -0.2754<br>(0.00) | -0.0048<br>(0.94) | 0.1357<br>(0.09)  | -0.7944<br>(0.00) | 0.0322<br>(0.76)    | 0.1748<br>(0.59)  | 0.6410<br>(0.06) | 54.29%              | 216.97*** |
| <b>Panel D: Big 5 Sample (2,347 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|   | -0.0700<br>(0.00)  | 0.0083<br>(0.49)  | 0.0406<br>(0.06)  | 0.0104<br>(0.72)  | -0.0876<br>(0.01) | 0.2894<br>(0.00)    | -0.3770<br>(0.00) | 0.7606<br>(0.00) | 14.01%              | 55.61***  |
| Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO_MC, OI_MC, MRET or P_DACC have been deleted.  |  |                   |                   |                   |                   |                     |                   |                  |                     |           |
| TACC  | = Operating income minus cash from operations in year $t$ , scaled by total assets in year $t-1$ |                   |                   |                   |                   |                     |                   |                  |                     |           |
| DCFO  | = 1 if CFO in year $t$ is less than 0; else 0  |                   |                   |                   |                   |                     |                   |                  |                     |           |
| CFO   | = Cash from operations in year $t$ scaled by total assets in year $t-1$                          |                   |                   |                   |                   |                     |                   |                  |                     |           |
| PSWITCH   | = 1 if partner switch (within audit firm) has occurred in year $t$ ; else = 0                    |                   |                   |                   |                   |                     |                   |                  |                     |           |
| ***   | Significant at 1% level  |                   |                   |                   |                   |                     |                   |                  |                     |           |
|   | p-values in brackets   |                   |                   |                   |                   |                     |                   |                  |                     |           |

**Table 6**  
**Performance adjusted unexpected accruals results for Big 5 auditees only,**  
**partitioned by period**

| Variable    | 1998-2000         |                   |                   |                   | 2001-2003         |                   |                   |                   |
|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|             | Raw               | Absolute          | Positive          | Negative          | Raw               | Absolute          | Positive          | Negative          |
| Intercept   | 0.1612<br>(0.06)  | 0.2158<br>(0.00)  | 0.1951<br>(0.02)  | -0.1776<br>(0.07) | -0.1321<br>(0.02) | 0.4513<br>(0.00)  | 0.2787<br>(0.00)  | -0.5254<br>(0.00) |
| PSWITCH     | 0.0191<br>(0.36)  | -0.0141<br>(0.38) | -0.0039<br>(0.85) | 0.0099<br>(0.67)  | -0.0252<br>(0.05) | -0.0056<br>(0.57) | -0.0251<br>(0.04) | -0.0043<br>(0.76) |
| CFO         | -0.1485<br>(0.00) | -0.0729<br>(0.00) | -0.2450<br>(0.00) | 0.0203<br>(0.41)  | -0.2633<br>(0.00) | -0.0039<br>(0.82) | -0.1934<br>(0.00) | -0.0769<br>(0.00) |
| LMVE        | -0.0075<br>(0.08) | -0.0059<br>(0.07) | -0.0060<br>(0.17) | 0.0032<br>(0.51)  | 0.0106<br>(0.00)  | -0.0171<br>(0.00) | -0.0066<br>(0.02) | 0.0235<br>(0.00)  |
| LEV         | -0.0034<br>(0.58) | -0.0044<br>(0.35) | 0.0052<br>(0.61)  | 0.0088<br>(0.11)  | -0.0536<br>(0.00) | 0.0130<br>(0.03)  | 0.0268<br>(0.21)  | -0.0210<br>(0.00) |
| EISSUE      | -0.0015<br>(0.94) | 0.0430<br>(0.00)  | 0.0313<br>(0.10)  | -0.0494<br>(0.01) | -0.0001<br>(0.99) | 0.0065<br>(0.49)  | 0.0016<br>(0.89)  | -0.0095<br>(0.48) |
| MERGER      | -0.0019<br>(0.92) | 0.0117<br>(0.43)  | 0.0088<br>(0.66)  | -0.0055<br>(0.80) | -0.0340<br>(0.01) | 0.0325<br>(0.00)  | 0.0066<br>(0.61)  | -0.0451<br>(0.00) |
| MKTBK       | -0.0025<br>(0.11) | 0.0025<br>(0.04)  | 0.0006<br>(0.84)  | -0.0027<br>(0.05) | 0.0002<br>(0.77)  | 0.0001<br>(0.78)  | 0.0008<br>(0.39)  | 0.0001<br>(0.85)  |
| TOP20       | 0.0002<br>(0.54)  | 0.0000<br>(0.89)  | 0.0005<br>(0.21)  | 0.0003<br>(0.46)  | 0.0004<br>(0.13)  | -0.0007<br>(0.00) | -0.0006<br>(0.02) | 0.0006<br>(0.06)  |
| LOSS        | -0.1314<br>(0.00) | 0.0379<br>(0.01)  | -0.0544<br>(0.01) | -0.0823<br>(0.00) | -0.1641<br>(0.00) | 0.0524<br>(0.00)  | -0.0466<br>(0.00) | -0.1063<br>(0.00) |
| MRET        | 0.0271<br>(0.01)  | 0.0060<br>(0.44)  | 0.0157<br>(0.14)  | 0.0030<br>(0.79)  | 0.0077<br>(0.35)  | 0.0142<br>(0.03)  | 0.0164<br>(0.04)  | -0.0088<br>(0.36) |
| LAGTACC     | 0.0253<br>(0.14)  | -0.0182<br>(0.16) | -0.0199<br>(0.21) | 0.0418<br>(0.05)  | -0.0027<br>(0.71) | 0.0049<br>(0.39)  | -0.0019<br>(0.89) | -0.0078<br>(0.24) |
| No. Obs     | 868               | 868               | 415               | 453               | 1,479             | 1,479             | 667               | 812               |
| R-Square    | 7.6%              | 8.9%              | 14.5%             | 11.3%             | 15.8%             | 10.8%             | 13.9%             | 17.7%             |
| F-Statistic | 7.46***           | 8.74***           | 7.39***           | 6.22***           | 26.29***          | 17.27***          | 10.76***          | 16.84***          |

Sample consists of 2,347 firm year observations. Observations that fall into the top/bottom 1% of CFO\_MC, OI\_MC, MRET or P\_DACC have been deleted. All non-big 5 auditees have been deleted.

Accruals = Unexpected accruals estimated using the performance model in year  $t$   
PSWITCH = 1 if partner switch (within firm) has occurred in year  $t$ ; else = 0  
CFO = Cash flow from operations in year  $t$  scaled by total assets in year  $t-1$   
TOT\_ASS = Total assets in year  $t$   
LMVE = Log of the market value of equity in year  $t$   
LEV = Ratio of total liabilities to total assets in year  $t$   
EISSUE = 1 if the firm has issued equity in year  $t$ , else = 0  
MERGER = 1 if the firm has been involved in a merger in year  $t$ , else = 0  
MKTBK = Market value of equity divided by book value of equity in year  $t$   
TOP20 = Percentage of firm owned by Top 20 shareholders in year  $t$   
LOSS = 1 if operating income is less than 0 in year  $t$ , else = 0  
MRET = Fiscal year share return adjusted for the All Ordinary Index in year  $t$   
LAGTACC = Total accruals in year  $t-1$  scaled by total assets in year  $t-2$   
\*\*\* Significant at 1% level  
p-values in brackets

**Table 7**  
**Conservatism results (market based tests) partitioned by period**

| <b>Panel A: Timeliness Tests (All firms)</b>  |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|---|--|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|----------|
| <b>Model 1: <math>OI = \alpha_0 + \alpha_1 DRET + \beta_0 MRET + \beta_1 MRET * DRET</math></b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | n  | $\alpha_0$        | $\alpha_1$        | $\beta_0$         | $\beta_1$         | Adj. R <sup>2</sup> | F Stat            |                   |                     |          |
| Predicted sign  |  | (?)               | (?)               | (-)               | (+)               |                     |                   |                   |                     |          |
| 1998-2000   | 1,255  | -0.0601<br>(0.01) | 0.0385<br>(0.29)  | -0.0872<br>(0.00) | 0.3879<br>(0.00)  | 2.73%               | 12.71***          |                   |                     |          |
| 2001-2003   | 2,366  | -0.0430<br>(0.02) | -0.0998<br>(0.00) | -0.0522<br>(0.01) | 0.4089<br>(0.00)  | 6.31%               | 54.09***          |                   |                     |          |
| <i>No partner switch</i>  |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| 1998-2000   | 1,080  | -0.0624<br>(0.02) | 0.0274<br>(0.50)  | -0.0903<br>(0.00) | 0.3421<br>(0.00)  | 2.18%               | 9.03***           |                   |                     |          |
| 2001-2003   | 1,961  | -0.0467<br>(0.02) | -0.1047<br>(0.00) | -0.0407<br>(0.05) | 0.3558<br>(0.00)  | 5.80%               | 41.23***          |                   |                     |          |
| <i>Partner switch</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| 1998-2000   | 175  | 0.0481<br>(0.38)  | 0.0722<br>(0.22)  | 0.0391<br>(0.08)  | 0.1335<br>(0.00)  | 9.94%               | 7.40***           |                   |                     |          |
| 2001-2003   | 405  | -0.0172<br>(0.73) | -0.0776<br>(0.32) | -0.1224<br>(0.03) | 0.6930<br>(0.00)  | 9.44%               | 13.94***          |                   |                     |          |
| <b>Panel B: Timeliness tests including PSWITCH intercept and interaction (All firms, 3,621 observations)</b>  |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| <b>Model 2: <math>OI = \alpha_0 + \alpha_1 DRET + \alpha_2 PSWITCH + \alpha_3 DRET * PSWITCH + \beta_0 MRET + \beta_1 MRET * DRET + \beta_2 MRET * PSWITCH + \beta_3 MRET * DRET * PSWITCH</math></b> |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | $\alpha_0$   | $\alpha_1$        | $\alpha_2$        | $\alpha_3$        | $\beta_0$         | $\beta_1$           | $\beta_2$         | $\beta_3$         | Adj. R <sup>2</sup> | F Stat   |
|   | (?)  | (?)               | (?)               | (?)               | (-)               | (+)                 | (?)               | (+)               |                     |          |
| <i>1998-2000 (1,255 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.0624<br>(0.01)  | 0.0274<br>(0.49)  | 0.0198<br>(0.78)  | 0.0613<br>(0.56)  | -0.0903<br>(0.00) | 0.3421<br>(0.00)    | 0.0217<br>(0.70)  | 0.2674<br>(0.18)  | 2.65%               | 5.88***  |
| <i>2001-2003 (2,366 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.0467<br>(0.02)  | -0.1047<br>(0.00) | 0.0296<br>(0.56)  | 0.0271<br>(0.74)  | -0.0407<br>(0.06) | 0.3558<br>(0.00)    | -0.0817<br>(0.15) | 0.3372<br>(0.03)  | 6.42%               | 24.17*** |
| <b>Panel C: Non-Big 5 Sample (1, 274 observations)</b>  |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| <i>1998-2000 (387 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.1351<br>(0.00)  | 0.0556<br>(0.45)  | -0.0678<br>(0.62) | 0.0150<br>(0.95)  | -0.0830<br>(0.03) | 0.2601<br>(0.06)    | 0.0478<br>(0.52)  | -0.0203<br>(0.96) | 0.65%               | 1.36     |
| <i>2001-2003 (887 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.1104<br>(0.00)  | -0.1229<br>(0.03) | -0.0194<br>(0.88) | 0.0319<br>(0.88)  | -0.0453<br>(0.19) | 0.2907<br>(0.00)    | -0.0471<br>(0.70) | 0.0589<br>(0.86)  | 3.18%               | 5.16***  |
| <b>Panel D: Big 5 Sample (2, 347 observations)</b>  |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| <i>1998-2000 (868 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.0299<br>(0.31)  | 0.0126<br>(0.79)  | 0.0133<br>(0.89)  | 0.0936<br>(0.46)  | -0.0895<br>(0.00) | 0.3728<br>(0.00)    | 0.0888<br>(0.54)  | 0.2458<br>(0.34)  | 3.01%               | 4.85***  |
| <i>2001-2003 (1,479 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | -0.0168<br>(0.46)  | -0.0825<br>(0.03) | 0.0195<br>(0.71)  | 0.0177<br>(0.83)  | -0.0209<br>(0.45) | 0.3617<br>(0.00)    | -0.1073<br>(0.09) | 0.4335<br>(0.01)  | 8.33%               | 20.18*** |
| Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO_MC, OI_MC, MRET or P_DACC have been deleted   |  |                   |                   |                   |                   |                     |                   |                   |                     |          |
| OI  | = Operating income in year $t$ scaled by total assets in year $t-1$        |                   |                   |                   |                   |                     |                   |                   |                     |          |
| DRET  | = 1 if MRET in year $t$ is less than 0; else = 0                           |                   |                   |                   |                   |                     |                   |                   |                     |          |
| MRET  | = Fiscal year share return adjusted for the All Ordinary Index in year $t$ |                   |                   |                   |                   |                     |                   |                   |                     |          |
| PSWITCH   | = 1 if partner switch (within firm) has occurred in year $t$ ; else = 0    |                   |                   |                   |                   |                     |                   |                   |                     |          |
| ***   | Significant at 1% level  |                   |                   |                   |                   |                     |                   |                   |                     |          |
|   | p-values in brackets   |                   |                   |                   |                   |                     |                   |                   |                     |          |

**Table 8**  
**Conservatism results (accruals test) partitioned by period**

| <b>Panel A: Accrual Tests (All firms, 3,621 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|---|--|-------------------|-------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-----------|
| <b>Model 1: TACC = <math>\alpha_0 + \alpha_1 DCFO_t + \beta_0 CFO + \beta_1 DCFO * CFO</math></b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | n  | $\alpha_0$        | $\alpha_1$        | $\beta_0$         | $\beta_1$         | Adj. R <sup>2</sup> | F Stat            |                   |                     |           |
| Predicted sign  |  | (?)               | (?)               | (-)               | (+)               |                     |                   |                   |                     |           |
| 1998-2000   | 1,255  | -0.0138<br>(0.51) | -0.2053<br>(0.00) | -0.5708<br>(0.00) | -0.0284<br>(0.84) | 33.20%              | 208.71***         |                   |                     |           |
| 2001-2003   | 2,366  | -0.0637<br>(0.00) | -0.0496<br>(0.00) | -0.1760<br>(0.00) | 0.2140<br>(0.00)  | 1.88%               | 16.14***          |                   |                     |           |
| <i>No partner switch</i>  |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| 1998-2000   | 1,080  | -0.0148<br>(0.44) | -0.2339<br>(0.00) | -0.5550<br>(0.00) | -0.2413<br>(0.06) | 55.25%              | 445.82***         |                   |                     |           |
| 2001-2003   | 1,961  | -0.0661<br>(0.00) | -0.0439<br>(0.00) | -0.1581<br>(0.00) | 0.1915<br>(0.00)  | 1.51%               | 10.98***          |                   |                     |           |
| <i>Partner switch</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| 1998-2000   | 175  | -0.0098<br>(0.78) | 0.0341<br>(0.47)  | -0.6484<br>(0.00) | 1.2923<br>(0.00)  | 58.29%              | 81.11***          |                   |                     |           |
| 2001-2003   | 405  | -0.0301<br>(0.12) | -0.0943<br>(0.00) | -0.4393<br>(0.00) | 0.5230<br>(0.00)  | 5.66%               | 9.10***           |                   |                     |           |
| <b>Panel B: Accrual tests including PSWITCH intercept and interaction (All firms, 3,621 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| <b>Model 2: TACC = <math>\alpha_0 + \alpha_1 DCFO + \alpha_2 PSWITCH + \alpha_3 DCFO * PSWITCH + \beta_0 CFO + \beta_1 CFO * DCFO + \beta_2 CFO * PSWITCH + \beta_3 CFO * DCFO * PSWITCH</math></b> |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | $\alpha_0$   | $\alpha_1$        | $\alpha_2$        | $\alpha_3$        | $\beta_0$         | $\beta_1$           | $\beta_2$         | $\beta_3$         | Adj. R <sup>2</sup> | F Stat    |
|   | (?)  | (?)               | (?)               | (?)               | (-)               | (+)                 | (?)               | (+)               |                     |           |
| <i>1998-2000 (1,255 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | -0.0148<br>(0.43)  | -0.2339<br>(0.00) | 0.0049<br>(0.92)  | 0.2680<br>(0.00)  | -0.5550<br>(0.00) | -0.2413<br>(0.05)   | -0.0934<br>(0.76) | 1.5336<br>(0.00)  | 55.52%              | 224.58*** |
| <i>2001-2003 (2,366 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | -0.0661<br>(0.00)  | -0.0439<br>(0.00) | 0.0360<br>(0.14)  | -0.0504<br>(0.12) | -0.1581<br>(0.00) | 0.1915<br>(0.00)    | -0.2812<br>(0.03) | 0.3315<br>(0.02)  | 2.03%               | 7.99***   |
| <b>Panel C: Non-Big 5 Sample (1,274 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| <i>1998-2000 (387 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | -0.0222<br>(0.55)  | -0.2766<br>(0.00) | 0.0352<br>(0.73)  | 0.0853<br>(0.55)  | -0.4739<br>(0.07) | -0.4963<br>(0.06)   | -0.2205<br>(0.62) | 1.0343<br>(0.07)  | 80.16%              | 223.77*** |
| <i>2001-2003 (887 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | 0.0067<br>(0.70)   | -0.1412<br>(0.00) | -0.0616<br>(0.45) | 0.0600<br>(0.51)  | -0.8621<br>(0.00) | 0.7869<br>(0.00)    | 0.7871<br>(0.25)  | -0.6272<br>(0.36) | 11.20%              | 16.97***  |
| <b>Panel D: Big 5 Sample (2,347 observations)</b>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| <i>1998-2000 (868 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | -0.0118<br>(0.44)  | -0.0198<br>(0.37) | -0.0085<br>(0.86) | 0.0996<br>(0.10)  | -0.5821<br>(0.00) | 0.8104<br>(0.00)    | -0.0023<br>(0.99) | 0.4453<br>(0.22)  | 30.47%              | 55.28***  |
| <i>2001-2003 (1,479 observations)</i>   |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | -0.0789<br>(0.00)  | 0.0005<br>(0.97)  | 0.0494<br>(0.04)  | -0.0919<br>(0.01) | -0.0253<br>(0.45) | 0.2080<br>(0.00)    | -0.4257<br>(0.00) | 0.3195<br>(0.05)  | 3.44%               | 8.51***   |
| Sample consists of 3,621 firm year observations. Observations that fall into the top/bottom 1% of CFO_MC, OI_MC, MRET or P_DACC have been deleted.  |  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| TACC  | = Operating income minus cash from operations in year $t$ , scaled by total assets in year $t-1$ |                   |                   |                   |                   |                     |                   |                   |                     |           |
| DCFO  | = 1 if CFO in year $t < 0$ ; else 0  |                   |                   |                   |                   |                     |                   |                   |                     |           |
| CFO   | = Cash from operations in year $t$ scaled by total assets in year $t-1$                          |                   |                   |                   |                   |                     |                   |                   |                     |           |
| PSWITCH   | = 1 if partner switch (within audit firm) has occurred in year $t$ ; else = 0                    |                   |                   |                   |                   |                     |                   |                   |                     |           |
| ***   | Significant at 1% level  |                   |                   |                   |                   |                     |                   |                   |                     |           |
|   | p-values in brackets   |                   |                   |                   |                   |                     |                   |                   |                     |           |

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**Appendix I**  
**Mapping of ASX Sectors to GICS Sectors**

| <i>GICS Sectors</i>                | <i>ASX Industry Sectors</i>   |
|------------------------------------|---|
| 1 Energy                           | 4 Energy  |
| 2 Materials                        | 1 Gold<br>2 Other Metals<br>3 Diversified Resources<br>7 Building Materials<br>10 Chemicals<br>12 Paper and Packaging |
| 3 Industrials                      | 22 Miscellaneous Industrials <sup>1</sup><br>23 Diversified Industrials<br>11 Engineering<br>14 Transport             |
| 4 Consumer Discretionary           | 15 Media<br>24 Tourism  |
| 5 Consumer Staples                 | 8 Alcohol and Tobacco<br>9 Food and Household<br>13 Retail  |
| 6 Health Care                      | 21 Health and Biotechnology   |
| 7 Developers                       | 6 Developers and Contractors  |
| 8 IT <sup>2</sup>                  | 18 Telecommunications<br>22 Miscellaneous Industrials   |
| 9 Telecommunications               | 18 Telecommunications <sup>3</sup>  |
| 10 Utilities                       | 5 Infrastructure and Utilities  |
| 11 Financial Services <sup>4</sup> | 16 Banks<br>17 Insurance<br>19 Investment and Fin. Services<br>20 Property  |

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<sup>1</sup> Some industry 22 firms were identified as IT firms

<sup>2</sup> A sub-sample from industry 18 and 22

<sup>3</sup> Some industry 18 firms were identified as IT firms

<sup>4</sup> All financial services firms are removed from our study