

Accepted Manuscript

Title: Is audit quality impacted by auditor relationships?

Author: Fiona Ball, Jonathan Tyler, Peter Wells

PII: S1815-5669(15)00016-8

DOI: <http://dx.doi.org/doi:10.1016/j.jcae.2015.05.002>

Reference: JCAE 74

To appear in: *Journal of Contemporary Accounting & Economics*

Received date: 31-3-2013

Revised date: 27-4-2015

Accepted date: 4-5-2015

Please cite this article as: Fiona Ball, Jonathan Tyler, Peter Wells, Is audit quality impacted by auditor relationships?, *Journal of Contemporary Accounting & Economics* (2015), <http://dx.doi.org/doi:10.1016/j.jcae.2015.05.002>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Is audit quality impacted by auditor relationships?

Fiona Ball, Jonathan Tyler* and Peter Wells

University of Technology, Sydney

Abstract

The objective of this study is to provide empirical evidence on the association of audit quality with audit tenure which would support the argument for auditor rotation being prescribed by regulation. Auditor tenure is measured having regard to both the duration of relations between the lead audit partner and client firm management (person-to-person relations), as well as the duration of the audit firm's engagement by the client (firm-to-firm). Using the setting of when Australian firms were adopting the *International Financial Reporting Standards* (IFRS), we examine 266 publicly listed Australian firms and find evidence of a negative association between the length of tenure between the lead audit partner and client firm management (person-to-person relations) and audit quality. Conversely we find a positive relation between audit firm engagement by the client (firm-to-firm) and audit quality. This suggests there may be quality benefits from prescribing audit partner rotation, and quality costs from prescribing audit firm rotation.

Key words; **Audit quality, Auditor independence, Auditor rotation, IFRS**

JEL: M41, M42, M48

Acknowledgements: The authors would like to thank the editor, Ferdinand Gul for his encouragement and helpful suggestions and the anonymous reviewers for their comments. We would also like to thank the organisers and participants at the JCAE Conference, Perth 2013, specifically the discussant Reza Monem, for their contributions.

* Corresponding author: Jonathan Tyler
Email: Jonathan.Tyler@uts.edu.au.
Phone: +61 2 9514 3629.

1. Introduction

Many countries have adopted regulations that prescribe audit partner rotation in response to anecdotal evidence of a lack of auditor independence contributing to corporate failures. In Australia the regulation requiring audit partner rotation is the *Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 (Cth)* (CLERP 9). Regulations have also been introduced internationally, although these may broaden the requirements to audit firm rotation.¹ The objective of this study is to provide empirical evidence of any association between audit quality and auditor tenure which would support auditor rotation being prescribed.

Audit quality is assessed in the period when Australian firms were implementing *International Financial Reporting Standards* (IFRS) and is measured as the estimation differences and adjustments made during the initial implementation of the new standards. Reflecting both uncertainty about the requirements of the standards and how they should be implemented, these would be expected to be resolved over the subsequent year. Auditor tenure is evaluated having regard to the person-to-person and audit firm–client firm relations that exist between the auditor and client, with the associations having potentially differing impacts on audit quality. Person-to-person relations are measured as the period where the same lead audit partner and client firm chief executive officer (CEO) combination worked together in preparing that firm’s audited financial statements, and would be considered more relevant to the determination of auditor independence. Evidence that person-to-person relations adversely impact audit quality would identify benefits of audit partner rotation and provide support for rotation being regulated as is the case in Australia. Audit firm–client firm relations are measured as the duration of the

¹ For example, in Europe this has been prescribed through preliminary agreement by the European Parliament and the Member States in December 2013 to amend the *European Directive on Statutory Audit* (2006/43/EC) and the proposal for a Regulation on specific requirements regarding statutory audit of public-interest entities (see e.g., Cameran et al., 2015).

relation between the audit firm and client firm, and these are controlled for to determine whether there are distinct benefits arising from the regulation being extended to include audit firm rotation which is required in other jurisdictions, or whether this would impose costs in terms of lower audit quality.

The motivation for this study is twofold. First, the issue of auditor independence and its implications for audit quality has been the focus of much debate by regulators, professional bodies and academics. These debates have typically focussed on high profile corporate failures in Australia (e.g., ABC Learning, Allco Finance, Centro, HIH Insurance, Westpoint,) and internationally (e.g., Enron, Madoff Investments, Parmalat, WorldCom), and typically involve claims that they arose as a consequence of an aspect of the audit engagement which undermined auditor independence and impaired audit quality.² The following comment is typical:

By receiving significant audit and non-audit fees, yet rarely seeming to blow the whistle on problems, auditors' independence and value are cast into serious doubt – exemplified by the collapses of ABC Learning, MFS, Allco, Centro and Bill Express. And the clamour is growing for solutions – such as having the external audit function run by a government authority, similar to the Auditor-General, or that in future, ASIC, rather than a company's board, select and appoint the auditors from an approved panel.

(Schwab, 2009, p. B1)

In particular, there is the claim that longer auditor tenure reduces audit quality, and hence the quality of financial reporting. In response to anecdotal evidence, audit partner rotation was debated and is now mandated in Australia. A motivation for this paper is to provide empirical evidence on whether the person-to-person relations between the lead audit partner and the client firm CEO reduces audit quality and supports audit partner rotation in the manner prescribed in the Australian regulation. Second, the setting for this study is the introduction of IFRS in

² For examples, see discussion by Bartholomeusz (2006), Gettler (2010), Kruger (2009), Main (2008), Schwab (2009), Treasury (2010), Washington (2009).

Australia which creates a unique opportunity to exploit regulatory change to identify differences in audit quality. With the introduction of IFRS in Australia, financial reports were required to include IFRS compliant income numbers in the transition year (the year prior to adoption), and re-estimates of these numbers in the adoption year (the first year IFRS was implemented). We measure audit quality as the differences in these two estimates of income (Loyeung et al., 2014). As with any change in accounting regulations, complexity leads to uncertainty about the requirements of the regulations and how they should be implemented. Our concern is with how this uncertainty is resolved, and in particular the extent to which this resulted in the embracing of more liberal accounting practices and the reporting of higher income numbers when IFRS was adopted for reporting purposes. This provides a unique setting in which to examine audit quality as the measure is less likely to be contaminated by the requirements for the incidence and identification of fraud, regulator intervention, or financial report restatement, which are common in many studies of financial report quality (see Appendix A).

This study builds on an extensive literature that considers the association of auditor tenure with audit quality, and attempts to distinguish the arguments supporting shorter (longer) auditor tenure. In the literature there is evidence that shorter auditor tenure enhances auditor independence and improves audit quality. This is attributed to factors such as bringing “fresh-eyes” to the audit which results in the identification of issues that have been previously overlooked, while simultaneously increasing investor confidence in the auditing profession (Lee et al., 2009). It is also consistent with the notion that auditor vigilance declines as auditor tenure increases through over-familiarity with the client (Mautz and Sharaf, 1961). However, there is conflicting evidence that longer auditor tenure enhances audit quality. This is commonly attributed to the existence of a “learning curve”, with Lim and Tan (2010) noting that while

longer tenure may be associated with reduced vigilance, this effect may be offset by greater auditor expertise. It is also consistent with comments by Treasury (2010) in relation to mandatory auditor rotation:

... the five-year rotation period was insufficient to build up adequate knowledge of the client ... [and] organisations that are large in size or are particularly complex or operate in a highly regulated and therefore complex industry are those that might command longer periods of audit tenure compared with other organisations. (p. 17).

This study adds to this literature by developing alternate measures of audit tenure which reflect person-to-person relations between the lead audit partner and the client firm CEO, and audit firm–client firm relations to distinguish the competing impacts of auditor tenure on audit quality.³ It is generally maintained that the problems of longer auditor tenure arise from a lack of independence and closer person-to-person relations between those involved in the management of the audit (the lead audit partner and the client firm CEO). Evidence of this would identify benefits arising from the prescription of audit partner rotation.⁴ In contrast, audit expertise is built within the audit team as a result of repeated experience in the audit of the client firm. Accordingly, we control for audit firm–client firm relations, measured as the tenure of the audit firm as auditor of the client firm, to determine whether there are distinct benefits arising from the prescription of auditor rotation, or whether it imposes costs in terms of lower audit quality (see Appendix B).

³ For example, in 2003 the audit partner in charge of the audit of Qantas Airways changed from Paul J McDonald to Robert Cooke. Both were partners of KPMG. The person-to-person relation between the audit partner and CEO would be considered to have commenced in 2003. However, partners of KPMG had been auditing the firm since 1999 and this would have been considered the commencement of the audit firm–client firm relation.

⁴ We have focused on the CEO as they are most likely to be involved in decisions on auditor appointment. Recognising that the CFO may have a more direct involvement in the financial reporting process this is also considered as a sensitivity test.

Based on a sample of 266 firms listed on the Australian S&P/ASX Top 500, evidence is provided of how auditor tenure is associated with financial reporting quality. We find evidence of a positive association between the duration of person-to-person relations between the lead audit partner and client firm CEO, and estimation differences and adjustments on the adoption of IFRS. Furthermore, these estimation differences and adjustments are more likely to result in the embracing of more liberal accounting practices and the reporting of higher income numbers. This suggests that close relationships between the lead audit partner and the client firm CEO undermine auditor independence. Hence audit quality is impaired and management utilise more liberal accounting practices. After controlling for this person-to-person relation we find evidence of a negative association between the duration of audit firm–client firm relations and estimation differences and adjustments on the adoption of IFRS. This result suggests that as audit firm tenure increases, auditor expertise develops and audit quality increases. These results are robust to a range of sensitivity tests.

This study makes a number of contributions to the literature and practice. First, it extends the literature considering the relation between audit tenure and audit quality. It uses a new measure of financial reporting quality, estimation differences and adjustments on the adoption of IFRS, which is not subject to the same limitations as other measures of audit quality.⁵ It also considers different aspects of audit relations (i.e., person-to-person and audit firm–client firm relations). Second, it provides evidence that person-to-person relations between lead audit partners and the client firm CEO undermine auditor independence and reduces audit quality, which is presumed in the regulation prescribing auditor rotation. Third, it provides empirical evidence that as audit firm–client firm relations increase in duration there is an increase in audit quality consistent with auditor expertise building. This is likely a consequence of greater audit

⁵ For example, using mechanical and statistical techniques to infer accounting quality.

firm awareness of the client business and is consistent with the prior literature which considers the relation between various measures of audit firm tenure and financial reporting quality (e.g., Geiger and Raghunandan, 2002; Ghosh and Moon, 2005; Johnson et al., 2002). Accordingly, while there is some support for regulation prescribing audit partner rotation, this does not extend to audit firm rotation and this would impose costs in terms of audit quality. This would be most problematic for complex audit engagements.

The remainder of this study is organised as follows. Section 2 provides a review of the relevant literature and the hypothesis development and Section 3 describes the research design and explanatory variables. Data collection and the sample description are provided in Section 4, while the results and relevant sensitivity analysis are discussed in Section 5. Section 6 provides summary conclusions, research limitations and future research potential.

2. Literature review and hypothesis development

Financial reports are an important tool used by firms to communicate financial information to investors and stakeholders, while reducing the level of information asymmetry that exists between owners and managers. They should be read as a “joint statement” from the auditor and manager (Antle and Nalebuff, 1991, p. 31), and the effectiveness of the communication will be impacted by the quality of the audit.

Auditor reporting behaviour (independence) and auditor competence (expertise) are instrumental in determining audit quality (Johnson et al., 2002), and concerns about the potential impact of auditor tenure on audit independence has led to regulation prescribing auditor rotation in many countries. In Australia, audit partner rotation has been required since 2006 under section 324DA(1) and (2) of the *Corporations Act 2001* (Cth) (as amended) which states that an

individual cannot play a significant role in the audit of a listed entity for more than five out of seven successive financial years (see also, APES 110 *Code of Ethics for Professional Accountants* (APES 110 para 290.154)). However, the empirical evidence on the relation between auditor tenure and audit quality is equivocal, with this likely reflecting complex and conflicting explanations for the relation between auditor tenure and auditor quality.

2.1 *Auditor independence hypothesis*

The auditor independence hypothesis maintains that auditor independence, and therefore audit quality, becomes impaired as the association between the auditor and the client lengthens. There are three main arguments for why increased auditor tenure adversely impacts auditor quality. First, auditors may develop a “learned confidence” or become too familiar with the client’s operations.⁶ Auditor rotation brings “fresh eyes” to an engagement, and increases investor confidence in the auditing profession (Lee et al., 2009; Seidman, 2001). Second, longer auditor-client relationships could lead to the development of person-to-person relations where a bond, loyalty and/or trust can be developed. These person-to-person relations, irrespective of whether they are developed intentionally or unintentionally, can impact an auditor’s objectivity and therefore independence (Arel et al., 2005; Carey and Simnett, 2006; Geiger and Raghunandan, 2002). As the length of an engagement increases, the auditor is more likely to accept client pressure or side with managers on important reporting decisions (e.g., the choice and application of accounting policies) creating the possibility of the auditor supporting more “aggressive accounting policy choices” that push boundaries (Azizkhani et al., 2010; Farmer et al., 1987; Myers et al., 2003). Ultimately, the development of close person-to-person relations

⁶ For a more extensive discussion refer to Azizkhani et al., 2010; Hoyle, 1978; Johnson et al., 2002; Myers et al., 2003; and Shockley, 1982.

between the auditor and the client may result in a failure to detect and report material fraud and or financial misstatement. Third, as auditor tenure increases, economic considerations could impact decisions and conduct. This could include decisions aimed at maintaining and profiting from the audit such as keeping clients long enough to recoup initial engagement start-up costs (e.g., Ghosh and Lustgaren, 2006; Sankaraguruswamy and Whisenant, 2009) and recovering the costs of discounting on initial audit engagements (e.g., Craswell and Francis, 1999; DeAngelo, 1981; Francis, 2004; Ghosh and Lustgarten, 2006; Simon and Francis, 1988). These considerations may impact the auditor's judgement and undermine independence (Azizkhani et al., 2010; DeAngelo, 1981; Geiger and Raghunandan, 2002; Gul, 1989). Distinguishing these arguments is difficult as they all imply a negative relation between auditor tenure and audit quality.

2.2 *Auditor expertise hypothesis*

The auditor expertise hypothesis maintains that audit quality increases with auditor tenure as it allows client-specific knowledge and expertise to develop and increase. This hypothesis is based on the degree of information asymmetry between the auditor and the client, which reduces over time as auditors acquire client specific knowledge (Azizkhani et al., 2010). Effective audits require a thorough understanding of the client's business and client specific knowledge, including information concerning a firm's internal control structure, operations and accounting systems, and procedures and processes (e.g., Dao et al., 2008; Johnson et al., 2002). The knowledge and expertise are developed over repeated audits and create significant learning curves that last a year or more (Dao et al., 2008; Knapp, 1991; Myers et al., 2003). A lack of this

knowledge in the early years of an audit engagement may result in lower quality audits (Johnson et al., 2002).⁷

2.3 *Distinguishing the impact of auditor tenure on audit quality*

An issue in the extant literature which has likely contributed to the equivocal findings is the diversity in the operationalisation of auditor tenure. The prior literature traditionally considers auditor tenure as the duration of the audit firm–client firm relation and these studies are therefore more likely to find a positive relation between audit tenure and financial reporting quality. Johnson et al. (2002) is typical of the studies considering the association between audit firm–client firm tenure and financial reporting quality. With financial reporting quality measured as unexpected accruals, they find some evidence of lower financial reporting quality with short audit firm tenure (two to three years). Similarly Myers et al. (2003), who proxy audit quality with the absolute value of unexpected accruals, find that as audit firm tenure increases there are greater constraints on extreme accounting decisions by management. More recently, studies have considered the relation between financial reporting quality, audit firm tenure, and other factors considered relevant to determining audit quality such as auditor independence. Issues considered include financial reporting quality measured by unexpected accruals and payment of non-audit fees (Gul et al., 2007), shorter tenure and higher audit fees (Stanley and DeZoort, 2007), and industry specialisation (Lim and Tan, 2010). This approach to measuring audit tenure contrasts with studies where more information about audit engagement partners is available, and when auditor tenure is measured having regard to specific audit partners rather than audit firms.

⁷ Johnson et al. (2002) also note that an initial lack of client specific knowledge on an engagement may not be associated with lower audit quality if it is possible to overcome the lack of knowledge by employing additional audit effort.

A confounding factor in this literature has not only been the measurement of audit tenure, but also the lack of consideration given to how the different measures reflect different aspects of the auditor–client relation. Auditor tenure has traditionally been measured as the duration of the audit firm–client firm relation; if firm specific audit experience is developed by the audit team, this would likely be relevant for evaluating the auditor expertise hypothesis. However, the audit firm–client firm relation should be distinguished from the person-to-person relation which exists between the lead audit partner and the client firm CEO. The dichotomy in this study extends the prior literature as it recognises that personal relations are established between the individual audit engagement partner and specific senior management rather than at the firm level; these relations would be more relevant to the evaluation of auditor independence. It is also consistent with anecdotal evidence that auditor independence could be “compromised” by a close association between the engagement partner and senior executives. For example,

...the independence of auditors has been called into question given they are being paid by the very people they are supposed to be monitoring ... [and in many cases] are on friendly terms with its executive team....

(Schwab, 2009, p. 1)

The person-to-person relation would also be relevant for evaluating whether declining auditor independence necessitates audit partner rotation, as is now prescribed by regulation in Australia, as distinct from audit firm rotation.

The above discussion highlights the importance of auditor independence and expertise in the auditing literature, and the need to distinguish between them in evaluating impacts of increased audit tenure on audit quality. The objective of the regulation prescribing audit partner rotation is to maintain audit independence, and hence the focus in this study is the impact of the person-to-person relation on audit quality. This is reflected in the following hypothesis:

H1. Audit quality is a **decreasing** function of longer person-to-person relations between the audit partner and the client firm CEO.

Recognising that audit expertise may also be increasing with longer audit firm tenure, we control for the tenure of the relation between the audit firm and the client to determine whether there are further benefits arising from audit firm rotation, or whether this would impose additional costs in terms of lower audit quality.

3. Research design

The research design in this study evaluates the association of audit quality with measures of audit tenure (and controls) with the following model:

$$AQ = \alpha_0 + \alpha_1 Partner_CEO_Tenure_{it} + \alpha_2 Audit_Firm_Tenure_{it} + \alpha_3 Controls_{it} + \varepsilon \quad (1)$$

Where AQ is a measure of audit quality, and $Partner/CEO_Tenure$ and $Audit_Firm_Tenure$ are measures of audit tenure which capture the two main aspects of the relation between the auditor and the client. Our primary concern is with the person-to-person relation which is measured with the $Partner/CEO_Tenure$ variable, as identified in our hypothesis.

3.1 Audit quality

In the extant literature there is considerable diversity in the measures used for audit quality. These include measures which focus on the audit client, such as unexpected accruals (Johnson et al., 2002; Lim and Tan, 2010; Myers et al., 2003); Securities and Exchange

Commission (SEC) enforcement actions and financial statement restatements (Stanley and DeZoort, 2007); fraud occurrence (Carcello and Nagy, 2004); litigation risk (Stice, 1991); and going concern opinions (Geiger and Raghunandan, 2002; Knechel and Vanstraelen, 2007). Other measures focus on the auditor and in particular auditor expertise commonly proxied as Big N auditors (Behn et al., 2008; Simunic, 1980) and auditor specialisation (Ferguson and Stokes, 2002; Palmrose, 1986; Stein and Cadman, 2005). However, there are limitations with these measures. Measures of quality using attributes of earnings are impacted by the underlying economic characteristics of the firm (Imhoff Jr., 1992; 2003). Isolating the separate effects of economic characteristics and audit quality on the attributes of earnings is fraught with difficulties. Other measures require the identification of financial reporting irregularity, or may lack precision with quality simply being labelled high or low.

To address this problem we utilise the setting of the introduction of IFRS in Australia, and measure audit quality as estimation of differences and adjustments on the adoption of IFRS. In July 2002, the Financial Reporting Council (FRC) announced its formal support for the transition of the Australian equivalents to IFRS. The Australian Accounting Standards Board (AASB) was responsible for the (re)issuance of the international standards in Australia and adoption was required for reporting years beginning on or after 1 January 2005 (FRC, 2002). The adoption of IFRS required firms to change their method of accounting for particular items, such as financial instruments, income taxes, intangible assets and goodwill. There were material impacts for many firms (Mybergh, 2006; Waring, 2005) and to mitigate uncertainty created by the introduction of international standards AASB 1047 *Disclosing the Impact of Adopting Australian Equivalents to International Financial Reporting Standards* (AASB, 2004d) was issued which required material disclosures to be made in the year prior to adoption or the

transition year. In particular, in the transition year firms were required to include an estimate of earnings under IFRS in their financial reports, and provide line-by-line disclosures of differences from reported Australian Generally Accepted Accounting Principles (GAAP) earnings. In financial reports for the adoption year (the first year of implementing IFRS), firms were required to include prior year information calculated on the basis of IFRS, and a line-by-line disclosure of differences from reported Australian GAAP information was again required (AASB 101; AASB 1047; Waring, 2005). Thus, there were two estimates of earnings for the same period prepared one year apart, and disclosures of how these estimates compared to reported Australian GAAP earnings. These differences reflect problems in the determination of appropriate accounting practices and their application, and are considered IFRS estimation differences and adjustments.

Contributing to these differences was the quantity of regulation and guidelines issued. Furthermore, in Australia there was no scope for early adoption and thus no opportunity for senior executives and auditors to gradually learn the new IFRS standards. This would have contributed considerably to uncertainty about the requirements of the standards and how they should be implemented. These estimation differences and adjustments on the adoption of IFRS are considered a reflection of audit quality. This is consistent with statements by the Australian Securities and Investment Commission (ASIC) warning firms to make every effort to ensure disclosures were as accurate as possible and suggesting it would be investigating “poor quality reporting” (ASIC, 2005); and anecdotal evidence that audit firms were concerned with the magnitude of these estimation differences and adjustments and they were subject to review. Furthermore, there is empirical evidence of these differences and adjustments having economic consequences which is consistent with these being a measure of audit quality (Loyeung et al., 2014). Critically this provides a continuous measure of audit quality for all firms.

Accordingly, estimation differences and adjustments (*IFRS-Diff*) were calculated as IFRS income reported in 2006 for the prior year (i.e., IFRS income for 2005) less the estimate of 2005 income under IFRS provided in 2005 for each sample firm. In essence, this is the difference between two estimates of income calculated under IFRS for the same period, but provided one year apart. The differences are then scaled by average total assets to control for size effects.⁸ This is shown by the following equation, with firm subscripts suppressed:

$$IFRS - Diff = \frac{IFRS_{INC}_{2006}^{2005} - IFRS_{INC}_{2005}^{2005}}{TA} \quad (2)$$

Where:

$IFRS_{INC}_{2006}^{2005}$ = Income calculated under IFRS for 2005 and disclosed in 2006 as a prior year figure

$IFRS_{INC}_{2005}^{2005}$ = Income calculated under IFRS for 2005 and disclosed in 2005

TA = Average total assets under IFRS for 2005 and 2006.

Our primary concern is the impact of auditor tenure on independence, and we therefore focus on signed estimation differences and adjustments as the measure of audit quality. A manifestation of impaired independence would be uncertainty about the requirements of the standards and how they should be implemented. This would be resolved in a manner that reflects most favourably on management and improves reported firm performance when considered with measures such as return on equity. This suggests that management will seek to adopt accounting policies that are liberal or income increasing, and these being least constrained by auditors where there are problems of auditor independence. Hence our initial focus is on signed IFRS estimation

⁸ An example using Qantas Airways is provided in Appendix A to illustrate this calculation.

differences and adjustments. If the focus was on the impact of audit tenure on expertise the implications are more equivocal. There will still be the incentive for management to adopt accounting policies that are liberal or income increasing, and there will be limits on whether auditors with less tenure (limited expertise) can constrain this. To the extent that limited auditor expertise results in greater reporting differences generally, this would suggest the evaluation of unsigned estimation differences and adjustments. However, this may not manifest if the choices made by management in determining the requirements of the standards, and how they should be implemented, are predominantly liberal and income increasing. Hence, emphasis is again given to signed IFRS estimation differences and adjustments, although absolute values are considered as a sensitivity test.

To mitigate the effects of the distribution of estimation differences and adjustments (i.e., outliers and skewness in the distribution) we also calculate the rank of *IFRS-Diff* based on the magnitude of the estimation differences and adjustments (*RANK-IFRS-Diff*).⁹ Additionally, the rankings of *IFRS-Diff* for firms within industries (*IND-RANK-IFRS-Diff*) are calculated to address the concern that estimation differences and adjustments are impacted by industry characteristics. The regulations causing the greatest estimation differences and adjustments relate to income tax, impairment and business combinations, and are not expected to pose additional difficulties for particular industries. Accordingly, this is expected to reduce variation in the measure of audit quality and reduce the significance of the results.

3.2 Auditor–client relations

⁹ As a sensitivity we also winsorised IFRS-Diff at the 1st and 99th percentile and the unreported results are not materially different.

The primary focus of this study is to examine whether auditor independence is impaired by the person-to-person relations between the audit partners and senior management of the client firm. Attention is focussed in the first instance on the duration of the relationship between the lead audit partner and the client firm CEO. We focus on the CEO of the client firm as they are most likely to be involved in the selection of the auditor, and would benefit most from financial reports being subjected to less critical scrutiny and the portrayal of performance more favourably. The person-to-person relation (*Partner/CEO Tenure*) between the lead audit partner and the client firm CEO is initially defined as the number of years (up to a maximum of 8) that the same audit partner and the same CEO have been representatives of the audit firm and client firm as at 2006.¹⁰

Consideration of the audit firm–client firm relation is required as a control and measurement of this follows the approach adopted in prior studies that consider audit firm tenure (e.g., Ghosh and Moon, 2005; Gunny et. al. 2010; Lim and Tan, 2010; Myers et al., 2003). Accordingly, the audit firm–client firm relation (*Audit Firm Tenure*) is defined as the cumulative number of years the audit firm has been employed by the client firm to perform the audit of the financial reports as at 2006, with a maximum tenure of 8 years.

3.3 Controls

Several control variables are included in the regression model due to the likelihood of there being other determinants of IFRS transition estimation differences and adjustments. These primarily relate to the complexity of the financial reports and decisions made in their

¹⁰ Recognising that the appropriate focal point may not be the CEO, as a sensitivity, attention is also directed to the relationship between the audit partner and the chief financial officer (CFO). The CFO may be more closely associated with the day to day financial reporting decisions.

preparation. Accordingly, consistent with Loyeung et al. (2014), the following control variables are included:

<i>Market Cap</i>	=	Market capitalisation for the firm
<i>LEV</i>	=	Leverage, measured as the ratio of the firm's total long-term debt to market value of equity
<i>ROA</i>	=	Return on assets, measured as the ratio of the firm's earnings divided by total assets (also consistent with Johnson et al., 2002)
<i>LOSS</i>	=	To control for whether the firm experienced a loss, an indicator variable that is set to equal one in the fiscal year 2006 if net income is negative, zero otherwise
<i>Audit Big N</i>	=	Indicator variable set to equal one if the firm was audited by a member of the Big 4 during the fiscal year 2006 audit, zero otherwise.

4. Data collection and sample description

Sample firms in this study correspond to those in Loyeung et al. (2014) which are chosen from the 2006 ASX/S&P Top 500 Australian firms. Firms in the financial sector are excluded as these firms are subject to additional regulatory reporting requirements, supervision, and problems arising from the timing of the issue of certain regulations and the related transition requirements (i.e., AASB 132 and AASB 139). In order to calculate CEO, audit firm and audit partner tenure, sample firms annual reports are required and these were sought for up to eight years (i.e., back to 1999) and hence all tenure variables are capped at eight years. Firms with missing data are deleted, as are firms that report in a foreign currency, firms with audit reports signed in a country other than Australia, or if they changed financial year-end. This results in a final sample of 266 firms.

Table 1, Panel A summarises the sample selection process and Panel B provides information on GICS industry sector grouping for the final sample. The *Materials* industry has

the most firms (61) in the sample, while the *Utilities* industry has the least (4). This is reflective of the market and we do not expect this industry distribution to introduce any bias to our results. Panel C summarises the year-end balance dates for firms within our sample and shows that 209 firms (78.6%) in our sample have a June 30 year-end, which is again reflective of the Australian reporting environment.

INSERT TABLE 1 ABOUT HERE

Table 2 displays the descriptive statistics for the pooled sample of dependent, independent and control variables. For the dependent variable *IFRS-Diff*, the mean (median) is – 0.005 (0.000), which is economically minimal and suggests that estimation differences and adjustments were not uniformly income increasing or decreasing. For the independent variables, the mean (median) audit firm tenure (*Audit_Firm_Tenure*) is 5.639 (6.000) years, while for the person-to-person association (*Partner/CEO_Tenure*) the mean (median) is 2.681 (2.000) years. *Pearson* and *Spearman* correlations between the variables of concern are reported in Table 3. By construction there is a high correlation between *Audit_Firm_Tenure* and *Partner/CEO_Tenure* (Spearman Correlation = 0.246, Pearson Correlation = 0.314). As predicted in the hypothesis, there is a negative and significant correlation between *IFRS-Diff* and *Audit_Firm_Tenure* (Spearman Correlation = –0.351, Pearson Correlation = –0.135).

INSERT TABLES 2 AND 3 ABOUT HERE

5. Results

5.1 Test results

The initial tests of the relation between audit quality and audit tenure are reported in Table 4 and show the association of estimation differences and adjustments on the adoption of

IFRS scaled by average total assets (*IFRS-Diffs*) with person-to-person relations (*Partner/CEO_Tenure*) and audit firm–client firm relationships (*Audit_Firm_Tenure*). In Panel A the results for the full sample are presented. For the model without controls the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 0.002$, $t\text{-stat} = 1.630$, $p = 0.052$), while the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -0.003$, $t\text{-stat} = -2.678$, $p = 0.004$). The model has low explanatory power (adjusted $r^2 = 2.2\%$), but it is significant at the 5% level ($F\text{-stat} = 3.931$, $p = 0.021$). For the model with controls the coefficient on *Partner/CEO_Tenure* is still significant at the 10% level ($\alpha_1 = 0.002$, $t\text{-stat} = 1.580$, $p = 0.058$), and the coefficient on *Audit_Firm_Tenure* remains negative and significant at the 1% level ($\alpha_2 = -0.003$, $t\text{-stat} = -2.573$, $p = 0.005$). However, caution needs to be exercised as there is a decrease in model explanatory power (adjusted $r^2 = 1.4\%$), and the model is no longer significant at conventional levels ($F\text{-stat} = 1.519$, $p = 0.161$). Accordingly, there is some support for Hypothesis 1, longer person-to-person relations between the lead audit partner and the client firm CEO reduces audit quality. However, there is also evidence that longer audit firm tenure enhances audit quality, suggesting two offsetting impacts of audit tenure on audit quality and highlighting the importance of analysing the tenure in two parts. The relative magnitude of the variation in measures of audit tenure and the coefficients on these measures is notable, and further consideration of these variables is suggested in future research.

INSERT TABLE 4 ABOUT HERE

The lack of model explanatory power is of concern; to address this in Panel B we limit the sample to the more extreme observations of estimation differences and adjustments on

implementing IFRS by eliminating the middle third of the observations. As expected there is an increase in model explanatory power (adjusted r^2 of 3.4% and 1.7% respectively for the models without and with controls). There is also an increase in the coefficients, although little change in significance which is probably a consequence of the reduced sample size. For the model without controls the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 0.004$, $t\text{-stat} = 1.545$, $p = 0.062$), while the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -0.004$, $t\text{-stat} = -2.764$, $p = 0.003$). For the model with controls the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 0.003$, $t\text{-stat} = 1.488$, $p = 0.069$), and the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -0.004$, $t\text{-stat} = -2.632$, $p = 0.005$). Again, there is some support for Hypothesis 1 longer person-to-person relations between the lead audit partner and the client firm CEO reduces audit quality. The control for audit firm tenure, however, suggests that longer audit firm tenure increases audit quality.

The results in Table 4 are potentially affected by the distribution of IFRS estimation differences and adjustments; to address this Table 5 reports the results based upon the rank of this variable (*RANK-IFRS-Diff*). As above, Panel A reports the results for the full sample and it is notable that there is a material increase in model explanatory power. For the model without controls the adjusted r^2 is 12.7%, and the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 3.326$, $t\text{-stat} = 1.282$, $p = 0.100$). The coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -11.502$, $t\text{-stat} = -6.321$, $p = 0.000$). For the model with controls the coefficient on *Partner/CEO_Tenure* is no longer significant ($\alpha_1 = 3.177$, $t\text{-stat} = 1.216$, $p = 0.113$), but the coefficient on *Audit_Firm_Tenure* remains negative and significant ($\alpha_2 = -11.208$, $t\text{-stat} = -6.077$, $p = 0.000$).

In Panel B the results are reported for the estimation of the model with the middle third of the *RANK-IFRS-Diff* observations eliminated from the sample. These results are consistent with those above and there is again an increase in model explanatory power; for the model without controls the adjusted r^2 is 16.4%. However, the coefficient on *Partner/CEO_Tenure* is not significant ($\alpha_1 = 4.621$, $t\text{-stat} = 1.196$, $p = 0.117$), while the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -15.605$, $t\text{-stat} = -6.035$, $p = 0.000$). For the model with controls the coefficient on *Partner/CEO_Tenure* is still not significant ($\alpha_1 = 4.400$, $t\text{-stat} = 1.126$, $p = 0.131$), and the coefficient on *Audit_Firm_Tenure* remains negative and significant ($\alpha_2 = -15.211$, $t\text{-stat} = -5.743$, $p = 0.000$).

Accordingly, in Table 5 there is again some support for Hypothesis 1, longer person-to-person relations between the audit partner and the client firm CEO reduces audit quality. However, it is notable that there is a much stronger positive relation between audit firm tenure and audit quality.

INSERT TABLE 5 ABOUT HERE

In Australia the adoption of IFRS was mandatory for financial years beginning on or after 1 January 2005. Accordingly, for firms with year ends after 31 December (i.e., non-December year ends) there was more time to resolve uncertainty about the requirements of the standards and to determine flexibility in how they should to be adopted. If impairment in audit quality results in the embracing of more liberal accounting policies, this would be more pronounced where there is more time to determine subjectivity in the choice of accounting policies and how this may be taken advantage of.¹¹

¹¹ It may also suggest that the amounts recognised as IFRS estimation differences and adjustments are more likely to be adjustments but this would be difficult to establish empirically.

Reflecting this, consideration was also given to sample firms with non-December year ends. In Table 6 we report the results for the model estimated with *IFRS-Diff* on a subsample of 229 firms. There is an increase in model explanatory power compared to Table 4, with the adjusted r^2 being 3.1% for the model without controls and 2.5% for the model with controls. Furthermore, the general tenure of the results is unchanged. For the model without controls the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 0.002$, $t\text{-stat} = 1.743$, $p = 0.041$), the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -0.003$, $t\text{-stat} = -2.911$, $p = 0.002$). For the model with controls the coefficient on *Partner/CEO_Tenure* is again positive and significant ($\alpha_1 = 0.002$, $t\text{-stat} = 1.771$, $p = 0.039$), and the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -0.003$, $t\text{-stat} = -2.868$, $p = 0.002$). We also estimated this with the middle third of firms ranked on *IFRS-Diff* eliminated, which further reduced our sample size; the results do not change substantively and hence are not reported. Critically, there is continued support for Hypothesis 1, longer person-to-person relations between the audit partner and the client firm CEO reduces audit quality, while there is evidence longer audit firm tenure increases audit quality.

Finally, we estimated the models for sample firms with non-December year ends, and with *RANK-IFRS-Diff* as the independent variable. The results are reported in Table 7. For the model without controls the coefficient on *Partner/CEO_Tenure* is positive and significant ($\alpha_1 = 3.619$, $t\text{-stat} = 1.569$, $p = 0.059$), and the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -11.158$, $t\text{-stat} = -6.568$, $p = 0.000$). For the model with controls the coefficient on *Partner/CEO_Tenure* is again positive and significant ($\alpha_1 = 3.627$, $t\text{-stat} = 1.556$, $p = 0.061$), and the coefficient on *Audit_Firm_Tenure* is negative and significant ($\alpha_2 = -11.02$, $t\text{-stat} = -6.361$, $p = 0.000$). We also estimated this with the middle third of firms ranked in *RANK-IFRS-*

Diff eliminated, which further reduced our sample size. The results do not change substantively and hence are not reported.

In summary, focussing on IFRS estimation differences and adjustments as a measure of audit quality we find evidence supporting Hypothesis 1, longer person-to-person relations between the audit partner and the client firm CEO reduce audit quality. There is also evidence of longer audit firm tenure increasing audit quality.

5.2 *Sensitivity tests*

A number of sensitivities are considered to determine the robustness of the results. In the main tests the focus was on signed estimation differences and adjustments on the adoption of IFRS. This reflected the major concern in financial reporting, and especially of auditors with the embracing of liberal accounting practices and the overstatement of income. This suggests a purposeful relation between audit quality and measures of income. However, it is also possible that the estimation differences and adjustments on the adoption of IFRS were primarily random errors. Recognising this we repeated our tests based on the absolute values of estimation differences and adjustments (i.e., absolute value of *IFRS-Diff* and rank of absolute value of *IFRS-Diff*). In unreported tests we fail to find a significant relationship between the absolute value of estimation differences and adjustments on the adoption of IFRS and audit tenure measures. This is consistent with the expectation that the sign of the impact on income is relevant for evaluating audit quality.

It is also possible that estimation differences and adjustments are impacted by industry characteristics and issues associated with the application of particular accounting standards. Hence, as a sensitivity we calculated *IND-RANK-IFRS-Diff* as the ranking of each firm within a

two digit GICS industry code. This was problematic in industries with small numbers of firms and these were required to be deleted. Based on a remaining sample of 173 firms, in unreported tests we find results are directionally consistent with those reported in the main tests. Notably, in the model based on *IND-RANK-IFRS-Diff* with controls, both the *Partner/CEO_Tenure* and the *Audit_Firm_Tenure* measures are significant at the 10% and 1% level respectively ($\alpha_1 = 0.768$, $t\text{-stat} = 1.352$, $p = 0.089$ and $\alpha_2 = -2.161$, $t\text{-stat} = -5.413$, $p = 0.000$). Furthermore, the model is robust (adjusted $r^2 = 0.141$) and significant at the 1% level ($F\text{-stat} = 5.043$, $p = 0.000$).

While there is support for the use of IFRS estimation differences and adjustments as a measure of financial reporting quality in Loyeung et al. (2014), alternative measures of accounting quality were also considered. Consistent with the prior literature, we posit that high quality audits mitigate extreme management reporting decisions and accruals are commonly used to identify extreme reporting decisions (e.g., Dechow et al., 2011; Francis and Wang, 2008; Myers et al., 2003). While early studies focus on unexpected accruals (e.g., Johnson et al., 2002; Myers et al., 2003), there has been a trend in recent literature towards total accruals (e.g., Bayley and Taylor, 2007; Carey and Simnett, 2006; Dechow et al., 2011). Hence we consider a range of measures of unexpected accruals. We focus on *RANK-IFRS-Diff* as the results are strongest for this measure; comparison is made with ranks of the accrual measures as this is least likely to be impacted by scale issues. We calculated correlations between *RANK-IFRS-Diff* and the ranks of various accrual measures including total accruals and discretionary accruals estimated with the Jones (1991) model, the modified Jones model (Teoh et al., 1998), and the performance adjusted modified Jones model (Kothari et al., 2005) for a restricted sample of 188 firms with data available. While we found that *RANK-IFRS-Diff* was positively correlated with the various accrual measures considered, only the correlation with the performance adjusted modified Jones

model was significant at the 10% level. While perhaps surprising, there are a number of potential causes for this. Accrual based measures of accounting quality are based on information reported in a single year with comparisons being made to other firms. Accordingly, these measures of accounting quality will be assessed relative to accounting decisions made by other firms, and this may be constrained by past accounting decisions of firms. In comparison, estimation differences and adjustments are assessed having regard to the estimates by the same firm; as the policies are being implemented for the first time, this is not impacted by past decisions. Furthermore, there is evidence of a lack of statistical significance and poor specification for most accruals models in the literature (e.g., Dechow et al., 1995).

Independent audit committees have been identified as a critical component of good corporate governance. The role of the audit committee is to oversee and monitor the company's audit process while overseeing the integrity of the financial reporting process (Burke and Guy, 2001). As a sensitivity test (unreported), we re-perform our main tests (*IFRS-Diff* and *RANK-IFRS-Diff*) for the full sample pooled and non-December year end sample with a control variable for audit committee governance. Following Matolcsy et al. (2011) we include a dummy variable which captures audit committee strength (*AC_Gov_Dummy*). This variable is calculated as zero if the firm has established an entirely non-executive and majority independent audit committee, and one otherwise. This adds little explanatory power to the model, and there is no substantive change in the results.

The primary focus of this study has been on the CEO as the basis for person-to-person relation with the audit partner. However, the chief financial officer (CFO) undoubtedly plays an important role in the preparation and oversight of a firm's financial statements (Feng et al., 2011). Accordingly, as a sensitivity, we substitute the CFO for the CEO in the determination of

the variable *Partner/CFO_Tenure*. In unreported tests we find results directionally consistent with those reported in the main tables. Notably, in the model based on *RANK-IFRS-Diff*, both the *Partner/CFO_Tenure* and the *Audit_Firm_Tenure* and *Partner/CFO_Tenure* measures are significant at the 1% level ($\alpha_2 = -4.888$, $t\text{-stat} = -3.829$, $p = 0.000$ and $\alpha_1 = 6.321$, $t\text{-stat} = 3.305$, $p = 0.001$, respectively). This model is robust (adjusted $r^2 = 0.155$) and significant at the 1% level ($F\text{-Stat} = 6.241$, $p = 0.000$).

Notwithstanding the variations in variable measurement and research design, our results appear robust.

6. Conclusions and limitations

Many countries adopted regulation that prescribed auditor rotation in response to anecdotal evidence that a lack of audit independence contributed to corporate failures. The objective of this study was to provide empirical evidence of any association between audit quality and auditor tenure which would support the argument for auditor rotation being prescribed by regulation. We assessed audit quality as the estimation differences and adjustments made when Australian firms adopted IFRS. Auditor tenure is measured having regard to both the person-to-person relations that exist between the engagement partner and client management, as well as the duration of the audit firm's tenure with the client.

We find some evidence that estimation differences and adjustments made on the adoption of IFRS increased with longer person-to-person relations between audit engagement partners and client firm management. This is consistent with longer audit partner and senior management relations reducing audit quality through the impairment of audit independence, resulting in management being able to adopt more liberal accounting policies. In contrast, we find much

stronger evidence that estimation differences and adjustments on the adoption of IFRS are decreasing with audit firm tenure. Critically, these divergent findings for different aspects of audit tenure suggest that there are complex relationships between auditors and clients and they have differing impacts on audit quality. This may provide insights into the equivocal findings in the extant literature.

The regulation prescribing auditor rotation is based on the assumption that auditor tenure undermines audit quality and this focuses on concerns about the loss of independence. We find evidence of longer lead audit partner and client management relationships reducing audit quality, suggesting benefits arising from regulation prescribing audit partner rotation. However, there are a range of factors that likely explain why audit quality is also increasing with auditor tenure. First, an audit partner represents one member of a broader audit team. While the audit partner takes ultimate responsibility for an engagement, normal turnover in audit staff and client management appear to reduce the importance of person-to-person relations (Davis et al., 2009). Second, internal and external audit review appears to play an important role in aiding professional scepticism and promoting auditor independence. Internal review or peer review provides a “second look” at the firm’s work (Davis et al., 2009). Furthermore, audit firms following quality review programs which ensure compliance with professional standards (e.g., APESs 2010) should aid professional scepticism and promote independence (Davis et al., 2009; Gay and Simnet, 2010). External reviews conducted by ASIC such as the *Audit Inspection and Surveillance Program* (King, 2011; Niven, 2010) and an *Auditing Inspection Program* doubtlessly have had an impact on the reported results. Third, auditors face increased litigation risk and public scrutiny when they develop closer person-to-person relations with CEOs (Dye,

1993).¹² Hence, it is not surprising that we find evidence that longer audit firm tenure increases audit quality; this suggests that the perceived benefits of regulations prescribing auditor rotation are likely to be limited and that prescribing audit firm rotation imposes costs in terms of reduced audit quality.

This study makes a number of contributions to literature and practice. First, it extends the literature considering the relation between audit tenure and financial report quality. Second, it uses a new measure of audit quality, estimation differences and adjustments made on transition to IFRS, which is not subject to some of the limitations associated with other measures of audit quality. Third, it considers different aspects of audit relations (i.e., person-to-person and audit firm–client firm relations). Fourth, it provides empirical evidence that as person-to-person relations between engagement partners and senior executives increase, there is a reduction in audit quality and this likely reflects an impairment of independence. However, as audit firm tenure increases, audit expertise of the firm builds and there is an increase in audit quality. This provides insights to the potential costs and benefits of the regulation prescribing auditor rotation.

This study has a number of limitations. First, the proxy *person-to-person* relations (*Partner/CEO_Tenure*) is noisy and does not directly capture the traditional notion of “relationships” presented in other research. However, we are limited by data and utilise the best available information to gain initial insights into this measure. Furthermore, we note that the *person-to-person* relation metric is a subset of the control variable *audit firm–client firm relations* (*Audit_Firm_Tenure*), which further compounds the above issue. Additionally, the *person-to-person* relation has the maximum value of eight years. This reflects the timeframe in which the engagement partner information began to be disclosed in Australia up until IFRS transition, but represents a clear limitation of this study. Second, the limited sample size restricts

¹² For example, Centro Properties AUD \$200m payout is a prime example of this (Hume, 2012).

the ability to test for industry fixed effects; due to limitations surrounding data availability, testing of auditor industry expertise have not been tested, which could add to our understanding of rotation issues. Adopting alternative measures to capture auditor expertise and independence could assist in overcoming the limitations associated with this study and could provide an opportunity for future research.

Accepted Manuscript

References

- Antle, R., Nalebuff, B., 1991. Conservatism and auditor-client negotiations. *J. Account. Res.* 29, 31–54.
- Arel, B., Brody, R., Pany, K., 2005. Audit firm rotation and audit quality. *CPA J.* 75 (1), 36–39.
- Australian Accounting Standards Board (AASB), 2004a. AASB 101 Presentation of Financial Statements. AASB, Melbourne.
- Australian Accounting Standards Board (AASB), 2004b. AASB 132 Financial Instruments: Presentation. AASB, Melbourne.
- Australian Accounting Standards Board (AASB), 2004c. AASB 139 Financial Instruments: Recognition and Measurement. AASB, Melbourne.
- Australian Accounting Standards Board (AASB), 2004d. AASB 1047 Disclosing the Impact of Adopting Australian Equivalents to International Financial Reporting Standards. AASB, Melbourne.
- Accounting Professional & Ethical Standards Board (APESB), 2010. APES 110 Code of Ethics for Professional Accountants. APESB, Melbourne.
- Australian Securities and Investment Commission (ASIC), 2005. IR 05-16 ASIC Guidance on Disclosing the Impact of IFRS for Full-Year Financial Results. ASIC, April 26; Available from: <<http://www.asic.gov.au/asic/asic.nsf/byheadline/IR+05-16+ASIC+guidance+on+disclosing+the+impact+of+IFRS+for+full-year+financial+reports?openDocument>> [10 October 2012].
- Azizkhani, M., Monroe, G., Shailer, G., 2010. Auditor Tenure and Perceived Credibility of Financial Reporting. Working Study, The Australian National University, Canberra.
- Bartholomeusz, S., 2006. Westpoint exposes soft side of auditing. *The Sydney Morning Herald* June 13 2006. Available from: <<http://www.smh.com.au/articles/2006/06/12/1149964468705.html?page=fullpage#contentSwap1>> [10 October 2012].
- Bayley, L., Taylor, S., 2007. Identifying Earnings Overstatements: A Practical Test. Working Paper, University of New South Wales, Australia.
- Behn, B., Choi, J., Kang, T., 2008. Audit quality and properties of analyst earnings forecasts. *Account. Rev.* 83 (2), 327–349.
- Burke, F., Guy, D., 2001. *Audit Committees: A Guide for Directors, Management, and Consultants*, fourth ed. Aspen Law & Business, New York.
- Cameran, M., Francis, J., Marra, A., Pettinicchio, A., 2015. Are there adverse consequences of mandatory auditor rotation? Evidence from the Italian experience. *Audit.: J. Prac. & Theory* 34 (1), 1-24.

- Carcello, J., Nagy, A., 2004. Audit firm tenure and fraudulent financial reporting. *Audit.: J. Prac. & Theory* 23 (Sept), 55–69.
- Carey, P., Simnett, R., 2006. Audit partner tenure and audit quality. *Account. Rev.* 81 (3), 653–676.
- Craswell, A., Francis, J., 1999. Pricing initial audit engagements: A test of competing theories. *Account. Rev.* 74 (2), 201–216.
- Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004. (Cth), 2004, Commonwealth of Australia, Canberra, ACT.
- Corporations Act 2001 (Cth), 2001, Commonwealth of Australia, Canberra, ACT.
- Dao, M., Mishra, S., Raghunandan, K., 2008. Auditor tenure and shareholder ratification of the auditor. *Account. Horiz.* 22 (3), 297–314.
- Davis, L., Soo, B., Trompeter, G., 2009. Auditor tenure and the ability to meet or beat earnings forecasts. *Contemp. Account. Res.* 26, 517–548.
- DeAngelo, L., 1981. Auditor size and audit quality. *J. Account. Econ.* 3, 183–199.
- Dechow, P., Ge, W., Larson, C., Sloan, R., 2011. Predicting material accounting misstatements. *Contemp. Account. Res.* 28 (1), 17–82.
- Dechow, P., Sloan, R., Sweeney, A., 1995. Detecting earnings management. *Account. Rev.* 70, 193–225.
- Dye, R. 1993. Auditing standards, legal liability and auditor wealth. *J. Polit. Econ.* 101 (5), 887–914.
- European Directive on Statutory Audit (2006/43/EC) Available from: <<http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32006L0043>> [4 July 2011].
- Farmer, T., Rittenberg, L., Trompeter, G., 1987. An investigation of the impact of economic and organizational factors on auditor independence. *Audit.: J. Pract. Theory* 7 (1), 1–14.
- Feng, M., Ge, W., Luo, S., Shevlin, T., 2011. Why do CFOs become involved in material accounting manipulations? *J. Account. Econ.* February, 21–36.
- Ferguson, A., Stokes, D., 2002. Brand name audit pricing, industry specialization and leadership premiums post Big 8 and Big 6 mergers. *Contemp. Account. Res.* 19, 77–110.
- Financial Reporting Council (FRC), 2002. Bulletin of the FRC 2002/4, 3 July 2002. FRC, Canberra, ACT. Available from: <<http://www.iasplus.com/en/binary/resource/ausfrc.pdf>> [14 January 2014].
- Francis, J., 2004. What do we know about audit quality? *Br. Account. Rev.* 36, 345–368.
- Francis, J., Wang, D., 2008. The joint effect of investor protection and Big 4 audits on earnings quality around the world. *Contemp. Account. Res.* 25 (1) (Spring), 157–191.

- Gay, G., Simnett, R., 2010. Auditing and Assurance Services in Australia. McGraw-Hill, Sydney.
- Geiger, M., Raghunandan, K., 2002. Auditor tenure and audit reporting failures. *Audit.: J. Prac. & Theory* 21 (March), 67–78.
- Gettler, L., 2010. Troubles with gatekeepers who fall asleep on the job. *The Age* March 31, 13.
- Ghosh, A., Lustgarten, S., 2006. Pricing of initial audit engagements by large and small audit firms. *Contemp. Account. Res.* 23 (2), 333–368.
- Ghosh, A., Moon, D., 2005. Auditor tenure and perceptions of audit quality. *Account. Rev.* 80 (2), 585–612.
- Gul, F., (1989) Bankers' Perceptions of factors affecting auditor independence. *Account. Audit. Account. J.* 2 (3), 40-51.
- Gul, F., Jaggi, B., Krishnan, G., 2007. Auditor independence: Evidence on the joint effects of auditor tenure and non-audit fees. *Audit.:J. Prac. & Theory* 26 (2), 227–242.
- Gunny, K., Krishnan, G., Zhang, T., 2010. Is audit quality associated with auditor tenure, industry expertise and fees? Evidence from PCAOB opinions. Working Paper, University of Colorado.
- Hoyle, J., 1978. Mandatory auditor rotation: The arguments and an alternative. *J. Account.* 145 (5), 69–78.
- Hume, N., 2012. Centro and PwC near record A\$200m payout. *Financial Times* May 9. Available from: <<http://www.ft.com/cms/s/0/29db5a06-99aa-11e1-aa6d-00144feabdc0.html#axzz1x7GtcmhO>> [21 May 2014].
- Imhoff Jr., E., 2003. Accounting quality, auditing and corporate governance. *Account. Horiz.* (suppl.) 17, 117–128.
- Imhoff Jr., E., 1992. The relation between perceived accounting quality and economic characteristics of the firm. *J. Account. Pub. Policy* 11, 97–118.
- Johnson, V., Khurana, I., Reynolds, J., 2002. Audit-firm tenure and the quality of financial reports. *Contemp. Account. Res.* 19 (4) (Winter), 637–660.
- Jones, J., 1991. Earnings management during important relief investigation. *J. Account. Res.* 29 (2), 193-228.
- King, A., 2011. ASIC checks audit skimping. *The Australian Financial Review* August 29, 46.
- Knapp, M., 1991. Factors that audit committees use as surrogates for audit quality. *Audit.: J. Prac. & Theory* 10 (1), 35–52.
- Knechel, W., Vanstraelen, A., 2007. The relationship between auditor tenure and audit quality implied by going concern opinions. *Audit.: J. Prac. & Theory* 26 (1), 113–131.

- Kothari, S.P., Leone, A.J., Wasley, C.E., 2005. Performance matched discretionary accruals measures. *J. Account. Econ.* 39 (1) 163–197.
- Kruger, C., 2009. Lessons to be learnt from ABC Learning’s collapse. *The Sydney Morning Herald* January 2, 24.
- Lee, H., Mande, V., Son, M., 2009. Do lengthy auditor tenure and the provision of non-audit services by the external auditor reduce audit report lags? *Int. J. Audit.* 13, 87–104.
- Lim, C., Tan, H., 2010. Does auditor tenure improve audit quality? Moderating effects of industry specialization and fee dependence. *Contemp. Account. Res.* 27 (3) (Fall), 923–957.
- Loyeung, A., Matolcsy, Z., Weber, J., Wells, P., 2014. An analysis of the accounting errors that arise during the transition to IFRS. Working Paper, University of Technology, Sydney.
- Main, A., 2008. Go figure: Even auditors can flunk maths. *The Australian* December 28. Available from: <<http://www.theaustralian.com.au/business/opinion/even-audits-fail-maths/story-e6frg9jf-1111118423599>> [22 November 2013].
- Matolcsy, Z., Tyler, J., Wells, P., 2011. The impact of quasi-regulatory reforms on boards and their committees during the period 2001–2007. *Aust. Account. Rev.* 21 (4), 352–364.
- Mautz, R., Sharaf, H., 1961. *The Philosophy of Auditing*. American Accounting Association, Sarasota, Florida.
- Mybergh, B., 2006. The Impacts of AIFRS on Australian Companies: A Study of the Financial Statement Disclosures by Australia’s Top 100 Listed Companies. *Keeping Good Companies.* 58 (3), 138-141.
- Myers, J., Myers, L., Omer, T., 2003. Exploring the term of the auditor – client relationship and the quality of earnings: A case for mandatory auditor rotation? *Account. Rev.* 78 (3), 779–799.
- Niven, D., 2010. Audit fees and maintaining audit quality. *Chart.* (August), 67
- Palmrose, Z., 1986. Audit fees and auditor size: Further evidence. *J. Account. Res.* 24 (1), 97–110.
- Sankaraguruswamy, S., Whisenant, S., 2009. Pricing initial audit engagements: Empirical evidence following public disclosure of audit fees. Working Paper, University of Houston.
- Schwab, A., 2009. Falling tide reveals auditors beached without bathers. *The Age* June 9, 1.
- Seidman, E., 2001. Testimony given to the US Senate Committee on Banking, Housing and Urban Affairs. Oversight Hearing on the Failure of Superior Bank. Federal Savings Bank. September 11.
- Shockley, R., 1982. Perceptions of auditor independence: An empirical analysis. *Account. Rev.* 54 (4), 785–800.

- Simon, D., Francis, J., 1988. The effects of auditor change on audit fees: Tests of price cutting and price recovery. *Account. Rev.* 63 (2), 255–269.
- Simunic, D., 1980. The pricing of audit services: Theory and evidence. *J. Account. Res.* 18 (1), 161–190.
- Stanley, J., DeZoort, F., 2007. Audit firm tenure and financial restatements: An analysis of industry specialization and fee effects. *J. Account. Public Policy* 26 (2), 131–159.
- Stein, M., Cadman, B., 2005. Industry specialization and auditor quality in US markets. Working Study, University of Oregon.
- Stice, E., 1991. The market reaction to 10-K and 10-Q filings and to subsequent earnings announcements. *Account. Rev.* 66, 42–55.
- Teoh, S.H., Welch, I., Wong, T.J., 1998. Earnings management and the long-term market performance of initial public offerings. *J. Fin.* 53 (December) 1935–1974.
- Treasury, 2010. Audit Quality in Australia: A Strategic Review. Australian Government: Treasury Department. March, 5. Available From: http://archive.treasury.gov.au/documents/1745/PDF/Audit_Quality_in_Australia.pdf [1 May 2014].
- Waring, T., 2005. New world audit. *In the Black* 75 (7) (August), 58–60.
- Washington, S., 2009. KPMG auditors banned over Westpoint failure. *The Age* August 18. Available from: <<http://www.theage.com.au/business/kpmg-auditors-banned-over-westpoint-failure-20090817-enrg.html>> [14 January 2014].

Appendix A

IFRS-Diff metric calculation: an example.

This appendix presents a worked example of the calculation of the *IFRS-Diff* metric for Qantas Airways Limited. It is calculated using IFRS disclosures from the 2004/2005 and 2005/2006 Qantas annual reports and applying the following *IFRS-Diff* formula:

$$IFRS - Diff = \frac{IFRS_INC_{2006}^{2005} - IFRS_INC_{2005}^{2005}}{TA}$$

	Income as reported on 30 June 2005	Income as reported on 30 June 2006	<i>IFRS-Diff</i>
	\$m	\$m	\$m
Net profit as reported under A-GAAP	764.4	764.4	0.0
Add/(less): IFRS Adjustments			
AASB 118: Revenue	-99.6	-142.2	-42.6
AASB 119: Employee Benefits	40.0	25.0	-15.0
AASB 117: Leases	-11.8	7.2	19.0
AASB 116: Property, Plant & Equipment	-0.3	-8.7	-8.4
AASB 112: Income Taxes	1.9		
Net other transition adjustments	34.4	37.8	1.5
Unidentified adjustments	0.0	5.8	5.8
Net profit as reported under IFRS	729.0	689.3	-39.7

The primary concern is the impact of auditor tenure on independence, we therefore focus on signed estimation differences and adjustments. Thus, the reported estimation differences and adjustments (i.e., -\$39.7) are then scaled by average total assets to arrive at an *IFRS-Diff* metric of -0.002.

Where;

- $IFRS_INC_{2006}^{2005}$: Income calculated under IFRS for 2005 and disclosed in 2006 as a prior year figure
- $IFRS_INC_{2005}^{2005}$: Income calculated under IFRS for 2005 and disclosed in 2005
- TA : Average total assets under IFRS for 2005 and 2006.

Appendix B

Person-to-person relation illustrative example.

This appendix presents worked examples of ways in which the “person-to-person relation” metric was derived for ten firms within the sample.

Audit client	Audit firm at IFRS transition	Audit partner at IFRS transition	CEO at IFRS transition	Audit firm tenure	Partner tenure	CEO tenure	Person-to-person relation	Raw IFRS Diff	IFRS Diff
Adtrans Group	Ernst & Young	Mark Phelps	Shaun Swift	8	3	4	3	0.00	0.000
Alesco Corporation	KPMG	G J Boydell	Justin Ryan	8	5	1	1	8.30	0.014
APN News & Media	PwC	S J Bosiljevac	Brendan Hopkins	8	2	4	2	-30.27	-0.011
Boral	KPMG	Trent Van Veen	Rod Pearce	8	5	7	5	-22.50	-0.004
Capral Aluminium	PwC	WHB Seaton	Robin Freeman	8	7	1	1	-2.41	-0.006
Healthscope	Deloitte	CMJ Bryan	Bruce Dixon	1	4	8	4	0.81	0.001
Qantas Airways	KPMG	Mark Epper	Geoff Dixon	8	5	6	5	-39.70	-0.002
Symbion Health	KPMG	Paul McDonald	Robert Cooke	8	4	8	4	-2.76	-0.001
Wesfarmers	Ernst & Young	G Meyerowitz	Richard Goyder	8	8	2	2	-3.69	0.000
Woolworths	Deloitte	Rod Smith	Roger Corbett	8	1	8	1	-0.40	0.000

Table 1

Sample selection and industry breakdown.

Panel A: Sample process		
Firms in the S&P/ASX Top 500	500	
<i>Less:</i>		
Firms missing CEO details	82	
Firms using non AUS GAAP	26	
Firms changed FYE	4	
Firms without annual reports for 2005	47	
Firms with other missing data	75	
<i>TOTAL FINAL SAMPLE OF FIRMS</i>	266	

Panel B: GICS sector breakdown			
Sector	Number	Percentage	
10: Energy	26	9	
15: Material	61	22	
20: Industrials	48	18	
25: Consumer Discretionary	53	19	
30: Consumer Staples	19	7	
35: Health Care	31	11	
45: Information Technology	19	7	
50: Telecommunication	5	1	
55: Utilities	4	1	
<i>TOTAL</i>	266	100	

Panel C: Sample firm balance dates	
Balance date	Number of firms
31 December	36
28 Feb	1
31 March	3
30 April	1
30 June	209
31 July	5
31 August	2
30 September	9
<i>TOTAL</i>	266

Table 2
Descriptive statistics.

Panel B: Dependent, Independent and Experiential Variables				
	Mean (Median)	Std. Deviation	Minimum	Maximum
<i>IFRS-Diff</i>	-0.005 (0.000)	0.043	-0.513	0.139
<i>Partner/CEO_Tenure</i>	2.681 (2.000)	1.787	1	8
<i>Audit_Firm_Tenure</i>	5.639 (6.000)	2.547	1	8
<i>Market Cap</i>	1293.148 (244.199)	4417.380	20.990	62961.960
<i>Leverage</i>	1.840 (1.717)	1.534	-15.46	14
<i>ROA</i>	0.272 (0.065)	0.232	-2.41	0.390
<i>Loss</i>	0.196 (0.000)	0.397	0	1
<i>Audit_Big_N</i>	0.797 (1.000)	0.403	0	1

Where:

- IFRS-Diff* : Calculated as IFRS income for 2005 reported in 2006 as a prior year figure less IFRS income for 2005 reported in 2005 as an estimate of IFRS income, scaled by average total assets.
- Partner/CEO_Tenure* : The length of time as measured in years (up to a maximum of 8) that the same audit partner and the same CEO combination have worked together in preparing the firm's financial statements at 2006.
- Audit_Firm_Tenure* : The duration of the relation between the audit firm and client firm in years at 2006.
- Market Cap* : The market capitalisation of the firm in 2006, scaled by average total assets.
- LEV* : Leverage, measured as the ratio of the firm's total long-term debt to market value of equity.
- ROA* : Return on assets, measured as the ratio of the firm's earnings divided by total assets (also consistent with Johnson et al., 2002)
- LOSS* : To control for whether the firm experienced a loss, an indicator variable that is set to equal one in the fiscal year 2006 if net income is negative.
- Audit_Big_N* : Indicator variable set to equal one if the firm was audited by a member of the Big 4 during the fiscal year 2006 audit, zero otherwise.

Table 3

Correlation matrix.

	<i>IFRS-Diff</i>	<i>Audit_Firm_Tenure</i>	<i>Partner/CEO_Tenure</i>
<i>IFRS-Diff</i>	1.000	-0.351** 0.000	-0.030 0.627
<i>Audit_Firm_Tenure</i>	-0.135* 0.028	1.000	0.246** 0.000
<i>Partner/CEO_Tenure</i>	0.063 0.308	0.314** 0.000	1.000

All variables as previously defined.

Pearson correlations are below diagonal and Spearman correlations are above diagonal.

All results are two-tailed tests:

** correlation is significant at the 1% level

* correlation is significant at the 5% level

Table 4

Tests of association between IFRS estimation differences and adjustments and auditor tenure.

This table presents the results of tests of association of estimation differences and adjustments on the adoption of IFRS and with measures of auditor tenure. Panel A presents the results for the full sample firms. Panel B presents results for a subsample of firms focused on the lower and upper thirds of sample firms partitioned on the magnitude of IFRS-Diff.

Panel A: IFRS-Diff (Full sample)						
<i>n</i> =266	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	0.004	0.628	0.265	0.004	0.409	0.341
<i>Partner/CEO_Tenure</i>	0.002	1.630	0.052*	0.002	1.580	0.058*
<i>Audit_Firm_Tenure</i>	-0.003	-2.678	0.004***	-0.003	-2.573	0.005***
<i>Market Cap</i>				0.000	0.115	0.454
<i>LEV</i>				0.002	1.026	0.153
<i>ROA</i>				0.004	0.311	0.378
<i>LOSS</i>				-0.004	-0.525	0.300
<i>Audit Big N</i>				-0.003	-0.506	0.307
<i>Adjusted R²</i>	0.022			0.014		
<i>F-stat</i>	3.931		0.021**	1.519		0.161
Panel B: IFRS-Diff (Sample restricted to top and bottom third of sample)						
<i>n</i> =178	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	0.006	0.675	0.250	0.008	0.573	0.284
<i>Partner/CEO_Tenure</i>	0.004	1.545	0.062*	0.003	1.488	0.069*
<i>Audit_Firm_Tenure</i>	-0.004	-2.764	0.003***	-0.004	-2.632	0.005***
<i>Market Cap</i>				0.000	0.086	0.466
<i>LEV</i>				0.002	0.652	0.258
<i>ROA</i>				0.002	0.132	0.447
<i>LOSS</i>				-0.008	-0.669	0.252
<i>Audit Big N</i>				-0.005	-0.447	0.328
<i>Adjusted R²</i>	0.034			0.017		
<i>F-stat</i>	4.105		0.018**	1.442		0.191

All variables as previously defined and reported as one-tailed

*** : Denotes significance at the 1% level

** : Denotes significance at the 5% level

* : Denotes significance at the 10% level

Table 5

Tests of association between ranked IFRS estimation differences and adjustments, and auditor tenure.

This table presents the results of tests of association of ranked estimation differences and adjustments on the adoption of IFRS with measures of auditor tenure. Panel A presents the results for the full sample firms. Panel B presents results for a subsample of firms focused on the lower and upper thirds of sample firms partitioned on the magnitude of IFRS-Diff.

Panel A: RANK-IFRS-Diff (Full sample)						
<i>n</i> =266	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	189.443	16.732	0.000***	177.799	11.005	0.000***
<i>Partner/CEO_Tenure</i>	3.326	1.282	0.100*	3.177	1.216	0.113
<i>Audit_Firm_Tenure</i>	-11.502	-6.321	0.000***	-11.208	-6.077	0.000***
<i>Market Cap</i>				0.001	0.554	0.290
<i>LEV</i>				4.004	1.350	0.089*
<i>ROA</i>				19.420	0.804	0.211
<i>LOSS</i>				6.243	0.440	0.330
<i>Audit Big N</i>				0.683	0.062	0.475
<i>Adjusted R²</i>	0.127			0.121		
<i>F-stat</i>	20.247		0.000***	6.203		0.000***
Panel B: RANK-IFRS-Diff (middle third eliminated)						
<i>n</i> =178	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	206.344	12.949	0.000***	188.754	7.598	0.000***
<i>Partner/CEO_Tenure</i>	4.621	1.196	0.117	4.400	1.126	0.131
<i>Audit_Firm_Tenure</i>	-15.605	-6.035	0.000***	-15.211	-5.743	0.000***
<i>Market Cap</i>				0.001	0.524	0.301
<i>LEV</i>				5.049	1.158	0.124
<i>ROA</i>				10.672	0.346	0.365
<i>LOSS</i>				-0.791	-0.038	0.485
<i>Audit Big N</i>				7.633	0.440	0.330
<i>Adjusted R²</i>	0.164			0.152		
<i>F-stat</i>	18.414		0.000***	5.548		0.000***

RANK-IFRS-Diff: Is the *IFRS-Diff* metric ordered from the largest negative value to largest positive value, and assigned a rank value between 1 and 266.

All other variables as previously defined and reported as one-tailed

*** : Denotes significance at the 1% level
** : Denotes significance at the 5% level
* : Denotes significance at the 10% level

Accepted Manuscript

Table 6

Tests of association between IFRS estimation differences and adjustments, and auditor tenure for non-December year-end firms.

This table presents the results of tests of association of estimation differences and adjustments on the adoption of IFRS with measures of auditor tenure for firms that report later in the reporting cycle (i.e., not in December).

<i>IFRS-Diff</i> – Non-December year-end						
<i>n</i> =229	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	0.007	1.116	0.133	0.008	0.904	0.183
<i>Partner/CEO_Tenure</i>	0.002	1.743	0.041*	0.002	1.771	0.039**
<i>Audit_Firm_Tenure</i>	-0.003	-2.911	0.002**	-0.003	-2.868	0.002***
<i>Market Cap</i>				0.000	-0.110	0.456
<i>LEV</i>				0.001	0.456	0.324
<i>ROA</i>				-0.004	-0.331	0.371
<i>LOSS</i>				-0.012	-1.615	0.054*
<i>Audit Big N</i>				-0.001	-0.173	0.431
<i>Adjusted R²</i>	0.031			0.025		
<i>F-stat</i>	4.660		0.010***	1.846		0.080*

All variables as previously defined and reported as one-tailed

*** : Denotes significance at the 1% level

** : Denotes significance at the 5% level

* : Denotes significance at the 10% level

Table 7

Tests of association between ranked IFRS estimation differences and adjustments and auditor tenure for non-December year-end firms.

This table presents the results of tests of association of rank IFRS estimation differences and adjustments with measures of auditor tenure.

RANK-IFRS-Diff – Non-December year-end						
<i>n=229</i>	Coefficient	t-stat	p-value	Coefficient	t-stat	p-value
<i>Constant</i>	169.445	15.741	0.000***	151.073	10.326	0.000***
<i>Partner/CEO_Tenure</i>	3.619	1.569	0.059*	3.627	1.556	0.061*
<i>Audit_Firm_Tenure</i>	-11.158	-6.568	0.000***	-11.021	-6.361	0.000***
<i>Market Cap</i>				0.000	0.494	0.311
<i>LEV</i>				2.100	0.560	0.288
<i>ROA</i>				7.272	0.335	0.369
<i>LOSS</i>				-0.550	-0.042	0.479
<i>Audit Big N</i>				3.561	0.359	0.360
<i>Adjusted R²</i>	0.153			0.139		
<i>F-stat</i>	21.650		0.000***	6.241		0.000***

All variables as previously defined and reported as one-tailed

- *** : Denotes significance at the 1% level
 ** : Denotes significance at the 5% level
 * : Denotes significance at the 10% level