

Analysis of Transition Errors During the Adoption of IFRS and Some Economic Consequences

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Abstract:

In this paper we focus on Australia's adoption of IFRS in 2005, providing evidence on factors affecting transition errors in financial reporting as Australian companies moved from Australian GAAP to IFRS, and some economic consequences of these errors. We find that characteristics of the firm, the CFO, and the firm's auditor are all associated with IFRS transition errors, and that these errors are associated with larger bid/ask spreads (i.e. greater information asymmetry) and increased audit fees as market participants react to the firm's difficulties adopting a new GAAP. We suggest that this evidence is helpful to both U.S. firms and regulators as the U.S. moves towards IFRS adoption, and also useful to academics, as it suggests the long term benefits of IFRS are likely understated, as transition errors may temporarily understate these benefits.

1. INTRODUCTION

Numerous studies have examined factors that affect the decision to adopt International Financial Reporting Standards (IFRS) and the consequences of the decision to adopt these standards. Some of these studies provide evidence on the institutional factors that affect voluntary adoption of IFRS by different European Union and other countries¹, while others address the impact of voluntary and/or mandatory IFRS adoption on the cost of capital, market liquidity and information asymmetry. Another stream of literature examines the market reaction to IFRS adoption and/or the market value relevance of IFRS adoption.² In this study we add to this research by focusing on the transition costs that are likely to arise with IFRS adoption.

Hail, Leuz and Wysocki (2010) provide an economic framework for analyzing the potential costs and benefits associated with IFRS adoption. They highlight that there are likely to be significant one time transition costs that arise when IFRS are adopted, and we have very little evidence on the magnitude of these costs. In this paper we fill this void by investigating the transition errors that occurred when Australian firms adopted IFRS. We first investigate the factors that cause Australian firms to have transition errors, focusing on firm, CFO, and auditor characteristics. We also investigate whether transition errors are less likely to occur for firms reporting relatively late in the fiscal year. As auditors, CFO's, and regulators become more familiar with the new IFRS accounting regime, there are likely to be information transfers among firms regarding which standards are difficult

¹ See for example, Hope, Jin and Kang (2006) and Ramanna and Sletten (2009) on the institutional factors that effect IFRS adoption and; Cuijpers and Buijink (2005), Daske, Hail, Leuz and Verdi (2008, 2010), Karamanou and Nishiotis (2009) for the economic consequences of IFRS adoption.

² Armstrong, Barth, Jagolinzer and Reidl (2010) address the market reaction to IFRS, whilst Clarkson, Hanna, Richardson and Thompson (2009) address the market value relevance of IFRS adoption.

to implement, reducing the potential for errors. We also investigate whether these errors are more likely to occur when firms have to adopt IFRS standards that are more complex.

We then analyse the impact of IFRS transition errors on measures of information asymmetry and on subsequent audit costs, providing evidence on the potential consequences of IFRS transition errors. Firms that struggle with IFRS adoption are likely to be penalized by market participants with larger spreads, and are likely to experience increased audit costs. Identifying these costs is helpful to firms to consider how much energy and effort to spend in preparing for IFRS adoption.

Our motivation for studying transition errors in Australia is twofold. First, Australia provides a powerful setting to study our research question as it adopted a ‘big bang’ approach to the adoption of IFRS whereby Australian companies were not allowed to use IFRS prior to the adoption year.³ Accordingly, chief financial officers and auditors did not have an opportunity to learn the new IFRS in a gradual fashion; rather they needed to develop their expertise within one reporting cycle. Similar to the U.S., as Hail et al (2010) discuss, the Australian Accounting Standards Board (AASB) also required all firms with a financial year commencing on or after 1 January 2004 to provide financial statement users with financial reports based on Australian GAAP. Firms were also required to reconcile their reports prepared under Australian GAAP to what would have been reported under IFRS. This disclosure required firms to detail significant differences in accounting policies across the two GAAPs, and quantify the impact of the change in

³ Many European Union countries like France, Germany and Italy amongst others, allowed the use of IFRS prior to the 2005 compulsory adoption of IFRS.

accounting policy on firms' financial statements.⁴ We refer to this reporting cycle as the transition year.

For financial year commencing on or after January 1, 2005 all firms were required to adopt IFRS, without the opportunity of 'opting out'.⁵ Accordingly, the first IFRS based annual reports were published for financial years ending on 31 December 2005.⁶ As the financial year for most Australian company's ends on the 30th of June, the majority of annual reports based on IFRS were released during 2006. We refer to this reporting cycle as the 'adoption year'. In the adoption year firms were required to prepare the current year and *comparative disclosure* of prior year information under IFRS, and detail the differences between the prior period comparative disclosure made in the adoption year to the IFRS numbers reported in the transition year. These differences are driven by the incorrect application of IFRS in the transition year, which we define as IFRS transition errors.

To provide evidence on the causes of IFRS transition errors we identify 280 companies of the Australian S&P/ASX top 500 firms (omitting Trusts and Reits), and identify the transition errors that occurred when they adopted IFRS.⁷ The data for IFRS transition errors and CFO characteristics are hand-collected from financial statements.

⁴ For a more detailed discussion of the transition rules see:
<http://www.asic.gov.au/asic/asic.nsf/byheadline/06-012+Australian+companies+on+track+with+smooth+AIFRS+transition?openDocument>

⁵ The inability to 'opt out' avoids the possibility of self-selection bias, hence both the potential for IFRS errors and their potential economic consequences is larger.

⁶ In fact any newly listed companies during 2005 also had to have IFRS based annual reports.

⁷ None of the firms in our sample were cross listed on any exchange outside of Australia.

Auditor and financial characteristics data are obtained from Aspect-Huntley database and the price/volume data from SIRCA database. Of the 280 firms, 142 firms had disclosed an IFRS earnings number in the transition year that turned out to be overstated, 42 firms disclosed an earnings number that was understated. Firms had total IFRS errors ranging from as small as \$10,000 up to almost \$500 Million. There were 19 specific standards that led to IFRS transition errors. The most frequent errors related to income taxes and accounting for business combinations. These descriptive statistics suggest that there was substantial heterogeneity in Australian firm's ability to apply new financial accounting standards.

Our first analysis focuses on the determinants of transition errors. We find that certain CFO characteristics, auditor characteristics, and the timing of the adoption, are all associated with IFRS transition errors. In particular, firms whose CFO is a qualified accountant (a CPA or a CA) are likely to have smaller IFRS transition errors. We also find CFOs that have a longer tenure, and thus are more familiar with the firm's operations, are likely to have smaller IFRS transition errors. As to auditor characteristics, we find that firms that have recently switched auditors are more likely to have IFRS transition errors. This suggests that the auditor's familiarity with the client is important in the extent to which the firm has transition errors.

We also find that IFRS transition errors are less likely for firms that have greater debt monitoring and are relatively larger. The results on size are consistent with Hail et al's (2010) assertions that the size of the firm is likely to be important when considering the potential magnitude of IFRS transition errors. Finally, we also find that firms that adopt IFRS relatively early in the financial reporting cycle have relatively larger errors.

This suggests that auditors and CFO's benefit by reporting later, as issues associated with IFRS adoption are identified and communicated to other market participants.

As to the types of standards that are most likely to give rise to IFRS transition errors, we find that standards that are considered to be more complex are more likely to give rise to transition errors. Our finding that more complex standards are more likely to give rise to transition errors is useful to standard setters, as it informs both auditors and regulators on where more errors are likely to occur.

In terms of the consequences of IFRS adoption, we find that during the year in which IFRS transition errors were disclosed to the market place, firms with the larger IFRS transition errors suffered an increase in bid/ask spreads, suggesting larger costs associated with information asymmetry. Finally, our results suggest that firms with the larger IFRS transition errors also incurred the larger audit costs subsequent to the adoption year.

We believe our paper makes a number of important contributions to the accounting literature. First, as far as we know, the existing accounting literature is relatively silent on factors influencing a firm's (or manager's) ability to implement a new GAAP. Evidence on the factors leading to transition errors and the consequences of those errors is likely to be important as the U.S. government continues considering the transition to IFRS. CFO's and regulators are likely to find the results of our tests to be interesting, as our results are likely to help them focus on which types of firms are likely to have accounting errors. Similarly, evidence on the consequences of transition errors are useful, as they allow managers to gauge the potential costs of transition errors, as they determine the amount of effort they expend in preventing these errors.

Second, our paper is informative to the debate on the net benefits of IFRS. In general, the existing research establishes that there is a net benefit associated with the adoption of IFRS, in that it improves information environments and reduces spreads. Our paper suggests that these papers understate the magnitude of the net benefits, as transition errors temporarily cause firm's information environment to appear worse in the year after IFRS adoption.

Finally, our analysis on the types of standards that give rise to accounting errors is likely to be informative to regulators and standard setters, as it indicates that the most errors occur in areas where IFRS standards are relatively more complex. Standard setters can thus reduce the probability of errors by increasing the extent to which there is GAAP convergence, and regulators can focus on the more complex standards when attempting to identify errors.

The rest of this paper is organized as follows; in Section 2 we provide background information on the literature focusing on the effects of IFRS adoption and the literature investigating accounting errors in general. In Section 3 we develop our hypotheses, in Section 4 we provide an overview of our research design. Section 5 presents results and Section 6 provides conclusions.

2. REVIEW OF THE RELEVANT LITERATURE

2.1 RESEARCH INVESTIGATING IFRS ADOPTION

There is a burgeoning literature on the consequences of IFRS adoption on the firm's information environment, cost of capital, and market impacts. This literature is important as it identifies many of the benefits claimed to arise from the adoption of IFRS.

However, much less attention has been directed towards investigating the costs of transitioning to IFRS, and in particular the causes or consequences of errors when countries require listed firms to switch GAAPs.

Hail, Leuz, and Wysocki (2010) provide a good framework for thinking about the transition errors that are likely to occur. They describe the institutional features of U.S. markets in order to assess the impact of IFRS adoption on U.S. reporting practices, and the potential costs and benefits of switching from U.S. GAAP to IFRS. They document a myriad of costs and benefits associated with the switch to IFRS, and suggest that there are likely to be one time transition costs if the U.S. chooses to require IFRS adoption. They indicate that there is little evidence on the magnitude of transition errors, or the factors that are likely to give rise to transition errors. Our paper complements this study by identifying one of the important transition costs U.S. firms are likely to incur, and providing evidence on the firms where this cost is likely to be both more likely and more costly.

A significant part of the literature considering IFRS adoption has relied upon there being voluntary early adoption to make inferences about the institutional factors impacting voluntary adoption of IFRS in the European Union and other countries (e.g., Hope, Jin and Kang, 2006) and the motivations for countries to adopt IFRS (e.g., Ramanna and Sletten, 2009). Our study differs in that it is undertaken in a context of mandatory adoption, and this permits the evaluation of whether there may be cost savings arising from allowing voluntary adoption of IFRS due to reduced transitional costs of adopting a new GAAP through a staggered introduction (i.e. an error learning process).

There is also a significant literature investigating the consequences of IFRS adoption to provide evidence of benefits that may arise. For example, Li (2009) finds that

there is a decrease in the cost of capital for firms that are required to adopt IFRS, while Daske et al (2007, 2010) find that around the time of IFRS adoption there is an increase in liquidity, a decrease in the cost of capital and increased market valuations for “serious” adopters. Similar results are reported by Karamanou and Nishiotis (2009). Furthermore, Cuijpers and Buijink (2005) suggest that voluntary adopters receive benefit from IFRS adoption in terms of increased analyst followings.

Our paper complements this research along a number of dimensions. Measuring the benefits of IFRS in transition and adoption years is potentially difficult, as when countries change reporting standards, there are likely to be transition errors that impact measures of information asymmetry and cost of capital. Thus, the long-term benefits of IFRS adoption may be larger than these studies suggest. In addition, “serious” adopters may be less likely to have transition errors, as these firms retain high quality auditors, invest in technology, and train their CFOs to ensure higher accounting quality. These costs should be considered in evaluating the benefits of IFRS adoption.

Finally, a number of studies have considered stock market responses. For example, Armstrong et al (2010) investigate the market’s reaction to the EU’s adoption of IFRS, and find on average, a positive response to events signaling an increased likelihood of IFRS adoption. If investors anticipated problems with IFRS adoption, then the long term benefits associated with IFRS are potentially larger than the average market reaction documented in that study (0.3%) as investors may have anticipated difficulties during the transition period resulting in a less positive reaction. By focusing on IFRS transition errors this may provide insights into whether the benefits are likely greater than originally reported.

2.2 RESEARCH ON REPORTING ERRORS AND RESTATEMENTS

There is a fairly deep literature on accounting errors and restatements that spans the last 20 years. This literature is helpful in identifying some issues related to IFRS transition errors, such as how CFOs and audit characteristics relate to IFRS transition errors. Papers investigating the “cause” of accounting errors, like Kinney and McDaniel (1989) and Defond and Jiambolvo (1991), typically compare firms that were required to make restatements to firms that do not, identifying firm or auditor characteristics that influence the probability of having to make a financial accounting restatement.

Researchers like Plumlee and Yohn (2008), investigate whether complexity of the “accounting system”, or simple internal “accounting errors” drive accounting restatements. We take the idea in Plumlee and Yohn (2008) that complexity of accounting standards may generate accounting errors, and identify a setting where there is an increase in complexity, and examine the cross-sectional determinants of those errors. In addition, we conduct our study in an international setting, while most (if not all) of the existing research has been done in the U.S.

Papers investigating the consequences of accounting errors typically examine whether accounting errors lead to CEO/CFO turnover (Desai et al (2008), litigation (Palmrose and Stulz (2004), abnormal returns (Dechow et al (1995), Palmrose et al (2005), and/or increases in information asymmetry (Anderson and Yohn (2002). In our setting, the consequences of the change in accounting standards and subsequent transition errors are likely to be different than those identified in previous research. In particular, Australia does not have litigation risk, and these errors arise at a time when there is a high level of uncertainty in the implementation of a new GAAP, namely IFRS.

3. THEORY DEVELOPMENT

Our analysis of the causes of IFRS transition errors focuses on the year that Australia transitioned from Australian GAAP to IFRS. We develop a number of predictions that the IFRS transition error depends on the firm's CFO quality, auditor quality, the extent to which the firm has debt monitoring, and the timing of the firms reporting (i.e., an error learning process). We also suggest that the nature of the home GAAP, and how it differs from IFRS is also likely to affect the probability that there are transition errors, and that the complexity of the standards increases the likelihood of errors occurring. We also recognize that firm characteristics are also likely to affect the probability of an IFRS transition error, and control for these in the regressions analyses.

We characterize CFO quality in terms of CFOs professional qualifications, tenure, and compensation. CFOs have a variety of responsibility within the firm, including oversight of the firm's accounting and treasury functions. We suggest that firms that have CFOs with a professional accounting designation are less likely to have IFRS transition errors, as CFOs who have been formally trained in accounting are more likely to be able to adapt to changes in accounting regulation. In Australia, there are two types of professional accounting designations, Certified Practicing Accountants (CPA) and Chartered Accountants (CA). In order to maintain CPA or CA qualifications, members of these bodies have to attend a number of professional development programs each year, which addresses current/developing issues in accounting.⁸ Thus we expect firms whose CFO has a CA or CPA qualification to have lower IFRS transition errors.

⁸ Prior to the period leading up to the introduction of IFRS, both professional bodies run extensive training programs in IFRS.

We assume that on average the labor market for CFOs is efficient, resulting in a better CFO having higher compensation. Hence, we expect a negative relation between CFO compensation and IFRS transition errors. We would also expect CFOs with longer tenure to be more talented. Furthermore, we expect firms whose CFOs have a longer tenure to be more familiar with the companies operations, and areas in which IFRS adoption is likely to lead to material errors. Hence, we predict a negative relation between CFO tenure and IFRS transition errors.

In terms of the firm's auditors, existing research (e.g. Defond and Jiambolvo, 1991; Weber and Willenborg, 2003) establishes that larger auditors are likely to provide higher quality audits. In particular, these studies suggest that larger auditors are less likely to audit firms that have accounting errors, and larger firms are less likely to issue "incorrect" audit opinions. Thus one would expect firms that retain larger auditors to have lower IFRS transition errors. We also characterize audit quality in terms of audit tenure and audit fees. Researchers have also established that both new auditors and auditors with a relatively longer tenure are prone to providing lower quality audits (Myers, Myers and Omer, 2003; Myers, Myers, Palmrose and Schulz, 2004). Accordingly, we predict that those firms whose auditors have longer tenure and those firms with new auditors have higher IFRS transition errors. Finally, one could argue that auditors that are paid a relatively larger fee in the IFRS transition year, are likely to exert more effort, and are thus less likely to have less IFRS transition errors.

We argue that firms with more debt monitoring are less likely to have IFRS transition errors. When the firm has outside debt holders (especially if there are relatively more debt holders) the accounting reports serve both a valuation role and a contracting

rule, increasing both the importance and the scrutiny of those reports. Accordingly, we predict firms with more debt monitoring are likely to have smaller IFRS transition errors.

Firms reporting relatively late in the reporting cycle are also less likely to have transition errors because they have the benefit of more time to become familiar with IFRS. The CFOs of firms who report late in the fiscal year are likely to learn from the errors reported by other firms on the inherent difficulties with specific IFRS standards. There are also likely to be professional training programs and/or network connections that allow CFO's to find out the areas where compliance with the new GAAP is relatively more difficult. In addition, auditors that have already audited firms during the early period of the transition year are less likely to make errors during the latter part of the transition to IFRS period. Based on these error learning arguments we suggest that firms that report later in the reporting cycle are likely to have smaller IFRS transition errors.

We also argue that the more IFRS a firm had to adopt and the more complex IFRS the firm had to adopt, the higher the transition errors. Similarly, if the firm has transactions in an area where there is no standard under the Australian GAAP but there is a standard under IFRS, the chance of an error occurring is relatively larger.

We also make some predictions about the economic consequences of IFRS transition errors. Specifically, we identify a number of costs associated with IFRS transition errors. First, we expect firms that do report higher errors as they transition to IFRS are likely to experience increases in information asymmetry as these IFRS transition errors are disclosed to the market. IFRS transition errors are likely to signal increased uncertainty to market participants about the quality of accounting information which, in turn, leads to increases in the firm's bid/ask spread. Thus, we predict that there

is a positive relation between IFRS transition errors and bid/ask spreads over the time period when errors are disclosed to market participants. Second, we analyze the relation between IFRS transition errors and audit fees. We predict that larger IFRS transition errors will lead to additional audit effort and there will be a positive relation between IFRS transition errors and audit fee changes.

4. RESEARCH DESIGN

4.1 SAMPLE SELECTION

To identify a sample of firms with IFRS transition errors we begin with all firms listed in the Top 500 S&P/ASX Australian firms in the transition year. We delete firms from the financial sector (71 firms), since they are subject to additional regulatory reporting requirements. Also deleted from the sample are firms with missing CFO data (77 firms), which includes missing CFO names and/or the CFO compensation details. Further, firms are deleted if they report in foreign currency (15 firms) or if they changed financial year-ends (4 firms). Finally we deleted firms from the sample if we could not obtain a copy of their annual report in the transition year (31) or were missing other data (22 firms). The final sample consists of 280 firms.⁹ Table 1 panel A summarizes the sample derivation and panel B provides information on the sample selected by GICS industry grouping. Consumer products and materials have the most firms in our sample,

⁹ We lose up to 20 additional firms in subsequent analyses due to missing data for those analyses. In each test we conduct we include the maximum number of firms with data available for the analysis. Requiring firms to have data for all tests in the paper does not have a significant effect on our results.

while the fewest number of firms are in the Utilities industry. This is reflective of the market and we do not expect this industry distribution to introduce any bias to our results.

4.2 Descriptive Evidence on the Sources of IFRS Transition Errors

In Table 2, we provide descriptive statistics on the sources of IFRS transition errors. There was significant heterogeneity in the sources of IFRS transition errors. We identified 19 specific standards that led to transition error, and included additional category for the miscellaneous standards that lead to errors (other). The most frequent errors were in the income tax category (171 errors, AASB 112 Income Tax), with this mostly due to the fact that for any element of the income statement that was impacted by a transition error, there is typically also a tax effect associated with the error. The second most frequent category was the accounting for share based payments (145 errors, AASB 2 Share-based payments). The requirements under IFRS are addressed in AASB 2, which was issued in February 2004, and were effective for fiscal years ending after January 1, 2005, which coincides with Australia's transition period to IFRS. Thus, as Australian companies were transitioning to IFRS, they were also simultaneously implementing a new IFRS standard, for which the accounting was significantly different compared to Australian GAAP.¹⁰

Conditional on having an IFRS transition error, the largest (absolute value) errors related to the accounting for impairments. The rules for impairments are governed by

¹⁰ Prior to the adoption of AASB 2, Australian firms both did not expense stock based compensation, and did not provide investors with disclosures on how the income statement would be impacted by the expensing of stock options. See Matolcsy, Riddell and Wright (2009).

AASB 136, which also became effective for fiscal years after Jan 1, 2005, and also represented a substantial departure from Australian GAAP.

We classify the level of complexity of the standards into low, medium and high. Our classification is based on the perceived complexity of the new IFRS compared to Home GAAP and the ‘newness’ of the IFRS standard. The ‘newness’ is based on the closeness of the Home GAAP and IFRS. Our classification of low, medium and high complexity was independently verified by an accounting professor at the University of Technology, Sydney and two partners of a big four accounting firm.

Jointly, this descriptive evidence suggests that as other countries adopt IFRS, if regulators and preparers want to minimize IFRS transition errors, they should focus their attention on the more complex standards and standards for which there are significant differences across the two accounting regimes as they tend to lead to larger transition errors with the exception of AASB 118 Revenue which is classified a low complexity standard with a high transition error. In addition, it is important to note that in the transition year firms were not required to disclose the impact of IFRS accounting rules for derivatives. Thus one very complex accounting error, where the differences between IFRS and Australian GAAP were potentially larger, did not lead to any transition errors in our sample, because of the way Australia firms transitioned to IFRS.

4.3 Research Design

To provide evidence on our predictions, we first develop a measure of the size of the IFRS transition error. We begin by reviewing the disclosure of the reconciliation of Australian GAAP income to IFRS income contained in our sample firm’s financial

reports in the transition year. In the transition year for each of our 19 categories (discussed in Table 2) we identify the sign and magnitude of the reconciling item. We then collect the adoption year financial reports, and identify the reconciliation between IFRS income for the adoption year and the transition year. For each of our 20 categories we once again identify the sign and magnitude of the reconciling item. We then take the difference between the reconciling items across the two disclosures in each of our 20 categories and calculate the absolute value of these differences. We then sum these errors and scale by the firm's revenue, to derive a scaled measure of the IFRS transition error (which we label as **Abs-Error**). For our analysis on the determinants of IFRS transition errors we use ranks of this variable, to mitigate the effects of outliers and skewness in the distribution on the analysis. Similar results are obtained if we use the continuous measures and winsorize at the 1st and 99th percentile.

We also hand collected data on the CFOs professional experience contained in their biographies as reported in the annual reports. We create an indicator variable (**CPA**) that is equal to one if the CFO is a Chartered Accountant (CA) or a Certified Practicing Accountant (CPA), and is zero otherwise. We also create a second indicator variable, **OtherDegree**, that is one if the firm holds a graduate degree (such as MBA or LLM). The variable **CFOTenure** is derived by tracing the CFOs appointment through historical annual reports which measures the CFOs tenure (in years). Finally we calculate the Log of the CFOs total compensation, **CFOComp**, and use it as a measure of the CFOs talent.

To measure audit quality we include an indicator variable **Big4**, which is one if the firm is audited by one of the big 4 auditors, and zero otherwise. We measure audit tenure using two different variables (to account for the potential non-linearity in the effect

of audit tenure on the probability of an audit error). The first variable, **AuditSwitch**, is an indicator variable with the value of one, if the transition year is the first year the auditors were appointed. The second variable, **AuditTenure**, is an indicator variable that is one if the firm retained their current auditor for more than 5 years. To measure audit effort, we create the variable **AuditFee**, which is the ratio of audit fee to total assets.

We measure the extent of debt holder monitoring by defining the variable **Leverage** as the ratio of the firm's total long-term debt to the firm's book value of equity. We measure error learning in IFRS adoption by the timing of the firm's financial reports using an indicator variable **FYE**. This variable is one for firms with a financial year end 31 December and zero for all other firms with financial year ends later in the reporting cycle. We also include controls for firm size, using the natural log of the firm's assets **Size**, and growth options using the ratio of the firm's market value to book value of equity (**MktoB**).

Using these proxies, we investigate the determinants of IFRS transition errors by running the following OLS regression (since there is only one observation per firm there is no need to control for firm or year effects):

$$\mathbf{RankAbsError}_i = \alpha_1 + \beta_1 \mathbf{CPA}_i + \beta_2 \mathbf{OtherDegree}_i + \beta_3 \mathbf{CFOTenure}_i + \beta_4 \mathbf{CFOComp}_i + \beta_5 \mathbf{Big4}_i + \beta_6 \mathbf{AuditSwitch}_i + \beta_7 \mathbf{AuditTenure}_i + \beta_8 \mathbf{AuditFee}_i + \beta_9 \mathbf{Leverage}_i + \beta_{10} \mathbf{FYE}_i + \beta_{11} \mathbf{Size}_i + \beta_{12} \mathbf{MktoB}_i + \varepsilon \quad (1)$$

Variable Definitions:

RankAbsError - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the

absolute value of this difference, we then rank these differences from highest to lowest, where the largest rank has the largest absolute error.

CPA	- Indicator variable set equal to one if the firm's CFO is a certified public accountant or chartered account, zero otherwise.
OtherDegree	- Indicator variable set equal to one if the firm's CFO has a graduate degree, zero otherwise.
CFOTenure	- The number of years the firm's CFO has been employed by the company.
CFOComp	- The natural log of the CFOs compensation (sum of salary, bonus, and stock based compensation).
Big4	- Indicator variable set equal to one if the firm's auditor is a member of the big 4, zero otherwise.
AuditSwitch	- Indicator variable set equal to one if the transition year is the first year that the firm's auditor audited the firm, zero otherwise.
AuditTenure	- Indicator variable set equal to one if the firm's auditor has audited the firm for five or more years, zero otherwise.
AuditFee	- The ratio of audit fees to assets.
Leverage	- The ratio of the firm's total long term debt to market value of equity measured at the beginning of the transition year.
FYE	- Indicator variable set equal to one if the firm's fiscal year end is December 31, 2004, zero otherwise.
Size	- The natural log of total assets measured at the beginning of the transition year.
MktoB	- The ratio of the firm's market value of equity to book value of equity measured at the beginning of the transition year.

We also re-run the above model with additional variables, the number of IFRS standards a firm had to adopt (**No.IFRS**) and an indicator variable set equal to one if the total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income, that are classified as HIGH is greater than the total number of accounting standards that are classified as LOW, zero otherwise (**Complexity**).

To measure the effects of IFRS transition errors on information asymmetry, we begin by developing a measure of information asymmetry, and changes in that measure

over the period that investors were likely to be made aware of the errors firms experienced as they transitioned to IFRS. Drawing on prior research (Leuz and Verrecchia (2002), Verrecchia and Weber (2006)), to measure information asymmetry, we rely on the firm's bid/ask spread. Since the Stock Market in Australia does not have a market maker, we do not attempt to decompose the information bid/ask spread into adverse selection and inventory holding components, we focus on the raw spread.

To determine the change in the spread, we first identify the date that each firm in our sample released their transition year annual report. After that date, the Australian Stock Market regulator, Australian Securities & Investment Commission (or ASIC), required firms to disclose any errors in the estimated impact of IFRS on the firms financial statements as they then became known to the financial statement preparers. Thus we use the period beginning one year prior to the announcement of the transition year earnings through three days prior to the transition earnings announcement as our "pre-period".¹¹ We use the period between the date the transition report was disclosed to the public, and the adoption year report was disclosed as our event period.¹² At any point during the event period investors could potentially be informed about the size of the IFRS transition error. In particular, some firms disclosed some preliminary information regarding the size of those errors as they released their interim financial reports. Other firms made disclosure outside of the financial reporting process. By the time the

¹¹ We also require that there be at least 100 days of bid/ask data in our database during this 360 day window. On average we have 171 days of bid/ask data per firm in the pre event window.

¹² Like the pre event window, we also require that there be at least 100 days of bid/ask data in our database during this 360 day window. On average we have 161 days of bid/ask data per firm in the post-event window.

adoption earnings are disclosed, investors should be aware of the full effects of the transition errors.¹³

We then calculate the average spread during the pre period as follows: For each trading day we identify the closing BID and subtract from it the closing ASK price, and divide this difference by the closing stock price. Then, for each firm we take the average of these spreads over the pre-event window. We follow a similar procedure for the event window. We then calculate the percentage change in the spread over the pre event and event windows (which we label as **Δ Spread**).

Our test variable, **AbsError**, measures the relative size of the firm's IFRS transition errors as we discussed above.¹⁴ Since our test variable measures changes in spreads, we control for changes in firm specific characteristics that are likely to influence the firm's spreads. Consistent with prior research, we control for the firm's stock price using the percentage change in the firm's average stock price over the pre-event period and the average stock price in the event period (which we label as **Δ Price**). We also include controls for changes in the firm's size (**Δ Size**), changes in profitability (**Δ Earnings**), changes in its growth options (**Δ BtoMkt**), and changes in leverage (**Δ Leverage**). Finally, we also control for whether the firm experienced a loss (**Loss**).

Using these proxies, we investigate the relationship between our measure of information asymmetry and IFRS transition errors by running the following OLS

¹³ We have searched the financial press during the transition period and identified numerous disclosures by our sample firms on the cause and/or magnitude of their IFRS errors.

¹⁴ There is one influential observation that we winsorize at the 99th percentile.

regression (we include fixed effect for industry, since there is only one observation per firm there is no need to control for firm or year effects):

$$\Delta\text{Spread}_i = \alpha_1 + \beta_1\text{AbsError}_i + \beta_2\Delta\text{Price}_i + \beta_3\Delta\text{Size}_i + \beta_4\Delta\text{Earnings}_i + \beta_7\Delta\text{BtoMkt}_i + \beta_8\Delta\text{Leverage}_i + \beta_5\text{Loss}_i + \beta_x\text{IndFixedEffects}_i + \varepsilon \quad (2)$$

Variable Definitions:

- AbsError** - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the absolute value of this difference.
- ΔPrice** - Calculated as the percentage change in the firm’s average stock price over the pre event period and the event period.
- ΔSize** Calculated as the percentage change in the market value of equity of the firm on the transition date and the adoption date.
- ΔEarnings** Calculated as the change in ROA of the firm on the transition date and the adoption date, where **ROA** is the ratio of the firm’s earnings divided by total assets.
- ΔBtoMkt** Calculated as the percentage change in the book to market ratio of the firm on the transition date and the adoption date, where **BtoMkt** is the ratio of the firm’s book value of equity to market value of equity.
- ΔLev** Calculated as the percentage change in the leverage of the firm on the transition date and the adoption date where **Leverage** is the ratio of the firm’s total long term debt to market value of equity.
- Loss** - Indicator variable that is one if fiscal year 2007 net income is negative

To provide evidence on the incremental audit costs associated with the disclosure of transition errors, we first develop a measure of the change in the firm’s audit fees. We use the audit fee in the adoption year as our measure of the “base” period, and the audit fee in the first year after adoption (fiscal year 2007), as our measure of the post audit fee, and calculate the percentage change in audit fees (**ΔFees**). If transition errors resulted in firms incurring more audit costs, then one would expect firms will increase their expenditures on audit fees after they find out there were significant errors.

Consistent with our description above, we measure the size of the transition error using the **AbsError** variable. Since our model is a model of changes in audit fees, we

develop measure of changes in firm characteristics that are likely to be associated with the size of the firm's audit fee. Since most audit fee models are in levels, we take the difference of the variables that are commonly included in those models.

More specifically, we control for changes in the firm's profitability ($\Delta\text{Earnings}$), size (ΔMVE), and current assets ($\Delta\text{Current Assets}$). We also include controls for whether the firm switched auditors after the adoption year earnings were announced ($\Delta\text{Auditor}$), whether the firm is audited by a large auditor (**Big4**), and the audit firm's tenure (**AuditTenure**). Using these proxies, we investigate the relationship between our measure of change in audit fees and IFRS transition errors by running the following OLS regression:

$$\Delta\text{AuditFee}_i = \alpha_1 + \beta_1\text{AbsError}_i + \beta_2\Delta\text{Earnings}_i + \beta_3\Delta\text{CurrentAssets}_i + \beta_4\Delta\text{Auditor}_i + \beta_5\text{Big4} + \beta_6\text{AuditTenure}_i + \varepsilon \quad (3)$$

Variable Definitions:

- AbsError** - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the absolute value of this difference.
- $\Delta\text{Earnings}$** - Calculated as the change in ROA between fiscal year 2006 and fiscal year 2007.
- ΔSize** - Calculated as the percentage change in assets between fiscal year 2006 and fiscal year 2007.
- $\Delta\text{Current Assets}$** Calculated as the percentage change in current assets (inventory and accounts receivable) between fiscal year 2006 and fiscal year 2007.
- $\Delta\text{Auditor}$** - Indicator variable set equal to one if the firm switched auditors in fiscal year 2006 (prior to the fiscal year 2007 audit), 0 otherwise.
- Big4** - Indicator variable set equal to one if the firm was audited by a member of the Big 4 during the fiscal year 2007 audit, 0 otherwise.
- AuditTenure** - Indicator variable set equal to one if the firm's auditor has audited the firm for five or more years, zero otherwise.

5. RESULTS

5.1 Descriptive Statistics

Table 3 provides Descriptive Statistics, reporting the means, medians and standard deviations of the variables used in our main analysis. Roughly 60% of the CFO's in our sample have either a CPA or a CA, and slightly more than 60% have an advanced degree (i.e. either an MBA, a law degree, some other masters or PhD). The average tenure of the CFO's in our sample is slightly less than three and a half years. In terms of auditor characteristics almost 80% of sample firms are audited by a member of the Big 4. The audit switch rate is roughly 7%, and over 50% of our sample has been audited by the same firm for more than five years. Other notable statistics are that 15% of the sample firms have December fiscal year ends, and were thus announcing "early" in the reporting cycle.

5.2 Main Results

Table 4 reports the results for our analysis of the determinants of IFRS transition errors based on equation 1. First, focusing on Column 1 in Table 4, we find that a CFO who has been certified as a CPA or a Chartered Accountant is less likely to have an IFRS transition error ($t = -2.52$). This result suggests that if a firm has a CFO that is not certified, they might want to consider obtaining additional accounting help if they are transitioning to IFRS. We also find that firms with CFOs that have received an alternative advanced degree, like an MBA or an LLM, are more likely to have IFRS transition errors as the coefficient is significant and positive ($t = 2.04$). This results highlights the trade-offs firms make when they hire CFOs. Some specialize in the

treasury or financing function, while others obtain advanced accounting knowledge. At the time of IFRS transition, those with more specialization in non-accounting areas are more likely to experience transition errors.

In terms of CFO tenure and compensation, which are both likely to be proxying for CFO ability and experience, we find that CFOs with longer tenure have less IFRS transition errors, as the coefficient is negative and significant ($t = -2.74$). On the other hand, there is not a statistically significant relation between compensation and errors. These results suggest that new CFOs that may be less familiar with the firm's operations, and intricate accounting policies, are more likely to have difficulty implementing IFRS.

In terms of auditor quality, the coefficients of variables Big4 and Audit Switch are all significant and positive ($t = 1.36$ and $t = 2.30$, respectively). Perhaps, surprisingly, we find that firms that have hired a Big4 auditor are more likely to experience IFRS transition errors. This result could be due to a self-selection problem, as firms that have relatively larger auditor firms are likely to have relatively more complicated accounting problems, hence are more likely to experience IFRS transition errors. In terms of auditor switch, we find that firms that have switched auditors are more likely to have IFRS transition errors. This result is consistent with Myers et al (2003), who suggest that audit quality is non-linear, whereby newer auditors and auditors are both more likely to provide lower audit quality. The coefficients on the audit tenure and audit fee variables are however not significant.

The coefficient on the debt monitoring variable (Leverage) is negative and significant ($t = -1.80$). This supports our debt monitoring prediction, that firms with outside debt holders are less likely to have IFRS transition errors.

The coefficient of the error learning variable (FYE) is also positive and significant ($t=3.70$). This result indicates that reports prepared relatively earlier in the fiscal year are more likely to experience an IFRS transition error. This result is consistent with the proposition that error learning plays an important role in IFRS transition errors. When firms are forced to transition to IFRS, those that are required to transition earlier, due to earlier reporting dates, are more likely to have errors. Those that have more time to both update their accounting system, and become familiar with the difficulties that other firms have are less likely to have errors. In terms of the control variables, we do find that larger firms are less likely to have transition errors. This result is consistent with the notion that while larger firms have more complicated accounts, they have access to greater expertise.

In column two and column three of Table 4 we report results for model 2 and model 3, respectively. These models are based on equation 1 with an additional variable each to capture complexity of the IFRS. In model 2 we include the number of IFRS standards (No.IFRS) a firm had to adopt, and in model 3 we add an indicator variable set equal to one if the total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income, that are classified as high complexity is greater than the total number of accounting standards that are classified as low complexity, zero otherwise. The coefficient on both the number of IFRS adopted and the complexity of the IFRS adopted are positive and significant ($t= 4.20$ and $t =1.60$, respectively). The results on these models suggest that the more IFRS a firm had to adopt and the more complex IFRS a firm had adopt, the higher the transition errors. All the other variables have the same sign and significance as in Model 1.

In summary, our results are consistent with our predictions that CFO quality, audit quality, an error learning process and complexity of the IFRS adopted by the firm are associated with IFRS transition errors.

We also approximate the economic cost of transition to IFRS in terms of information asymmetry and increased audit fees. In Table 5 we report the relationship between IFRS transition errors and our measure of information asymmetry, the firm's bid/ask spread based on Equation 2. The coefficient of IFRS transition errors is significant and positive ($t=1.94$). This result indicates that firms with larger IFRS transition errors experience a larger increase in their Bid/Ask spreads. This finding is consistent with IFRS transition errors leading to increases in information asymmetry and increase in the firm's cost of capital. In terms of our control variables, change in price (Δ **Price**), change in size (Δ **Size**) change in earnings (Δ **Earnings**) and Δ in book to market (Δ **B to Mkt**) are significant. We find that the firm's Price is related to the percentage increase in spreads, which is likely a mechanical relationship. Firms with a larger change in price are likely to have changes in relative spreads that are smaller, as the spread is scaled by price. We also find that firms with increases in size have decreases in spreads, which is consistent with improved information environments occurring in larger firms, reducing spreads. Finally our results indicate that firms with increases in growth options have smaller spreads, while firms that have increases in leverage experience increases in spreads.

Table 6 reports the results for our analysis of the effect of the IFRS transition errors on audit fees, based on Equation 3. Consistent with our main prediction, we find that firms that have larger IFRS transition errors are likely to have an increase in the audit

fees in the period after the transition as the coefficient of Abs Error is positive and significant ($t=2.09$). This result is consistent with the prediction that firms with larger errors spend more on auditors to reduce the likelihood of future errors. It also highlights one of the additional costs that are associated with transition to a new set of accounting principles. Consistent with prior research (for example Weber, Willenborg and Zhang (2008), many of our control variables are not significant in this specification. The one variable that is significant, Big4, is potentially interesting as it has a negative sign. This result suggests that the costs of auditing IFRS prepared statements are potentially lower than Australian GAAP (at least for big 4 auditors).

In summary, our results are consistent with our predictions that, during the transition period, firms with larger IFRS errors have higher costs in terms of information asymmetry and audit fees.

5.3 Sensitivity Analysis

To ensure that our results are not being driven by our research design choices, we conduct several sensitivity analyses. First, while our main test of the determinants of IFRS transition errors is conducted using an OLS regression, we recognize that the dependant variable is truncated at 0 (and has a mass point at 0). Thus we re-run the analysis using a tobit regression, and find results that are generally consistent with those reported in the paper (variables that are statistically significant remain significant, while those that are not do not become significant). Second, our dependant variables in our investigation of the determinants of IFRS transition errors are ranked. We re-run the tests using the unranked measure and winsorize the variables at the 1st and 99th percentiles and find results that are consistent with those reported in the paper.

In our analysis of the effect of IFRS transition errors on measures of the bid/ask spread, we must identify a pre-event period and an event period. We investigate the sensitivity of our results to these research design choices. Changing the size of the pre-event window, and/or the event window does not have a material impact on our results. The size of the post-event window is important. In particular, if we reduce the post-event window to be under 250 days, we lose statistical significance. This suggests that market participants are unlikely to learn the full effects of IFRS transition errors until the subsequent earnings announcement is made available to the public.

6. CONCLUSIONS

This study investigates the transition costs associated with the adoption of IFRS and some of the economic consequences of these transition errors. We predict that IFRS transition errors can be, at least in part, explained in terms of CFO quality, audit quality, debt monitoring and an error learning process. We characterize CFO quality in terms of their accounting qualifications, other degrees, tenure and their compensation. We find that all these characteristics are significant in explaining IFRS transition errors, but their compensation. We also find that audit switching is associated with IFRS transition error and IFRS transition errors are also associated with an error learning process. Finally our results suggest that the more IFRS or the more complex IFRS a firm was impacted by during the adoption of IFRS, the higher the transition errors.

In terms of economic consequences, we find that during the transition period to IFRS, firms with larger errors have increased information asymmetry and increased audit fees.

Overall, our paper provides an insight into the transition to IFRS process, which has not been addressed in the literature. Hence, we supplement the other already existing evidence on the costs and benefits of IFRS adoption. Our results suggest that firms which do not have CFOs with accounting expertise may want to obtain such expertise to minimize their transition costs. Regulators may need to address the costs and benefits of introducing all IFRS at the same time (the ‘big bang’ approach) as opposed to a gradual introduction. Alternatively regulators may want to stage the introduction of more complex and new standards to minimize transition errors.

References

- Anderson, L.K. & Yohn, T.L. 2002, 'The effect of 10K restatements on firm value, information asymmetries, and investors' reliance on earnings', *Working Paper*.
- Armstrong, C.S., Barth, M.E., Jagolinzer, A.D. & Riedl, E.J. 2010, 'Market Reaction to the Adoption of IFRS in Europe', *Accounting Review*, vol. 85, no. 1, pp. 31-61.
- Armstrong, C.S., Guay, W.R. & Weber, J. 2010, 'The role of information and financial reporting in corporate governance and debt contracting', *Working Paper*.
- Clarckson, P., Hanna, J.D., Richardson, G. & Thompson, R. 2009, 'The impact of IFRS adoption on the value relevance of book value and earnings', *Working Paper*.
- Cuijpers, R. & Buijink, W. 2005, 'Voluntary Adoption of Non-Local GAAP in the European Union: A Study of Determinants and Consequences', *European Accounting Review*, vol. 14, no. 3, pp. 487-524.
- Daske, H., Hail, L., Leuz, C. & Verdi, R. 2008, 'Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences', *Journal of Accounting Research*, vol. 46, no. 5, pp. 1085-1142.
- Daske, H., Hail, L., Leuz, C. & Verdi, R. 2009, 'Adopting a label: Heterogeneity in the economic consequences of IFRS adoptions', *Working Paper*.
- Dechow, P.M., Ge, W. & Schrand, C. 2010, 'Understanding earnings quality: A review of the proxies, their determinants and their consequences', *Working Paper*.
- Dechow, P.M. & Sloan, R.G. 1995, 'Detecting Earnings Management', *Accounting Review*, vol. 70, no. 2, pp. 193-225.
- DeFond, M.L. & Jiambalvo, J. 1991, 'Incidence and Circumstances of Accounting Errors', *Accounting Review*, vol. 66, no. 3, pp. 643-655.
- Desai, H., Hogan, C.E. & Wilkins, M.S. 2006, 'The reputational penalty for aggressive accounting: Earnings restatements and management turnover', *The Accounting Review*, vol. 81, no. 1, pp. 83-112.
- Hail, L., Leuz, C. & Wysocki, P.D. 2009, 'Global accounting convergence and the potential adoption of IFRS by the United States: An analysis of economic and policy factors', *Working Paper*.
- Hennes, K.M., Leone, A.J. & Miller, B.P. 2008, 'The Importance of Distinguishing Errors from Irregularities in Restatement Research: The Case of Restatements and CEO/CFO Turnover', *Accounting Review*, vol. 83, no. 6, pp. 1487-1519.
- Hope, O.-K., Jin, J. & Kang, T. 2006, 'Empirical Evidence on Jurisdictions that Adopt IFRS', *Journal of International Accounting Research*, vol. 5, no. 2, pp. 1-20.

- Johnson, V.E., Khurana, I.K. & Reynolds, J.K. 2002, 'Audit-Firm Tenure and the Quality of Financial Reports', *Contemporary Accounting Research*, vol. 19, no. 4, pp. 637-660.
- Karamanou, I. & Nishiotis, G. 2009, 'Disclosure and the cost of capital: Evidence from the market's reaction to firm voluntary adoption of IAS', *Journal of Business Finance & Accounting*, vol. 36, no. 7-8, pp. 793-821.
- Kinney Jr, W.R. & McDaniel, L.S. 1989, 'Characteristics of firms correcting previously reported quarterly earnings', *Journal of Accounting & Economics*, vol. 11, no. 1, pp. 71-93.
- Kitney, D. & Buffini, F. 2006, 'ASIC offers reprieve on tough reporting rules', *The Australian Financial Review*, pp. 1, 11.
- Leuz, C. & Wysocki, P.D. 2008, 'Economic consequences of financial reporting and disclosure regulation: a review and suggestions for future research', *Working Paper*.
- Myers, J.N., Myers, L.A. & Omer, T.C. 2003, 'Exploring the Term of the Auditor-Client Relationship and the Quality of Earnings: A Case for Mandatory Auditor Rotation?', *Accounting Review*, vol. 78, no. 3, pp. 779-799.
- Myers, J.N., Myers, L.A., Palmrose, Z.-V. & Scholz, S. 2005, 'The length of auditor-client relationships and financial statement restatements', *Working Paper*.
- Palmrose, Z.-V., Richardson, V.J. & Scholz, S. 2004a, 'Determinants of market reactions to restatement announcements', *Journal of Accounting and Economics*, vol. 37, no. 1, pp. 59-89.
- Palmrose, Z.-V., Richardson, V.J. & Scholz, S. 2004b, 'Determinants of market reactions to restatement announcements', *Journal of Accounting & Economics*, vol. 37, no. 1, p. 59.
- Palmrose, Z.-V. & Scholz, S. 2004, 'The Circumstances and Legal Consequences of Non-GAAP Reporting: Evidence from Restatements', *Contemporary Accounting Research*, vol. 21, no. 1, pp. 139-180.
- Plumlee, M. & Yohn, T.L. 2010, 'An Analysis of the Underlying Causes Attributed to Restatements', *Accounting Horizons*, vol. 24, no. 1, pp. 41-64.
- Ramana, K. & Sletten, E. 2010, 'Why do countries adopt international financial reporting standards?', *harvard Business School Working Paper series 09-102*.
- Siqi, L., 'Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital?', *Accounting Review*, vol. 85, no. 2, pp. 607-636.
- Siqi, L. 2010, 'Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital?', *Accounting Review*, vol. 85, no. 2, pp. 607-636.

- Stanley, J.D. & Todd DeZoort, F. 2007, 'Audit firm tenure and financial restatements: An analysis of industry specialization and fee effects', *Journal of Accounting & Public Policy*, vol. 26, no. 2, pp. 131-159.
- Verrecchia, R.E. & Weber, J. 2006, 'Redacted Disclosure', *Journal of Accounting Research*, vol. 44, no. 4, pp. 791-814.
- Weber, J. & Willenborg, M. 2003, 'Do Expert Informational Intermediaries Add Value? Evidence from Auditors in Microcap Initial Public Offerings', *Journal of Accounting Research*, vol. 41, no. 4, pp. 681-720.

Table 1
Sample selection and industry breakdown
Panel A: Sample selection

Firms in the S&P/ASX Fortune 500		500
Less:		
Financial Firms		71
Firms missing CFO data		77
Firms using non AUS GAAP		15
Firms changed FYE		4
Firms without annual reports		31
Other missing Data		22
Total		280

Panel B: GICS sector breakdown

	Number	Percentage
Consumer	76	27.14%
Energy	25	8.93%
HealthCare	36	12.86%
Industrial	50	17.86%
Information	21	7.50%
Material	62	22.14%
Telecommunication	6	2.14%
Utilities	4	1.43%
Total	280	100%

Table 2
Descriptive Statistics on the Accounting Standards that led to the Accounting Errors and the relative size of the errors

Accounting Standard	Number of firms with an Error	Aggregate absolute Value of errors \$M	Average size of Abs Val of error	Level of complexity
AASB 118 Revenue	49	247.4	5.05	Low
AASB 119 Employee benefits	48	131.4	2.74	High
AASB 2 Share-based payment	145	124.3	0.86	High
AASB 3 Business combinations	111	540.3	4.87	High
AASB 138 Intangible Assets	47	106.0	2.26	High
AASB 116 Property, Plant and Equip	51	97.9	1.92	Low
AASB 112 Income Tax	171	925.1	5.41	High
AASB 132 and 139 Financial Inst.	20	48.8	2.44	High
AASB 136 Impairment Transition	42	468.8	11.16	High
AASB 117 Lease	48	59.7	1.24	Medium
AASB 140 Investment property	10	61.2	6.12	Low
AASB 128 Joint ventures	38	50.8	1.34	Medium
AASB 121 Functional Currency	29	105.6	3.64	Medium
AASB 6 Exploration Transition	3	18.7	6.23	Medium
AASB 123 Borrowings	13	48.5	3.73	Low
AASB 137 Provisions, contingent liabilities and assets	43	55.3	1.29	Medium
AASB 5 Assets held for sale	12	54.0	4.50	Low
AASB 102 Inventories	7	28.13	4.02	Low
AASB 120 Government grants	4	23.65	5.91	Low
Other Standards	76	444.37	5.85	

Table 3
Descriptive Statistics

Variable	Mean (median)	Std Dev
Rank Abs Error	138.5 (138.5)	79.75
CPA	0.60 (1.00)	0.49
OtherDegree	0.61 (1.00)	0.49
CfoTenure	3.35 (2.0)	3.78
CFOComp	12.72 (12.64)	0.77
Big4	0.79 (1.00)	0.40
AuditSwitch	0.07 (0.00)	0.25
AuditTenure	0.54 (0.49)	0.49
AuditFee	0.002 (0.003)	0.001
Leverage	0.88 (0.76)	0.98
FYE_	0.15 (0.00)	0.35
Size	5.35 (5.06)	1.71
MktoB	2.86 (2.10)	3.21
No.IFRS	3.74 (4.00)	2.03
Complex	0.85 (1.00)	0.35

Variable Definitions:

RankAbsError - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal

year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the absolute value of this difference, we then rank these differences from highest to lowest, where the largest rank has the largest absolute error.

- CPA** - Indicator variable set equal to one if the firm's CFO is a certified public accountant or chartered account, zero otherwise.
- OtherDegree** - Indicator variable set equal to one if the firm's CFO has a graduate degree, zero otherwise.
- CFOTenure** - The number of years the firm's CFO has been employed by the company.
- CFOComp** - The natural log of the CFOs compensation (sum of salary, bonus, and stock based compensation).
- Big4** - Indicator variable set equal to one if the firm's auditor is a member of the big 4, zero otherwise.
- AuditSwitch** - Indicator variable set equal to one if the transition year is the first year that the firm's auditor audited the firm, zero otherwise.
- AuditTenure** - Indicator variable set equal to one if the firm's auditor has audited the firm for five or more years, zero otherwise.
- AuditFee** - The ratio of audit fees to assets.
- Leverage** - The ratio of the firm's total long term debt to market value of equity measured at the beginning of the transition year.

- FYE** - Indicator variable set equal to one if the firm's fiscal year end is December 31, 2004, zero otherwise.
- Size** - The natural log of total assets measured at the beginning of the transition year.

- MktoB** - The ratio of the firm's market value of equity to book value of equity measured at the beginning of the transition year.
- No.IFRS** - The total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income
- Complex** - Indicator variable set equal to one if the total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income, that are classified as HIGH is greater than the total number of accounting standards that are classified as LOW, zero otherwise

Table 4

Determinants of IFRS Transition Errors

Model Variable	Predicted Sign	Model 1 Coefficient (T-Statistic)	Model 2 Coefficient (T-Statistic)	Model 3 Coefficient (T-Statistic)
Intercept	?	190.509 (1.97)**	211.734 (2.26)***	199.769 (2.07)**
CPA	-	-27.870 (-2.52)***	-22.597 (-2.10)**	-27.550 (-2.50)***
OtherDegree	?	22.628 (2.04)**	13.732 (1.25)	22.088 (2.00)
CFOTenure	-	-3.361 (-2.74)***	-2.331 (-1.92)**	-3.082 (-2.50)***
CFOComp	-	-0.535 (-0.06)	-2.088 (-0.25)	-2.933 (-0.33)
Big4	-	17.142 (1.36)*	16.092 (1.31)	19.208 (1.52)*
AuditSwitch	+	41.924 (2.30)***	38.477 (2.17)**	41.261 (2.26)**
AuditTenure	+	9.578 (0.99)	9.858 (1.06)	10.078 (1.05)
AuditFee	-	2213 (1.22)	1467 (0.83)	2170 (1.20)
Leverage	-	-8.908 (-1.80)**	-8.670 (-1.81)**	-8.491 (-1.71)**
FYE	+	47.772 (3.70)***	49.504 (3.95)***	49.537 (3.83)***
Size	-	-7.888 (-1.63)**	-15.445 (4.20)***	-7.912 (-1.64)*
MktoB	?	-2.040 (-1.34)*	-2.460 (-1.67)**	2.178 (1.44)*
No.IFRS	+		10.413 (4.20)***	
Complexity				21.259 (1.60)*
Adjusted R-Squared		13.7%	18.9%	14.2%

Variable Definitions:

CPA - Indicator variable set equal to one if the firm's CFO is a certified public accountant or chartered account, zero otherwise.

OtherDegree - Indicator variable set equal to one if the firm's CFO has a graduate degree, zero otherwise.

CFOTenure - The number of years the firm's CFO has been employed by the company.

CFOComp	- The natural log of the CFOs compensation (sum of salary, bonus, and stock based compensation).
Big4	- Indicator variable set equal to one if the firm's auditor is a member of the big 4, zero otherwise.
AuditSwitch	- Indicator variable set equal to one if the transition year is the first year that the firm's auditor audited the firm, zero otherwise.
AuditTenure	- Indicator variable set equal to one if the firm's auditor has audited the firm for five or more years, zero otherwise.
AuditFee	- The ratio of audit fees to assets.
Leverage	- The ratio of the firm's total long term debt to market value of equity measured at the beginning of the transition year.
FYE	- Indicator variable set equal to one if the firm's fiscal year end is before June 30, 2005, zero otherwise.
Size	- The natural log of the firm's total assets measured at the beginning of the transition year.
MktoB	- The ratio of the firm's market value of equity to book value of equity measured at the beginning of the transition year.
No.IFRS	- The total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income
Complexity	- Indicator variable set equal to one if the total number of accounting standards identified by the firm as having a material impact on income during the reconciliation of Home GAAP income to IFRS income, that are classified as HIGH is greater than the total number of accounting standards that are classified as LOW, zero otherwise

Table 5

Analysis of the effect of IFRS Transition Errors on the firm's Bid/Ask spreads.

Variable	Predicted Sign	Coefficient (T-Statistic)
Intercept	?	-0.013 (-0.24)
AbsError	+	0.02 (1.94)**
ΔPrice	-	-0.30 (-10.00)***
ΔSize	-	-2.03 (-3.63)***
ΔEarnings	+	-0.09 (-0.83)
ΔBtoMkt	-	-0.16 (-3.01)***
ΔLev	-	0.14 (2.71)***
Loss	+	0.04 (0.87)
Industry fixed effects	?	(included)
Adjusted R-Squared		47.8%

Variable Definitions:

- AbsError** - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the absolute value of this difference.
- PreEvent** - The period beginning one year before the announcement of the transition period earnings through 3 days before the announcement of the transition period earnings.
- Event** The period beginning 3 days after the announcement of the transition period earnings through the announcement of the adoption period earnings (by which time the full amount of the size of the transition error would have been known by market participants)
- ΔPrice** - Calculated as the percentage change in the firm's average stock price over the pre event period and the event period.
- ΔSize** Calculated as the percentage change in the market value of equity of the firm on the transition date and the adoption date.

ΔEarnings	Calculated as the change in ROA of the firm on the transition date and the adoption date, where ROA is the ratio of the firm's earnings divided by total assets.
ΔBtoMkt	Calculated as the percentage change in the book to market ratio of the firm on the transition date and the adoption date, where BtoMkt is the ratio of the firm's book value of equity to market value of equity.
ΔLev	Calculated as the percentage change in the leverage of the firm on the transition date and the adoption date where Leverage is the ratio of the firm's total long term debt to market value of equity.
Loss	- Indicator variable that is one if fiscal year 2007 net income is negative

Table 6

Analysis of the effect of IFRS Transition Errors on Changes in Audit Fees.

Variable	Predicted Sign	Coefficient (T-Statistic)
Intercept	?	0.30 (1.59)
AbsError	+	0.07 (2.09)**
ΔEarnings	+	0.05 (-0.58)
ΔSize	+	0.001 (1.51)
ΔCurrent Assets	-	0.006 (1.34)
ΔAuditor	-	0.19 (1.02)
Big 4	+	-0.34 (-2.30)**
AuditTenure	?	0.04 (1.39)
Adjusted R-Squared		5.1%

Variable Definitions:

- AbsError** - For each of the 18 categories we identified above, we calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2005. We then calculate the difference between IFRS and Australian GAAP for the 2005 fiscal year, as reported in 2006. We then calculate the difference between these differences, and calculate the absolute value of this difference.
- ΔEarnings** - Calculated as the change in ROA between fiscal year 2006 and fiscal year 2007.
- ΔSize** - Calculated as the percentage change in assets between fiscal year 2006 and fiscal year 2007.
- ΔCurrent Assets** Calculated as the percentage change in current assets (inventory and accounts receivable) between fiscal year 2006 and fiscal year 2007.
- ΔAuditor** - Indicator variable set equal to one if the firm switched auditors in fiscal year 2006 (prior to the fiscal year 2007 audit), 0 otherwise.
- Big4** - Indicator variable set equal to one if the firm was audited by a member of the Big 4 during the fiscal year 2007 audit, 0 otherwise.
- AuditTenure** - Indicator variable set equal to one if the firm's auditor has audited the firm for five or more years, zero otherwise.