The Impact of IFRS 10 on Consolidated Financial Reporting

ABSTRACT

This study examines the impact of IFRS 10 adoption on consolidated financial reports. Our evidence suggests that the new standard is associated with firms consolidating fewer subsidiaries and consolidating less subsidiaries with non-majority ownership. The results also indicate that the effects of IFRS 10 adoption are associated with financial reporting incentives. Finally, our results suggest that post-IFRS 10, the value relevance of equity increased and the value relevance of profit decreased for firms reporting fewer subsidiaries. The findings are of particular interest to accounting standard setters who are currently undertaking their post-implementation review of the impact of IFRS 10 adoption.

1. Introduction

The aim of this study is to examine the impact of IFRS 10 adoption in 2013 and to determine whether the International Accounting Standards Board (IASB) achieved its objective of improving the usefulness of consolidated financial statements (IASB, 2011, *p.* 43). Prior to 2013, International Accounting Standard (IAS) 27 *Separate Financial Statements* governed the presentation and preparation of consolidated financial statements for companies using International Financial Reporting Standards (IFRS).[1] While IAS 27 was viewed as an improvement from the prior accounting standard (Hsu *et al.*, 2012), it has been criticised for applying a definition of control which, arguably provided firms with the discretion to opportunistically exclude loss-making and non-majority owned entities (IASB, 2011). In light of these concerns regarding IAS 27, the IASB introduced IFRS 10 *Consolidated Financial Statements* in 2013 with an updated control definition which purported to address the issues raised regarding the IAS 27 control definition.[2] At present however, there is limited evidence on the impact of IFRS 10 on consolidated financial statements. Accordingly, we examine the impact of IFRS 10 adoption by Australian firms and evaluate whether IFRS 10 improved consolidated financial reporting.

Specifically, we examine the association between IFRS 10 adoption and: i) changes in the number of subsidiaries consolidated, ii) the consolidation of non-majority owned subsidiaries; iii) whether the change in subsidiaries consolidated after the new standard is associated with firm profitability, and (iv) the value relevance of financial statements. We also analyse whether the effect of IFRS 10 adoption on the change in the number of subsidiaries and recognition of non-majority owned subsidiaries is impacted by factors that prior research has identified as motivating appropriate consolidation (Beck *et al.*, 2017; Whittred, 1987; Mian and Smith, 1990a).

Consolidated financial statements are crucial to decision makers as they are the primary source of information used by stakeholders to make decisions regarding corporate groups. Underpinning the preparation of consolidated financial statements are the accounting standards that set out the

---

[1] Australia adopted IFRS for financial years commencing on or after 1 January 2005. Due to the legal framework in Australia, accounting standards are issued by the Australian Accounting Standards Board (AASB). These standards are qualitatively the same and do not differ from IFRS beyond minor technicalities in terminology specific to the Australian setting. Thus, we use the term 'IAS 27' to refer to both the international standard (IAS 27) and the Australian version (AASB 127) throughout this paper.

[2] IFRS 10 was re-issued in Australia as AASB 10 but contains the same requirements as IFRS 10. For ease of exposition, we refer to the Australian standard as 'IFRS 10' throughout the paper.

definition of 'control', as control forms the basis for identifying which entities' (*i.e.,* subsidiaries) financial information are aggregated into the consolidated financial statements. Under the superseded IAS 27 the control definition was criticised as it required the parent entity to (1) have the "*power to govern*" over, and (2) the receipt of "*benefits*" from, the subsidiary, suggesting that majority shareholder ownership and positive returns are necessary conditions, respectively for consolidation.[3]

In light of concerns surrounding the IAS 27 control definition, the IASB introduced IFRS 10 *Consolidated Financial Statements* in 2013. IFRS 10 applies a principles-based definition of control which requires firms to consolidate entities from which they i) receive "*variable returns*," incorporating both positive and negative returns, and ii) have the "*power*" to affect their returns. As such, this definition of control limits the ability of firms to omit loss-making (*i.e.* no "*benefits*") and non-majority owned (*i.e.* inability to *"govern"*) entities from the consolidated financial reports. The IASB anticipated that the new definition of control would address the "*divergence of practice*" regarding the application of the control definition in IAS 27 and increase the consistency of interpretation about which entities were required to be consolidated (IASB, 2011, *p.* 5).[4] Accordingly, Ernst and Young (2011) posit the change to the definition of control addresses the issue surrounding the exclusion of loss-making entities, which was a contributing factor to the 2008-09 global financial crisis (GFC):

"… *IFRS 10 (AASB 10) may change which entities are within a group. These changes were made by the IASB, in part, in response to the financial crisis, when there was heavy criticism of accounting rules that permitted certain entities to remain off-balance sheet.*" (p.1).[5]

However, some have raised concerns that the continued use of a principles-based control definition under IFRS 10 provides unnecessary complexity and allows for further subjectivity in application to non-majority owned investments (Ben-Shahar., *et al*., 2016), or a continued reliance on traditional ownership-based thresholds used under IAS 27 (Beck *et al*., 2017).

---

[3] As the IASB highlights, "… *(IAS 27) focused primarily on whether an investor had a majority of the voting rights in an investee ...*" (IASB, 2011, *p.*10) and provided insufficient application guidance to firms on the requirement to consolidate non-majority owned investees.

[4] The European Financial Reporting Advisory Group (EFRAG) also anticipated that the new requirements would "*enhance consistency of application and increase comparability for users*" (European Commission, 2012 *p.* 4).

[5] Ernst and Young (2011), *IFRS Developments: IASB issues three new standards: Consolidated Financial Statements, Joint Arrangements, and Disclosure of Interests in Other Entities*. May 2011.

This study is motivated by the lack of empirical evidence on how firms responded to the adoption of IFRS 10, as current evidence is limited to an exploratory study (Lopes and Lopes, 2019). The IASB indicated that most consolidation decisions would be unaffected by the new control definition and expressed uncertainty as to whether the revised control definition would result in the consolidation of more or fewer investees (IASB, 2011, *p.* 17). This study provides evidence on how the updated definition of control impacted the number of controlled entities which are consolidated and also provides indirect evidence on whether firms potentially responded to the standard by rearranging their organisational structure. To our knowledge, this is the first study to provide empirical evidence on whether IFRS 10 improved the usefulness of accounting information. The findings of this study are, therefore, relevant to the IASB, on the impact and effectiveness of IFRS 10, particularly in light of the IASB currently undertaking a post-implementation review (PIR) of IFRS 10 (IASB, 2020).

We employ a balanced sample of 1,008 Australian firm-year observations (252 unique listed firms) and compare subsidiary information for the two years pre- and post-IFRS 10 implementation.[6] IFRS 10 was adopted for firms with financial years commencing on or after 1 January 2013, meaning IFRS 10 was adopted by December year end firms in 2013 and by firms with other financial year ends, in 2014. The post period in this study is defined for each firm as the first two financial years of IFRS 10 adoption.[7] We first consider the implications of IFRS 10 on consolidation practices and find that IFRS 10 adoption resulted in firms reporting significantly fewer subsidiaries, with this result concentrated in the first year of adoption. One possible interpretation of this finding is that the updated control definition resulted in firms applying a "*more appropriate consolidation*" (IASB, 2011, p. 17) and no longer consolidating subsidiaries which did not meet the control definition. As changes in the number of subsidiaries are more likely to occur around the margins (IASB, 2011, *p.* 17), we consider the incidence of non-majority consolidation (*i.e.,* subsidiaries at or below 50%) and find evidence of a decrease in the consolidation of non-majority owned subsidiaries after IFRS 10 adoption, with this effect again

---

[6] We use Australian data as Australia implemented IFRS 10 prior to Europe allowing for easier access to data. Furthermore, we avoid a cross-country sample due to differences in accounting enforcement and audit quality across countries (even within the European Union). These differences are highlighted in Brown *et al*., (2014).

[7] We require firms to have two years of subsidiary data pre-IFRS 10 (2011-2012 for December year ends and 2012-2013 for June year ends) and post-IFRS 10 (2013-2014 for December year ends and 2014-2015 for June year ends).

4

strongest in the first year of IFRS 10 adoption.[8] Our additional analysis provides some evidence supporting restructuring activities, as we document a greater likelihood of subsidiary divestitures post-IFRS 10. We also investigate whether reporting incentives are associated with the adjustment in the number of subsidiaries post-IFRS 10 and find that Big 4 auditor use and CEO ownership have a moderating effect.

The next set of tests examines the consequences of changes in consolidation practices from IFRS 10. First, our results suggest that inconsistent with the consolidation of loss-making subsidiaries, there is no effect on firm profitability for firms reporting an increase in subsidiaries after the standard is adopted. Second, our findings show that the value relevance of equity, but not income, increases after IFRS 10 adoption which indicates that investors regarded net assets as being more informative after adoption of the new accounting standard. When partitioning firms based on the directional change in subsidiaries, we document a significant decline in the value relevance of net income after IFRS 10 adoption for firms which consolidate fewer subsidiaries.

The findings from this study make a number of contributions. First, the results are of importance to accounting standard setters (*i.e.,* the AASB and IASB) and particularly timely given the IASB's current call for evidence relevant to the PIR on IFRS 10 (IASB, 2020). Our findings suggest that although the revised standard led to the consolidation of fewer subsidiaries, it did not increase the consolidation of non-majority owned subsidiaries. Whilst these results may be due to a more "*appropriate*" application of the control definition, they are also potentially consistent with firms restructuring their business activities after IFRS 10. Furthermore, following IFRS 10 adoption, firms appear to have reclassified associates as subsidiaries but only for those firms reporting an increase in subsidiaries. There is also some evidence that IFRS 10 increased the usefulness of financial statements as we find an increase in the value relevance of equity post-IFRS 10.

Second, the results of this study have wide-ranging implications for users of financial statements. From a user perspective, understanding the impact of the new control definition on management behavior and financial statements enables more informed decision making. If the rules improved the usefulness of accounting information and reduced diversity of reporting practices, investors

---

[8] Relative to IAS 27, IFRS 10 explicitly indicates that a firm may control an investee without majority ownership and provides increased guidance to investors on the capacity to control an investee without majority ownership (IASB, 2011).

can place greater confidence in financial statements and limit the need for additional sources of information. Furthermore, creditors and debtholders have greater confidence in lending funds to listed corporations with the knowledge that all controlled entities, including those that are loss-making, have been consolidated into the financial statements. As our results suggest improved value relevance of equity, IFRS 10 appears to have led to more useful financial reporting.

The remainder of this study is structured as follows. Section 2 discusses the institutional setting, reviews prior literature and develops hypotheses. The following section discusses sample selection and provides descriptive statistics, whilst Section 4 describes our research method and provides results. Section 5 concludes the paper.

2. Institutional setting, prior literature and hypotheses

2.1 Institutional Setting

The first legally backed Australian accounting standard guiding the preparation of consolidated financial statements was AASB 1024 *Consolidated Accounts*. This standard was applicable for financial years ending on or after 31 December 1991, and required parent entities to consolidate investees which were controlled, with control defined as:

"… *the capacity of an entity to dominate decision-making, directly or indirectly, in relation to the financial and operating policies of another entity so as to enable that other entity to operate with it in pursuing the objectives of the controlling entity …*" (*para.* 9).

AASB 1024 remained operative in Australia until superseded by IAS 27 following the adoption of International Financial Reporting Standards (IFRS) in 2005. IAS 27 defined control as "*the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities*" (*para.* 4). The definition of control in IAS 27 was criticised for two primary reasons. First, the use of the term the "*power to govern*" allowed firms to argue that greater than 50% ownership was required by the firm to have the ability to govern another entity. The second criticism was the requirement for firms to "*benefit from the activities*" (para. 8) of another entity to be regarded as having control. This allowed firms to argue that loss-making entities did not provide benefits thereby enabling them to omit these entities as subsidiaries.

In light of these criticisms of IAS 27 and a perceived "*diversity of practice*" in implementing the definition of control (IASB, 2011, *p.* 9), the IASB released an exposure draft ED 10 *Consolidated*

Financial Statements in December 2008. The IASB indicates that it received 148 comment letters in response to the exposure draft. A summary of these comment letters suggested that although "*there was a significant level of support for the concept of consolidation based on control*" many users expressed "*a significant level of disagreement about how the IASB had articulated the control concept.*"[9] Following further consultation and outreach activities, the IASB issued IFRS 10 *Consolidated Financial Statements* in May 2011, along with IFRS 11 *Joint Arrangements* and IFRS 12 *Disclosure of Interests in Other Entities*, with implementation in Australia commencing for financial years beginning on or after 1 January 2013.[10]

Although, the consolidation accounting procedures in superseded IAS 27 were largely unchanged, IFRS 10 introduced a revised definition of control and provided extensive guidance on the definition's implementation. According to IFRS 10, "*an investor controls an investee when the investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee*" (para. 6). To address the perceived shortcoming that IAS 27 allowed non-majority owned investees to remain "off-balance sheet," the revised control definition focuses on the investor's ability to affect returns through their power over an investee, as opposed to the "*power to govern.*" Moreover the application guidance provided with IFRS 10 clearly specifies that investees have power over an investee "*even if it holds less than a majority of the voting rights*" (para. B38). The standard also indicates (para. B41) that an investee with less than 50% ownership has sufficient power when "*the investor has the practical ability to direct the relevant activities unilaterally.*" A list of circumstances which a firm with non-majority ownership needs to consider to determine if it has sufficient power are provided in paragraph B42 of the standard. These circumstances include: "*the size of the investor's holding of voting rights relative to the size and dispersion of holdings of the other vote holders.*"

To address the second criticism of IAS 27 that loss-making entities were not required to be consolidated, an objective of IFRS 10 was to improve the transparency for investors of the risks associated with "*off balance-sheet vehicles*" (European Commission 2012, *p.* 2). As such, the

---

[9] IASB Meeting Notes, 19 May 2009, available at: https://www.iasplus.com/en/meeting-notes/iasb/2009/agenda_0905/agenda1167. Last accessed: 16 August, 2019.
[10] The effective date of IFRS 10 in Europe was years commencing on or after 1 January 2014.

revised accounting standard now makes it clear that an investors' returns from their investment can "*be only positive, only negative or both positive and negative*" (*para.* 15) to reduce the likelihood of the non-consolidation of loss-making subsidiaries.[11]

While the main objective of the new standard is to reduce diversity in practice regarding the application of the control definition and improve financial information comparability (IASB, 2011), there is limited empirical evidence to support its effectiveness. Lopes *et al.*, (2019) undertake an exploratory study of the effect of IFRS 10 in Germany, France and the UK and find few firms report IFRS 10 adoption had a material impact on their financial statements. Whilst Ben-Shahar *et al.*, (2016) assess the validity of the standard from an economic perspective, they do not undertake any empirical or descriptive analysis of the effects of IFRS 10.

2.2 Literature Review

Earlier studies examining consolidated financial statements focused on the effect of a principles vs. rules-based control definition. Specifically, these studies examine the impact of the use of a 'bright-line' rule of greater than 50% ownership to identify subsidiaries and find that prior to 1991, many companies deliberately structured ownership in investees just below 50% to avoid consolidation requirements (Psaros, 2007; Walker, 1990, 1991).[12]

In recent times, standard-setters have generally moved to setting principles-based rather than rules-based standards to prevent firms' from structuring transactions to achieve a desired accounting treatment (Beck *et al.*, 2017). Whilst this move has generally been supported (Maines *et al.*, 2003; Schipper, 2003; Nobes, 2005), there is concern that principles-based standards require increased professional judgement from both preparers and auditors (Nelson *et al.*, 2002) and that increased discretion results in more aggressive financial reporting (Nelson, 2003; Ewert and Wagenhofer, 2005; Folsom, *et al.*, 2017). There is also evidence that auditors and preparers prefer rules-based standards (McEnroe and Sullivan, 2013) and prior research finds that principles-based accounting standards are associated with increased litigation risk for both firms (Donelson, *et al.*, 2012) and auditors (Gimbar, *et al.*, 2016).

---

[11] Gornik-Tomaszewski and Larson (2014) compare the requirements of IFRS 10 with US GAAP.
[12] A revised *IFRS 11 Joint Arrangements* applicable to joint ventures and jointly controlled entities was implemented in Australia for financial periods beginning on or after 1 January 2013. We do not examine the effect of IFRS 11 adoption on Australian financial reporting and leave this analysis to future research.

The implementation of principles-based standards has resulted in standard setters moving towards a control definition which relies on the economic substance of the relationship between investor and investee. Psaros and Trotman (2004) in an experimental setting, find that participants with an incentive not to consolidate are less-likely to consolidate using rules-based accounting standards. Hsu *et al*., (2012) find the adoption a principles-based control definition in Taiwan increased the value relevance of financial statements. Beck *et al*., (2017) use data from 2004 to 2008 and find the change to a principles-based control definition by the FASB and IASB did not impact the propensity for firms to structure ownership in other firms at or just below 50%. Consistent with evidence of firm's strategic incentives to avoid consolidation (Duchac, 2004; Francis, 1986; Livnat and Sondhi, 1986; Copeland and Mackinnon, 1987; Mohr 1988), prior research documents firms with higher leverage or using a non-Big 4 auditor, have a higher likelihood of ownership being structured between the 40-50% thresholds.

2.3 Hypothesis Development

The presumption underlying the revision of the control definition in IFRS 10 is that entities were not accurately incorporating all controlled off-balance sheet activities (Ben-Shahar *et al*., 2016; Ernst and Young, 2011). Assuming that the revised definition of control addresses the problems involved with the previous definition of control, it is possible that the adoption of IFRS 10 leads to an increase in the number of entities consolidated. However, in their '*Effect analysis*', the IASB expresses uncertainty as to whether investors will consolidate more or fewer subsidiaries after IFRS 10 adoption as the revised definition of control requires firms to reassess whether they '*truly control*' an investee (IASB, 2011, *p.* 17). Furthermore, based on the results in Mian *et al*., (1990b), limiting the ability of managers to selectively include/(exclude) subsidiaries post-IFRS 10 may lead to divestitures of investees with greater financial risk. Given the uncertainty regarding the effect of IFRS 10, we state our first hypothesis without a directional expectation:

> H_1: There is an association between the adoption of IFRS 10 and the change in the number of subsidiaries included in consolidated financial statements.

Unlike IAS 27, IFRS 10 explicitly states that control can exist without majority ownership and highlights that investor's returns can be both positive and negative (IASB, 2011, *para.* 15). IFRS 10 provides increased guidance on these matters, mitigating concerns highlighted by the IASB (2011) that the previous lack of guidance resulted in inconsistent consolidation practices. These

changes are expected to lower the ability of management to argue that non-majority and/or loss-making entities do not qualify for consolidation. However, it is conceivable that the application of a revised principles-based definition of control may induce greater subjectivity (Henry, 1999; Nelson, 2003; Psaros and Trotman, 2004; Agoglia *et al*., 2011), leading to even greater dispersion in application or more aggressive financial reporting. For instance, a 2009 comment letter analysis by the IASB on the exposure draft preceding IFRS 10 suggested users disagreed with the IASB control definition and that "*constituents were schizophrenic*" about the meaning of control. From an opportunistic perspective, firms may apply the control definition to increase the consolidation of profitable non-majority owned subsidiaries, while excluding unprofitable investments by reducing their ownership interest into a 'grey' zone which avoids consolidation, or simply divesting their stake.

Given these competing effects, it is uncertain as to whether IFRS 10 leads to more or less consolidation of non-majority owned and loss-making subsidiaries. As outlined in section 4.3 due to a lack of disclosure of subsidiary level profitability we are unable to directly test the impact of IFRS 10 on the consolidation of loss-making subsidiaries. As an indirect alternative test, we investigate if the consolidation of additional subsidiaries after IFRS 10 leads to a decline in consolidated and total subsidiary profitability. Our second and third hypotheses are outlined as follows in non-directional form:

> **H2**: There is an association between the adoption of IFRS 10 and the likelihood of consolidating entities with non-majority ownership.

> **H3**: There is an association between the change in subsidiaries following the adoption of IFRS 10 and consolidated and subsidiary profitability.

Evidence from prior research suggests that consolidation decisions are driven by firm specific incentives. On one hand, firms with considerable outstanding debt or poor ongoing financial performance can opportunistically structure ownership thresholds to shift debt off-balance sheet and losses to investees which are then omitted (Whittred, 1987; Mian *et al*., 1990b; Beck *et al*., 2017). The motivation to improve financial performance is often an outcome of managerial incentives, with large CEO ownership levels encouraging the concealment of poor performance to uphold market valuations (Whittred, 1987). On the other hand, monitoring mechanisms in the form of external auditing can lead to more appropriate consolidation practices (Becker, *et al.*, 1998;

DeFond and Zhang, 2014; Beck *et al.*, 2017). Based on these studies, it is expected that leverage, firm profitability, auditor type, and CEO ownership influence the likelihood that firms accurately report investees as subsidiaries prior to IFRS 10 adoption, and thus such firms are predicted to be differentially impacted by the new control definition. This leads to the following hypothesis:

H4: The impact of the adoption of IFRS 10 on the consolidation of subsidiaries is associated with financial reporting incentives.

Consolidated financial statements are most useful to stakeholders when all 'truly' controlled entities are included. Assuming that IFRS 10 reduces the diversity of practice (IASB, 2011), it is expected that the new standard results in more uniform consolidation practices (IASB, 2011) and leads to financial statements which more accurately reflect the underlying economics of the group. As stated by the IASB (IASB, 2011), the new standard should provide benefits for users and investors in terms of more comparable and useful financial statements. If the information under the revised standard is more useful for investors' decisions it should increase the value relevance of financial information (Barth *et al.*, 2001). This expectation is consistent with prior research, which highlights that financial statement value relevance improves upon the adoption of a principles based control definition (Hsu *et al.*, 2014) and the separate disclosure of non-controlling interest in equity and income (So and Smith, 2009).[13] Alternatively, the new control definition may be applied more subjectively than a rules-based definition, potentially leading to greater divergence in practice (Ewert *et al.*, 2005) and reduced value relevance.[14] On balance, it is not clear whether IFRS 10 results in more consistent and '*appropriate*' consolidation and improves financial statements usefulness. This leads to our next hypothesis stated in the null form:

H5: There is no association between the adoption of IFRS 10 and the value relevance of financial statements.

---

[13] Richardson *et al.*, (2012) find a decline in the value relevance of assets and liabilities when Canada removed the choice to account for joint ventures using either equity accounting or proportionate consolidation.

[14] It is also possible that practitioners continue to rely on traditional quantitative thresholds in determining control over entities, resulting in little change in the reporting of consolidated entities and no change in value relevance (Beck *et al.*, 2017). Similarly, if firms were already appropriately consolidating prior to IFRS 10 there would be a minimal effect from IFRS 10 adoption.

3. Sample selection and description statistics

3.1 Sample

The sample is constructed using the top 500 firms by market capitalisation on the Australian Securities Exchange (ASX) as of 2013. We require firms to have two years of data pre- and post-IFRS 10 adoption which leads to an initial sample of 2,000 observations.[15] The sample is restricted to the top 500 firms as larger firms are expected to have more subsidiaries and be subject to a greater impact from IFRS 10.[16] Information on subsidiaries are hand collected using the notes to the financial statements. Financial information required to estimate the regression models are obtained from Morningstar's *DatAnalysis* Premium database. Corporate governance and auditor information, as well as details on mergers and acquisitions are obtained respectively from the *Connect 4 Boardroom* and *Takeovers and Mergers* databases.

From the initial sample of 2,000 firm-year observations, we remove: 646 firm-years due to missing financial information, 57 firm-years due to missing subsidiary data and 12 firm-years due to insufficient corporate governance data.[17] A further 24 firm-years for firms using US GAAP and eight firm-years where the firm early-adopted IFRS 10 were also excluded. We also remove 77 firm years with incomplete data for each of the two years pre- and post- IFRS 10. Finally, firms that reduce disclosure after the adoption of IFRS 10 to report only material subsidiaries are removed, resulting in the exclusion of a further 168 firm years.[18] After these eliminations the final sample is 1,008 firm-years. The sample selection process is summarised in Table 1.

INSERT TABLE 1 HERE

---

[15] IFRS 10 was implemented for firms with financial year commencing on or after 1 January 2013. Therefore, the first two years of the post-period for December year end firms is 2013-2014 and 2014-2015 for all firms with other year ends.

[16] We find 19 firm-year observations (nine firms) where no subsidiaries were reported. Dropping observations without subsidiaries do not qualitatively or statistically change the results.

[17] The primary variable driving the missing observations is earnings before interest and tax (n=546), missing for 27% of the total sample or 72% of all observations excluded due to missing financial data.

[18] IFRS 12 *Disclosure of Interests in Other Entities* became effective at the same time as IFRS 10. Paragraph Aus 4.5 of the Australian version of IFRS 12 allows firms to apply a materiality threshold to disclosures outlined in the standard including details of subsidiaries.

3.2 Descriptive Statistics

The descriptive statistics partitioned into the period pre- and post- adoption of IFRS 10 are reported in Table 2. Panel A presents the full sample descriptive statistics while Panel B provides a comparison of the pre- and post-IFRS 10 sub-samples, Panel C compares firms pre- and post-IFRS 10 based on the direction of the change in subsidiaries in the first year post-IFRS 10 and Panel D classifies changes in subsidiaries pre- and post-IFRS 10 based on the subsidiary activity. Definitions for all variables are provided in Appendix 1. In Table 2 Panel A, the average number of subsidiaries in the sample is 29.09 with a range from 0 to 187 subsidiaries.[19] The average change in subsidiaries is 0.736 with the median change in subsidiaries being 0 suggesting relatively stable subsidiary levels. Accordingly, given the large range and relative stability in the number of subsidiaries, we focus on the change in subsidiaries in our analysis to evaluate the impact of IFRS 10. We also use an indicator variable (*SUBS NONMAJORITY*) to identify firms which consolidate subsidiaries with non-majority ownership. Interestingly, we find that the percentage of firms consolidating non-majority owned subsidiaries is 15%. To examine the yearly change in the number of subsidiaries, we employ three indicator variables denoting: an increase (*UPWARD CHANGE*), decrease (*DOWNWARD CHANGE*), or no change (*NO CHANGE*) in subsidiaries. These variables show that firms most commonly have no change in subsidiaries (47.2%) followed by an increase (35.2%) then a decrease (17.6%).

When comparing the pre- and post-IFRS 10 sample in Panel B of Table 2, we find the number of subsidiaries is not significantly different pre- and post- IFRS 10 (from 28.60 to 29.59). In contrast, the average change in the number of subsidiaries significantly decreases post-IFRS (from 1.20 to 0.270). As IFRS 10 provided additional guidance on the consolidation of non-majority owned subsidiaries, it is interesting to examine the likelihood of the consolidation of subsidiaries without majority ownership. We find that the percentage of firms consolidating non-majority owned subsidiaries (*SUBS NONMAJORITY*) remains constant following IFRS 10 adoption (14.9% pre- vs. 15.1% post- IFRS10). When focusing on the yearly change in subsidiaries, the findings indicate that after IFRS 10 there is a significantly higher frequency of reported decreases in the number of subsidiaries (*DOWNWARD CHANGE*) (15.1% pre- vs. 20% post- IFRS10). In contrast, there are

---

[19] We do not conduct our primary analysis on the number of subsidiaries as the variable captures innate differences in the corporate structure of the sample firms which is largely stable.

no statistically significant differences in firms' recording no change (*NO CHANGE*) or an increase (*UPWARD CHANGE*) in the number of subsidiaries pre- and post-IFRS 10 adoption.

INSERT TABLE 2 HERE

The descriptive statistics for the control variables indicate that there is a decrease in firm profitability after the adoption of IFRS 10, evidenced by a significant decline in return on assets (*ROA*) and a significant increase in the percentage of firms' reporting a consolidated loss (*LOSS*). We also find a significant negative change in the number of reported associates (*CHANGEASSOCIATES*) after IFRS 10 implementation.

In Panel C of Table 2, we group firms based on their cumulative change (increase, decrease, or change) in subsidiaries the first and second year post-IFRS 10 and compare differences in their non-majority consolidation practices (*SUBS NONMAJORITY*), profitability (*ROA* and *LOSS*) and subsidiary activity (*MERGER* and *SOLD*) between the pre- and post-IFRS 10 period. We find that firms with an increase or no change in subsidiaries post-IFRS 10 are associated with significantly lower consolidated profitability and a higher frequency of reporting losses. Firms with an increase in subsidiaries in the post-IFRS 10 period are associated with a significant decrease in associates (*CHANGE ASSOCIATES*) suggesting firms re-classified their subsidiaries post-IFRS 10. We find no statistical difference in the consolidation of non-majority owned subsidiaries, or sales and divestitures in the pre- and post-IFRS 10 period for each of the three groups of firms.

Panel D of Table 2 classifies the change in subsidiaries across each year around IFRS 10 adoption into subsidiary acquisitions, subsidiary divestitures and any other reasons. Any reclassifications of subsidiaries for accounting reasons should be captured by this other category. Interestingly, we find that in the first year post-IFRS 10, there is the lowest change in subsidiaries due to other reasons and mergers and the greatest change in subsidiaries due to sales.

4. Research method and results

4.1 IFRS 10 and the number of subsidiaries (H_1)

To test H_1, we estimate an OLS regression where the dependent variable is the year-on-year change in the number of subsidiaries (*CHANGE SUB COUNT*). The main test variable is an indicator variable (*POST*) denoting the two financial years after IFRS 10 adoption, which are the financial years 2013-2014 for December year end firms and 2014-2015 for all other financial year end firms.

We control for incentives associated with the disclosure/non-disclosure of subsidiaries identified in prior research. These controls include firm leverage (*LEVERAGE*) (Mian *et al*., 1990a, Beck *et al*., 2017), losses (*LOSS*), a Big 4 auditor (*BIG4*) (Becker *et al*., 1998; DeFond *et al*., 2014) and shareholder agency problems using CEO ownership (*CEO OWNERSHIP*) (Whittred, 1987). Model (1) also includes a number of financial controls including: firm size (*TOTAL ASSETS*), liquidity (*CURRENT RATIO*), and growth options *(MARKET TO BOOK)*. We also include governance controls for board size (*BOARD SIZE*) (Yermack, 1996) and CEO bonuses (*CEO BONUS*). Since it is expected that a completed takeover mechanically increases the number of subsidiaries, we control for successful M&As and sales of a subsidiary during a financial year (*MERGER* and *SOLD*). Finally, since IFRS 10 was adopted for financial years commencing on or after 1 January 2013, December year-end firms were the first group of firms to implement the standard, we control for firms with a December financial year end (*DEC YEAR END*). We also include industry fixed effects (*INDUSTRY*) with industry defined using two digit GICS codes. All continuous control variables are defined as the change in the current year value from the prior year. Variable definitions are provided in Appendix 1. The full model is summarised as follows (time and firm subscripts omitted for convenience):

$$CHANGE\ SUB\ COUNT = \alpha_i + \beta_1 POST + \beta_2 LEVERAGE + \beta_3 CEO\ OWNERSHIP + \beta_4 LOSS$$

$$+\ \beta_5 BIG4 + \beta_6 TOTAL\ ASSETS + \beta_7 CURRENT\ RATIO + \beta_8 MARKET\ TO\ BOOK$$

$$+\ \beta_9 BOARD\ SIZE + \beta_{10} CEO\ BONUS + \beta_{11} MERGER + \beta_{12} SOLD + \beta_{13} DEC\ YEAR\ END$$

$$+\ INDUSTRY + \varepsilon_I \qquad\qquad\qquad (1)$$

Consistent with a downward change in subsidiaries after the adoption of IFRS 10 Table 3 documents a marginally significant and negative coefficient on *POST*.[20] There are a number of possible explanations for this result. Firstly, as suggested by the IASB (IASB, 2011) the new definition of control was expected to result in firms reassessing whether they actually control investees. Our findings suggest that the modification of firms' interpretations of the control

---

[20] In additional analysis (untabulated), we separately examine whether the results are driven by (1) increases or (2) declines in subsidiaries and find the results consistent with firms consolidating fewer subsidiaries.

definition resulted in some subsidiaries no longer meeting the definition of being a controlled entity. Alternatively, while we controlled for acquisitions and sales (*SOLD*), it is still possible that firms responded to IFRS 10 by discontinuing the operations of a number of subsidiaries or combining the business activities of multiple subsidiaries into fewer entities. Amongst controls we find that firms selling subsidiaries (*SOLD*) and those audited by Big 4 auditors (*BIG4*) report a downward change in subsidiaries. In contrast, larger firms (*TOTAL ASSETS*) report a positive change in subsidiaries.[21]

INSERT TABLE 3 HERE

4.2 IFRS 10 and the consolidation of subsidiaries with ownership at or below 50% (H₂)

The next model tests **H₂** by examining whether IFRS 10 impacted the likelihood that firms consolidate non-majority owned subsidiaries. The dependent variable is an indicator variable coded as one if the firm reports any subsidiaries with an ownership interest at or below 50% (*SUBS NONMAJORITY*). The independent variables are similar to those in Model (1) except that we use the change values of all continuous variables in Model (1) and the actual values of the control variables in Model (2). We also include the lagged count of prior subsidiaries (*LAG SUB COUNT*) as an additional control variable. The full regression model is:

$$SUBS\ NONMAJORITY = \alpha_i + \beta_1 POST + \beta_2 LEVERAGE + \beta_3 CEO\ OWNERSHIP + \beta_4 LOSS$$

$$+ \beta_5 BIG4 + \beta_6 TOTAL\ ASSETS + \beta_7 CURRENT\ RATIO + \beta_8 MARKET\ TO\ BOOK$$

$$+ \beta_9 BOARD\ SIZE + \beta_{10} CEO\ BONUS + \beta_{11} MERGER + \beta_{12} SOLD + \beta_{13} LAG\ SUBS\ COUNT$$

$$+ \beta_{14} DEC\ YEAR\ END + INDUSTRY + \varepsilon_I \tag{2}$$

---

[21] We do not use a regression model with the number of subsidiaries as the dependent variable, as subsidiary levels reflect differences in the company's choice of corporate structure resulting in a significant disparity across firms. In an untabulated regression we re-define the dependent variable as the natural log in the number of subsidiaries and find an insignificant coefficient on the *POST* variable.

The results are reported in Column (1) of Table 4. The finding on the key test variable indicates that the likelihood of consolidation of non-majority owned subsidiaries is unchanged after IFRS 10 adoption. This result is inconsistent with the expectations of the IASB (2011). In Column (2) the regression is re-estimated after respecifying the dependent variable as the proportion of subsidiaries which are non-majority owned. The result on *POST* is negative and marginally significant ($p<0.1$) suggesting that IFRS 10 reduced the proportion of subsidiaries consolidated that have non-majority ownership. The coefficient value translates into a 21.43% (0.003 / 0.014) reduction in the proportion of subsidiaries that are non-majority owned following IFRS 10.

INSERT TABLE 4 HERE

The findings on the control variables indicate that larger firms (*TOTAL ASSETS*), firms with more subsidiaries in the prior year (*LAG SUBS COUNT*) and firms making a loss (*LOSS*) are significantly more likely to disclose non-majority owned subsidiaries. Additionally, firms with a lower current ratio (*CURRENT RATIO*), lower CEO ownership (*CEO OWNERSHIP*) and engaging a non-Big 4 auditor (*BIG4*) are more likely to consolidate non-majority owned subsidiaries.

4.3 IFRS 10 and consolidated profits (H₃)

We estimate an OLS regression to examine how the adoption of IFRS 10 impacts on the frequency of consolidating loss-making entities (**H₃**). The dependant variable is the consolidated return on assets (*ROA*) reported by a firm. The independent variables are consistent with those in Model (2), other than the inclusion of two indicator variables denoting whether a firm reported more (*UPWARD CHANGE*) or less subsidiaries (*DOWNWARD CHANGE*) in a particular financial year.[22] These two indicator variables are also interacted with *POST* to indicate whether the profitability of a firm arising from the change in subsidiaries differs after IFRS 10 adoption. The model is summarised as follows:

$ROA = \alpha_i + \beta_1 POST + \beta_2 DOWNWARD\ CHANGE + \beta_3 DOWNWARD\ CHANGE*POST$

---

[22] We also exclude the loss indicator variable as this variable would be mechanically associated with return on assets.

17

$$+ \ \beta_4 UPWARD \ CHANGE + \beta_5 UPWARD \ CHANGE*POST + \beta_6 LEVERAGE$$

$$+ \ \beta_7 CEO \ OWNERSHIP + \beta_8 BIG4 + \beta_9 TOTAL \ ASSETS + \beta_{10} CURRENT \ RATIO$$

$$+ \ \beta_{11} MARKET \ TO \ BOOK + \beta_{12} BOARD \ SIZE + \beta_{13} CEO \ BONUS + \beta_{14} MERGER$$

$$+ \ \beta_{15} SOLD + \beta_{16} DEC \ YEAR \ END + INDUSTRY + \varepsilon_I \qquad\qquad (3)$$

The results are presented in Table 5. As an initial test in Column (1) the regression is estimated without the interaction variables. The results display a significant and negative coefficient on *POST* which is consistent with the decline in firm profitability post– IFRS 10 displayed in Table 2. The findings in Column (2) indicate that both a downwards and upwards change in subsidiaries are not significantly associated with firm profitability. Intriguingly, only the interaction variable *DOWNWARD CHANGE*POST* is statistically significant with a positive effect on return on assets. This result indicates that firms which reported fewer subsidiaries after IFRS 10 adoption achieved an increase in profitability and is potentially consistent with subsidiaries which are no longer consolidated being either less profitable or loss making. Our results, however, need to be interpreted cautiously as we are unable, due to a lack of disclosure, to directly examine profitability at the individual subsidiary level.

INSERT TABLE 5 HERE

As an additional test of **H₃** we replace the dependent variable in Model 3 with subsidiary (as opposed to consolidated) return on assets. Subsidiary return on assets is calculated as the difference between reported consolidated profit and parent entity profit, scaled by total assets. Parent entity profit is hand collected from the disclosure notes in annual reports. The findings from estimating the revised Model (3) are presented in Columns (3) and (4) of Table 5. The conclusions drawn from this revised model are largely consistent with those presented in Columns (1) and (2). Firstly, the coefficient on *POST* is negative and marginally significant ($p<0.1$) indicating a decline in profitability after IFRS 10 adoption. Similarly, we find a positive and significant coefficient on *DOWNWARD CHANGE*POST* suggesting that firms reporting fewer subsidiaries experience an increase in profitability perhaps due to the non-consolidation of loss-making subsidiaries

4.4 Incentives for non-consolidation and the impacts from the adoption of IFRS 10 (H₄)

Based on prior research, **H₄** predicts that the effect of IFRS 10 adoption is associated with firm leverage (*LEVERAGE*), CEO ownership (*CEO OWNERSHIP*), reported losses (*LOSS*) and auditor

size (*BIG4*). To test **H₄**, we modify Models (1) and (2) by creating interaction variables between *POST* and each of the abovementioned variables. The complete model is as follows:[23]

$$CHANGE\ SUB\ COUNT/SUBS\ NONMAJORITY = \alpha_I + \beta_L POST + \beta_2 LEVERAGE$$

$$+ \beta_3 LEVERAGE*POST + \beta_4 CEO\ OWNERSHIP + \beta_5 CEO\ OWNERSHIP*POST + \beta_6 LOSS$$

$$+ \beta_7 LOSS*POST + \beta_8 BIG4 + \beta_9 BIG4*POST + \beta_{10} TOTAL\ ASSETS + \beta_{11} CURRENT\ RATIO$$

$$+ \beta_{12} MARKET\ TO\ BOOK + \beta_{13} BOARD\ SIZE + \beta_{14} CEO\ BONUS + \beta_{15} MERGER + \beta_{16} SOLD$$

$$+ \beta_{17} LAG\ SUB\ COUNT + \beta_{18} DEC\ YEAR\ END + INDUSTRY + \varepsilon_I \qquad (4)$$

INSERT TABLE 6 HERE

The results in Column (1) of Table 6 indicate that after controlling for the interactive effect of incentives to consolidate subsidiaries, the *POST* variable is positive and significant. Inconsistent with Whittred (1987), we document no association between leverage (*LEVERAGE*) and the change in the number of subsidiaries, and the insignificant coefficient on *LEVERAGE*POST* indicates that highly levered firms were no more likely to report additional subsidiaries after IFRS 10 adoption. Also in contrast to Whittred (1987), we find CEO ownership (*CEO OWNERSHIP*) is not associated with the change in subsidiaries and the coefficient on the interaction variable between *CEO OWNERSHIP* and *POST* is insignificant. Interestingly the coefficient on the interaction term *BIG4*POST* is negative and marginally significant ($p<0.1$) indicating that IFRS 10 adoption resulted in clients of larger auditors reporting fewer subsidiaries. The result on the interaction term *LOSS*POST* is insignificant, thereby suggesting that the effect of IFRS 10 adoption was not different for loss making companies.

As an additional test of **H₄**, we conduct a similar analysis using Model (2) examining the likelihood that firms consolidate non-majority owned subsidiaries (*SUBS NONMAJORITY*) after the adoption of IFRS 10. The results from estimating this revised model are shown in Column (2) of Table 6. Consistent with the findings in Table 4 we find an insignificant coefficient on *POST* and the findings on *LEVERAGE*, *CEO OWNERSHIP*, *LOSS*, and *BIG4* remain unchanged. The results on each of the interaction variables are insignificant, other than the interaction between *CEO*

---

[23] The number of subsidiaries in the prior year (*LAGSUBCOUNT*) is only included as a control when the presence of non-majority subsidiaries is used as the dependent variable.

*OWNERSHIP*POST* which indicates a greater likelihood of consolidation of non-majority owned subsidiaries after IFRS 10 for firms with greater CEO ownership. A possible interpretation of this finding is that firms with low CEO ownership already applied accurate consolidation of non-majority owned subsidiaries pre- IFRS 10 (Whittred, 1987) and were less impacted by the new standard. In the final column of Table 6 the dependent variable is remeasured as the proportion of non-majority subsidiaries consolidated. In contrast to the results in Table 4, the findings on *POST* and *LEVERAGE* are insignificant. Overall, we find only limited evidence that the impact of IFRS 10 was associated with incentives for 'appropriate' consolidation.

4.5 IFRS 10 and value relevance (H₅)

We test **H₅** by investigating whether there is an increase in the value relevance of financial statements after the adoption of IFRS 10. The model adopted is based on the work of Edwards and Bell (1961) and Ohlson (1995) and is consistent with prior research examining the value relevance of consolidated financial statements (Abad *et al*., 2000; Ahmed *et al*., 2006; Harris *et al*., 1994; Hsu *et al*., 2012). The regression model tests the association between market value per share (*MVE*) and the book value of equity (*BVE)* and earnings before interest and tax (*EBIT*) both scaled by the number of shares. Consistent with prior research (Hayn, 1995; Burgstahler and Dichev, 1997), an indicator variable is included in the model denoting firms making a loss (*LOSS*). To test whether IFRS 10 adoption improved the value relevance of net income and equity, both *BVE* and *EBIT* are interacted with *POST*. The full model is summarised as follows:

$MVE = \alpha_i + \beta_1 BVE + \beta_2 EBIT + \beta_3 POST + \beta_4 POST*BVE + \beta_5 POST*EBIT + \beta_6 LOSS$

$\quad + INDUSTRY + \varepsilon_i$ (5)

The results are presented in Table 7. In Column (1) of Table 7, we estimate the base case value relevance regression excluding the *POST* variable and interaction terms. Consistent with prior research, we find that both net income and equity are positive and significant. In Column (2) of Table 7, we show the findings from estimating the complete Model (5). These results provide a significant coefficient on the interaction term between *POST* and the *BVE* consistent with greater financial statement value relevance of equity after IFRS 10 adoption. In contrast, the coefficient on the interaction term between *POST* and *EBIT* is insignificant.

INSERT TABLE 7 HERE

To provide additional evidence on whether IFRS 10 improved the value relevance of financial statements, we re-estimate the model separately for firms which report an annual increase (Column (3)), decrease (Column (4)) or no change (Column (5)) in subsidiaries. The results for the sample with an increase and no change in subsidiaries (Columns (3) and (5) respectively) provide consistent results on the interaction variables to those documented in the main regression. In contrast, the findings in Column (4) indicate that for firms which reported less subsidiaries after IFRS 10 adoption, although the value relevance of net equity increases the value relevance of earnings decreases. This finding suggests that the non-consolidation of certain subsidiaries following the implementation of the new control definition reduced the usefulness of earnings. This result is perhaps due to profit information being less useful to investors when equity accounting is applied to subsidiaries no longer consolidated. Overall, we find evidence supporting the rejection of **H5**, as the results document that IFRS 10 adoption is associated with an improvement in the value relevance of equity.

4.6 Additional Analyses

4.6.1 First and second year post-IFRS 10

To examine whether the impact of IFRS 10 takes place in the first or second year after the standard's implementation, we re-estimate the regression models using separate indicator variables for the first (*FIRST POST*) and second year (*SECOND POST*) after IFRS 10 adoption. The results are presented in Table 8.

INSERT TABLE 8 HERE

The findings from the tests of **H1** are largely consistent with those in Table 3, as we find the change in subsidiaries are significantly lower in the first year of IFRS 10 adoption (Column (1)). The results from testing **H2** are reported in Columns (2) and (3) of Table 8. Surprisingly, we find that in the first year after IFRS 10 adoption there is a marginally significant ($p<0.1$) decrease in the likelihood (Column 2) and a significant decrease in the proportion (Column 3) of non-majority owned subsidiaries consolidated. We further restrict the sample to the first year post-IFRS 10 and the year immediately preceding (last year pre-IFRS 10) ($n=504$) and re-run the analysis in Columns (4)-(6). We find that the significant decrease in subsidiaries holds in the first year post-IFRS 10, however the reduction in non-majority consolidation is no longer significant. While this

suggests the impact on IFRS 10 adoption on non-majority consolidation is limited, we cannot rule out the multi-period impact of the standard.

4.6.2 Associates with ownership just below 50%

In the next test we focus on firms that disclose associates with ownership levels between 40-50%. As an aim of IFRS 10 was to increase the consolidation of non-majority owned subsidiaries, arguably these firms are more likely to have been impacted by the new standard and been required to reclassify associates as subsidiaries. To conduct this test we hand collect details of investments in associates from the notes to the financial statements. This search identifies 180 firm years with the presence of associates with ownership levels between 40-50%.[24] We estimate regression models (1) and (2) on this reduced sample. The results (not tabulated) on the *POST* variable indicate unexpectedly that IFRS 10 adoption resulted in these firms reporting significantly fewer subsidiaries, with no significant effect on the consolidation of non-majority owned subsidiaries.

4.6.3 Classification shifting of non-majority owned subsidiaries as associates

We also consider the interplay between the number of investments reported as associates and subsidiaries over our sample period. It is expected that any reclassifications of investments in other entities arising from IFRS 10 are likely to lead (at least partially) to investments being reclassified from subsidiaries to associates and vice versa. To test this conjecture we modify the change version of regression model (1) by including the yearly change in the number of reported associates as an additional control variable (*CHANGE ASSOCIATES*). We also interact this new variable with the IFRS 10 indicator variable *CHANGE ASSOCIATES*POST*.

INSERT TABLE 9 HERE

The results are presented in Column (1) of Table 9. We find a negative and significant coefficient on *POST* consistent with less subsidiaries being reported after the adoption of IFRS 10 while *CHANGE ASSOCIATES* yields a positive and significant coefficient. Moreover, the interaction variable with *POST* is insignificant suggesting that the adoption of IFRS 10 did not have any impact on the likelihood associates are reclassified as subsidiaries. In Column (2) of Table 9, we refocus our analysis on firms reporting an upward change in subsidiaries and interact *CHANGE*

---

[24] The accounting requirements for investments in associates are outlined in IFRS 128 and did not change over the period of this study.

ASSOCIATES with *POST*, and find a negative significant coefficient. This suggests that firms increasing subsidiaries after the adoption of IFRS 10 are more likely to experience a decline in associates consistent with the re-classification of associates to subsidiaries. In Column (3) we consider whether this result holds for firms experiencing a downward change in subsidiaries. The results of this analysis remain consistent with the findings in Column (1). We find similar results when we conduct this analysis on a sub-sample of firms with associates and subsidiaries with ownership interest between 40% and 80%.

4.6.4 Impact of Divestitures and Acquisitions of Subsidiaries

We next consider whether IFRS 10 potentially impacted firms' economic decisions in regards to subsidiary divestitures and acquisitions. We undertake this analysis as the new accounting standard may have impacted real firm activities beyond accounting reclassifications. For instance, firms forced to consolidate using a broader definition of control may have an incentive to divest investees that are unprofitable or currently profitable but loss making in the future. Moreover, firms may reconsider the acquisition of investees with loss making potential if IFRS 10 requires consolidation. In Table 10, we alternately report the results of a logit regression examining the association between IFRS 10 adoption and reported sales (*SOLD*) and acquisitions (*MERGER*) of subsidiaries.[25] The model analysing subsidiary sales is estimated on a subsample of firms which disclose subsidiaries in the prior year (*n=919*), while analysis of acquisitions is based on the full sample (*n=1,008*). The control variables included in these models are identical to those in regression model (1) other than the exclusion of the *SOLD* and *MERGER* variables which are now used as the dependent variables.

INSERT TABLE 10 HERE

In Column (1), we find a significant positive coefficient on *POST*, which suggests that subsidiary sales are significantly higher post-IFRS 10. When considering the acquisition of subsidiaries, Column (2) shows *POST* is insignificant suggesting IFRS 10 did not impact takeover activity.

In Table 11 we present a univariate comparison of firms pre- and post-IFRS 10 adoption and grouped by the directional change in subsidiaries, after excluding firms with subsidiary activity

---

[25] The assessment of the restructuring of subsidiaries requires manually checking financial statement notes which we concede may not be indicative of all restructuring activity.

(i.e., sales and/or mergers) during the sample period. We find the main results (i.e., the reduction in subsidiaries and non-majority consolidation) do not appear to hold, although we still document significantly lower subsidiaries for firms with a decrease in subsidiaries in the post-IFRS 10 period.[26] The findings also indicate lower profitability for firms with no change in subsidiaries. These results suggest that firms are potentially engaging in real activities (i.e., divesting subsidiaries) in response to the new standard.

4.6.5 Other additional tests

We also conduct a number of further untabulated analyses to assess the robustness of our findings. First, we inspect company disclosures regarding IFRS 10, and find two companies voluntarily disclose a material impact of IFRS 10 on their subsidiaries. Given the small sample, we are unable to conduct any meaningful analysis. Second, given the moderating impact of leverage on the impact of IFRS 10, we augment our value relevance analysis to separately include assets and liabilities in lieu of the book value of equity and find the conclusions drawn remain qualitatively similar. Third, we also consider whether the main result differs when controlling for general M&A activity and include a variable capturing the percentage change in industry-year M&A activity for all acquisitions of Australian publicly listed companies. In this analysis (untabulated) we find industry M&A activity is negatively associated with the change in subsidiaries and positively associated with non-majority consolidation. The statistical significance of the test variables remains the same.[27]

4.6.6 Discussion and limitations of the study

At the time of writing the IASB is undertaking the first phase of its PIR into IFRS 10. The evidence in this study is relevant to the IASB in the completion of its PIR as to date there is limited empirical evidence on the effects of the standard. The limited evidence is perhaps largely due to the need to hand collect subsidiary data from the notes to the financial statements. Furthermore, it is possible that some firms more heavily impacted by IFRS 10 were excluded from this study as they disclosed

---

[26] In untabulated additional analysis, we conduct univariate analysis on the change in subsidiaries following IFRS 10 adoption for alternative sub-sample of firms with: no subsidiary sales, no subsidiary acquisitions or no subsidiary sales and acquisitions. For each sub-group the results show that firms continue to report a significant decrease in subsidiaries post-IFRS 10. We also find, in a comparison of firms in the pre- and post-IFRS 10 period, firms with a decrease in subsidiaries in the post-IFRS 10 period are associated with significantly more subsidiary sales (38% pre- vs. 49% post-) and less subsidiary acquisitions (6% pre- vs. 1% post-).

[27] We thank the reviewer for raising this point and providing the suggested analysis.

only material subsidiaries which we excluded from this study. Although analysing firms only disclosing material subsidiaries is outside the scope of this study, we recommend the IASB to address convergence in subsidiary disclosures by mandating all subsidiaries be reported in the annual report.

The evidence in this study suggests that IFRS 10 had limited direct impact on the financial statements of the top 500 ASX listed firms. Overall, we find that approximately 50% of firms report no change in subsidiaries upon adoption of the new standard. Although, our empirical evidence documents a decline in the number of subsidiaries consolidated and a decrease in the proportion of firms consolidating non-majority owned subsidiaries, these findings are only significant at the 10% level. The decline in consolidation of non-majority owned subsidiaries is somewhat surprising given an explicit goal of the new standard was to provide increased guidance on the application of the control definition to investees held with less than 50% ownership. Supporting the IASB's goal of improving the usefulness of financial statements our findings show a significant increase in the value relevance for equity after IFRS 10 adoption. In completing the PIR of IFRS 10 it would be useful for the IASB to collect and obtain evidence from other countries to determine if the effect of the implementation of the standard are similar to the results documented in this study. In particular, it is notable that Australia has consistently applied a principles-based control definition since the introduction of a legally backed accounting standard in 1991. It is therefore possible that the introduction of IFRS 10 had less impact in Australia than in countries which have more recently used a rules-based control definition.

This study is subject to a number of limitations. Firstly, it is not possible to rule-out that the effects we have attributed to the implementation of IFRS 10 are driven by concurrent events which took place at the same time. Whilst there are no obvious events which are likely to impact the accounting for subsidiaries, we cannot rule out that other factors drive our findings. Although, it is common practice in research to use a difference-in-difference approach to attribute causality, the lack of a suitable control group which did not apply IFRS 10 limits our ability to conduct such an analysis. This weakness applies to all research assessing the implementation of new accounting standards which are applied simultaneously by all firms.[28] Further, due to the gradual development and roll-

---

[28] The introduction of IFRS 10 was accompanied by the simultaneous application of IFRS 12 *Disclosure of Interests in other Entities*. Whilst our sample selection process attempted to remove the effects of IFRS 12 in our main analysis, it remains possible

out of IFRS 10, we can only infer the impact of IFRS 10 in the first year(s) of implementation and cannot rule out its multi-period effects such as pre-emptive corporate restricting of in the year prior to implementation. Second, whilst our additional analysis suggests an increase in the sales of subsidiaries after the adoption of the standard, we cannot distinguish whether this effect is driven by firms implementing more appropriate consolidation accounting practices, or restructuring their investees in response to IFRS 10. Subsequent research can attempt to disentangle these two explanations and may benefit from interviewing preparers of financial statements. Thirdly, a distinct objective of the IASB in introducing IFRS 10 was to require consolidation of loss-making subsidiaries. As accounting standards do not currently require the disclosure of individual subsidiary level profitability, we were unable to directly test if the adoption of the new standard met this objective. It is recommended that in its PIR, the IASB consider introducing mandatory disclosure of subsidiary level profitability for either all or material subsidiaries. Such information is likely to be useful to users of financial statements when assessing the performance of individual entities within the corporate group.

5. Conclusions

The IASB introduced IFRS 10 in 2013 to reduce diversity in practice surrounding the application of the control definition. The IASB expressed uncertainty as to whether the new standard would increase or decrease the number of subsidiaries consolidated (IASB 2011). To date, however, there is a paucity of evidence highlighting the impact of the IFRS 10. This lack of evidence is limiting for the IASB in assessing the effectiveness of the standard, particularly now that a post implementation review of the effects of IFRS 10 is underway. This study addresses this lack of evidence and contributes to the literature by examining the impact of IFRS 10 on a sample of Australian listed companies.

Our results suggest that firms consolidated fewer subsidiaries following the adoption of IFRS 10. There are two possible explanations for this finding. Firstly, it is possible that IFRS 10 resulted in a "*more appropriate*" consolidation of investees. Alternatively, although we control for subsidiary acquisitions and sales, it is possible that our findings are driven by firms either disposing subsidiaries or restructuring ownership levels after IFRS 10. Interestingly, our additional analysis

---

that the financial statement disclosures we rely on were also impacted by the adoption of IFRS 12 and it is not possible to further disentangle the effects of the simultaneous adoption of both standards.

suggests that firms reporting less subsidiaries did not report an increase in the number of reported associates. In contrast, we find evidence of the reclassification of associates to subsidiaries for firms reporting more subsidiaries after the adoption of IFRS 10. Our results also show a decrease in the proportion of subsidiaries consolidated with non-majority ownership post-IFRS 10. This finding is intriguing given the increased focus and guidance provided in IFRS 10 on this topic. Our evidence is also inconsistent with IFRS 10 adoption increasing the consolidation of loss-making subsidiaries.

We also assess whether IFRS 10 improved the usefulness of financial information for shareholders. The results document an increase in the value relevance of equity for all firms and a decline in the value relevance of net income for firms' which report fewer subsidiaries after IFRS 10 adoption. Whilst the findings of increased value relevance of equity post-IFRS 10 are consistent with improved financial statement usefulness, the reduction in the value relevance of income for firms reporting less subsidiaries are potentially concerning.

REFERENCES

Abad, C., J., Laffarga, A., Garcia-Borbolla, M., Larran, J., Pinero, and N. Garrod, 2000, An evaluation of the value relevance of consolidated versus unconsolidated accounting information: Evidence from quoted Spanish firms, *Journal of International Financial Management and Accounting* 11, 156–177.

Agoglia, C., T.S. Doupnik, and T. Tsakumis, 2011, Principles-based versus rules-based accounting standards: the influence of standard precision and audit committee strength on financial reporting decisions, *The Accounting Review* 86, 747-767.

Ahmed, A., E. Kilic, and G. Lobo, 2006, Does recognition verse disclosure matter? Evidence from value-relevance of banks' recognized and disclosed derivative financial instruments, *The Accounting Review* 81, 567–588.

Barth, M., W. Beaver, and W. Landsman, 2001, The Relevance of the Value Relevance Literature for Financial Accounting Standard Setting: Another View, *Journal of Accounting and Economics* 31, 77–104.

Beck, A., B. Behn, A., Lionzo, and F. Rossignoli, 2017, Firm equity investment decisions and U.S. GAAP and IFRS consolidation control guidelines: An empirical analysis, *Journal of International Accounting Research* 16, 37-57.

Becker, C.L., M.L. DeFond, J. Jiambalvo, and K.R. Subramanyam, 1998, The effect of audit quality on earnings management, *Contemporary Accounting Research* 15, 1–24.

Ben-Shahar, D., E., Sulganik, D., Tsang, 2016, Does IFRS 10 on consolidated financial statements abandon accepted economic principles? *Australian Accounting Review* 26, 341-345.

Brown, P., J. Preiato, and A. Tarca, 2014, Measuring country differences in enforcement of accounting standards: An audit and enforcement proxy, *Journal of Business Finance & Accounting* 41, 1-52.

Burgstahler, D., and I. Dichev, 1997, Earnings, adaptation and equity value, *The Accounting Review* 72, 187-215.

Copeland, R.M., and S. McKinnon, 1987, Financial distortion and consolidation of captive finance subsidiaries in the general merchandising industry, *Journal of Business Finance & Accounting* 14, 77–97.

DeFond, M., and J. Zhang, 2014, A review of archival auditing research, *Journal of Accounting and Economics* 58, 275–326.

Donelson, D.C., J.M. McInnis, and R.D. Mergenthaler, 2012, Rules-based accounting standards and litigation, *The Accounting Review* 87, 1247–1279.

Duchac, J., 2004, The dilemma of bright line accounting rules and professional judgment: Insights from special purpose entity consolidation rules, *International Journal of Disclosure and Governance* 1, 324–338.

Edwards, J., and P. Bell, 1961, The theory and measurement of business income, Berkeley, California: University of California Press.

Ernst and Young, 2011, IFRS Developments: IASB issues three new standards: Consolidated Financial Statements, Joint Arrangements, and Disclosure of Interests in Other Entities, May.

European Commission, 2012, Endorsement of IFRS 10 Consolidated Financial Statements (IFRS 10), IFRS 11 Joint Arrangements (IFRS 11), IFRS 12 Disclosure of Interests in Other Entities (IFRS 12), IAS 27 Separate Financial Statements (IAS 27 (2011)) and IAS 28 Investments in Associates and Joint Ventures (IAS 28 (2011)), May, Brussels

Ewert, R., and A. Wagenhofer, 2005, Economic effects of tightening accounting standards to restrict earnings management, *The Accounting Review* 80, 1101–1124.

Folsom, D., P. Hribar, R. Mergenthaler, and K. Peterson, 2017, Principles-based standards and earnings attributes, *Management Science* 63, 2592-2615.

Francis, J.R., 1986, Debt reporting by parent companies: parent-only versus consolidated statements, *Journal of Business Finance & Accounting* 13, 393–403.

Gimbar, C., B. Hansen, and M. Ozlansk, 2016, The effects of critical audit matter paragraphs and accounting standard precision on auditor liability, *The Accounting Review* 91, 1629-1646.

Gornak-Tomaszewski, S., and R. Larson, 2014, New consolidation requirements under IFRS. *Review of Business* 35, 47-58.

Harris, T., M. Lang, and H. Moller, 1994 The value relevance of German accounting measures: An empirical analysis, *Journal of Accounting Research* 32, 187–209.

Hayn, C., 1995, The information content of losses, *Journal of Accounting and Economics* 20, 125-153.

Henry, B., 1999, What Constitutes Control?' *Journal of Accountancy* 187, 39–43.

Hsu, A., R. Duh, and K. Cheng, 2012, Does the control-based approach to consolidated statements better reflect market value than the ownership-based approach? *The International Journal of Accounting* 47, 198-225.

International Accounting Standards Board (IASB), 2011, IFRS10 Consolidated Financial Statements and IFRS 12 Disclosure of Interests in other entities: Effect analysis. London: IASB.

International Accounting Standards Board (IASB), 2020, Post-implementation Review of IFRS 10 Consolidated Financial Statements, IFRS 11 Joint Arrangements and IFRS 12 Disclosure of Interests in Other Entities. London, IASB

Livnat, J., and A.C. Sondhi, 1986, Finance subsidiaries: their formation and consolidation, *Journal of Business Finance & Accounting* 13, 137–147.

Lopes, A.I., and M. Lopes, 2019, Effects of adopting IFRS 10 and IFRS 11 on consolidated financial statements: An exploratory research, *Meditari Accountancy Research* 27, 91-124.

Maines, L.A., E. Bartov, P. Fairfield, D.E. Hirst, T.E. Iannaconi, R. Mallett, C.M. Schrand, D.J. Skinner, and L. Vincent, 2003, Evaluating concepts-based vs. rules-based approaches to standard setting, *Accounting Horizons* 17, 73–89.

McEnroe, J.E., and M. Sullivan, 2013, An examination of the perceptions of auditors and chief financial officers regarding principles versus rules-based accounting standards, *Research in Accounting Regulation* 25, 196–207.

Mian, C., and C. Smith, 1990a, Incentives for unconsolidated financial reporting, *Journal of Accounting and Economics* 12, 141-171.

Mian, C., and C. Smith, 1990b, Incentives associated with changes in consolidated reporting requirements, *Journal of Accounting and Economics* 13, 249-266.

Mohr, R.M., 1988, Unconsolidated finance subsidiaries: characteristics and debt/equity

effects, *Accounting Horizons* 2, 27–34.

Nelson, M.W., 2003, Behavioral evidence on the effects of principles- and rules-based standards, *Accounting Horizons* 17, 91–104.

Nelson, M.W., J.A. Elliot, and R.L. Tarpley, 2002, Evidence from auditors about managers' and auditors' earnings management decisions, *The Accounting Review* 77, 175–202.

Nobes, C.W., 2005, Rules-based standards and the lack of principles in accounting, *Accounting Horizons* 19, 25–34.

Ohlson, J., 1995, Earnings, book values and dividends in equity valuation, *Contemporary Accounting Research* 11, 661–687.

Psaros, J., 2007, Do principles-based accounting standards lead to biased financial reporting? An Australian experiment, *Accounting and Finance* 47, 527–550.

Psaros, J., and K. Trotman, 2004, The impact of the type of accounting standards on preparers' judgements, *Abacus* 40, 76-93.

Richardson, A., R. Roubi, and K. Soonawalla, 2012, Decline in financial reporting for joint ventures? Canadian evidence on removal of financial reporting choice, *European Accounting Review* 21, 373–393.

Schipper, K., 2003, Principles-based accounting standards, *Accounting Horizons* 17, 61–72.

So, S., and M. Smith, 2009, Value relevance of IAS 27 (2003) revision on presentation of non-controlling interest: Evidence from Hong Kong, *Journal of International Financial and Accounting* 20, 166-198.

Walker, B., 1990, Adsteam holds lessons in how to assess 'groups,' *New Accountant*, (November 15), 20.

Walker, B., 1991, Control test remains a sticking point, *New Accountant*, (August 8), 9.

Whittred, G., 1987, The derived demand for consolidated financial reporting, *Journal of Accounting and Economics* 9, 259-285.

Yermack, D. 1996, Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40, 185-211.

Table 1
Sample derivation

	N
ASX Top 500 publicly listed firms (two years pre- and post-IFRS10)	2,000
Less: Firms with missing financial information in the current and prior year	(646)
Sample with sufficient financial information	1,354
Less: Firms with missing information on subsidiaries	(57)
Less: Firms with missing governance information	(12)
Sample with sufficient subsidiary and governance data	1,285
Less: Firms using US GAAP	(24)
Less: Firms early adopting IFRS 10	(8)
Less: Firms without complete data two years pre- and post- IFRS10	(77)
Less: Firms only disclosing material subsidiaries during the sample period	(168)
Full Sample to test **H₁-H₅**	1,008

Table 2
Descriptive statistics

Panel A: Full Sample

Variables	N	mean	median	sd	min	p25	p75	max
Number of Subsidiaries	1,008	29.09	14	38.622	0	4	37	187
Change in number of subsidiaries	1,008	0.736	0	8.793	-62	0	1	34
SUBS NONMAJORITY (Dummy)	1,008	0.150	0	0.357	0	0	0	1
SUBS NONMAJORITY (Proportion)	1,008	0.014	0	0.062	0	0	0	0.800
UPWARD CHANGE	1,008	0.352	0	0.478	0	0	1	1
DOWNWARD CHANGE	1,008	0.176	0	0.381	0	0	0	1
NO CHANGE	1,008	0.472	0	0.499	0	0	1	1
ROA (Consolidated)	1,008	0.032	0.079	0.218	-1.032	0.009	0.128	0.423
ROA (Subsidiary)	1,008	-0.006	0.008	0.162	-0.979	-0.020	0.045	0.507
MVE	1,008	5.210	1.910	9.626	0.012	0.583	5.315	67.230
LEVERAGE	1,008	1.947	1.672	1.137	-0.028	1.351	2.123	8.696
CEO OWNERSHIP	1,008	0.032	0.002	0.101	0	0	0.014	0.613
LOSS (Consolidated)	1,008	0.222	0	0.416	0	0	0	1
LOSS (Subsidiary)	1,008	0.397	0	0.489	0	0	1	1
BIG4	1,008	0.805	1	0.397	0	1	1	1
TOTAL ASSETS	1,008	20.241	20.164	1.590	16.103	19.137	21.216	24.422
CURRENT RATIO	1,008	2.925	1.647	3.985	0.164	1.123	2.750	25.605
MARKET TO BOOK	1,008	2.227	1.490	2.305	-0.180	0.855	2.590	12.870
BOARD SIZE	1,008	2.091	2.079	0.270	1.386	1.946	2.303	2.708
CEO BONUS	1,008	0.643	1	0.479	0	0	1	1
MERGER	1,008	0.026	0	0.159	0	0	0	1
SOLD	1,008	0.207	0	0.406	0	0	0	1
DEC YEAR END	1,008	0.134	0	0.341	0	0	0	1
LAG SUB COUNT	1,008	2.577	2.639	1.363	0.000	1.609	3.584	5.380
BVE	1,008	2.427	1.235	3.854	-0.007	0.479	2.602	28.600
EBIT	1,008	0.405	0.204	0.707	-0.681	0.008	0.517	4.854
CHANGEASSOCIATES	1,008	0.012	0	0.224	-0.847	0	0	1.099

This table reports univariate statistics on the full sample of 1,008 observations. All variables are defined in Appendix 1.

Panel B: Pre- and post-IFRS 10 sample and comparison of means and medians

	(1)			*(2)*			*(3)*
	Pre-IFRS 10 adoption sample			*Post-IFRS 10 adoption sample*			*Stat. Diff. Col (2)-(3)*
Variables	*N*	*mean*	*median*	*N*	*mean*	*median*	
Number of Subsidiaries	504	28.60	13.00	504	29.59	15.00	-0.980
Change in number of subsidiaries	504	1.202	0.000	504	0.270	0.000	0.933*
CHANGE SUB COUNT	504	0.726	0.000	504	0.130	0.000	0.035***
SUBS NONMAJORITY (Dummy)	504	0.149	0.000	504	0.151	0.000	-0.002
SUBS NONMAJORITY (Proportion)	504	0.015	0.000	504	0.013	0.000	0.002
UPWARD CHANGE	504	0.373	0.000	504	0.331	0.000	0.042
DOWNWARD CHANGE	504	0.151	0.000	504	0.200	0.000	-0.050*
NO CHANGE	504	0.476	0.000	504	0.468	0.000	0.008
ROA (Consolidated)	504	0.058	0.086	504	0.005	0.072	0.053***
ROA (Subsidiary)	504	0.005	0.013	504	-0.018	0.005	0.023*
MVE	504	4.773	2.034	504	5.647	1.839	-0.874
LEVERAGE	504	1.892	1.661	504	2.002	1.676	-0.110
CEO OWNERSHIP	504	0.033	0.002	504	0.030	0.001	0.003
LOSS (Consolidated)	504	0.187	0.000	504	0.258	0.000	-0.071**
LOSS (Subsidiary)	504	0.379	0.000	504	0.415	0.000	-0.036
BIG4	504	0.794	1.000	504	0.815	1.000	-0.022
TOTAL ASSETS	504	20.218	20.087	504	20.265	20.201	-0.047
CURRENT RATIO	504	3.098	1.667	504	2.751	1.636	0.346
MARKET TO BOOK	504	2.328	1.540	504	2.127	1.440	0.201
BOARD SIZE	504	2.085	2.079	504	2.096	2.079	-0.011
CEO BONUS	504	0.665	1.000	504	0.621	1.000	0.044
MERGER	504	0.032	0.000	504	0.020	0.000	0.012
SOLD	504	0.185	0.000	504	0.230	0.000	-0.046
DEC YEAR END	504	0.127	0.000	504	0.141	0.000	-0.014
LAG SUB COUNT	504	2.517	2.565	504	2.637	2.708	-0.120
BVE	504	2.344	1.207	504	2.509	1.244	-0.165
EBIT	504	0.423	0.211	504	0.387	0.186	0.036
CHANGEASSOCIATES	504	0.032	0.000	504	-0.009	0.000	0.041**

This table reports univariate statistics on a sample of 1,008 observation split into pre-IFRS 10 (*N*=504), and post-IFRS 10 (*N*= 504). A statistical test of difference in means pre- and post- IFRS 10 are presented in Column (3). A *t*-test is used for continuous variables and a $\chi 2$-test for binary variables. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix 1.

Panel C: Comparison of firms pre- and post-IFRS 10 based on post-IFRS 10 changes in subsidiaries (Increase, Decrease and No change)

	(1)		(2)		(3)
	Pre-IFRS 10		Post-IFRS 10		
Firms with an increase in subsidiaries post-IFRS 10					
	N	*mean*	*N*	*mean*	*Stat Diff.*
SUBS NONMAJORITY (Dummy)	224	0.152	224	0.192	-0.040
SUBS NONMAJORITY (Proportion)	224	0.014	224	0.013	0.000
ROA (Consolidated)	224	0.076	224	0.037	0.039**
ROA (Subsidiary)	224	0.015	224	-0.002	0.018
LOSS (Consolidated)	224	0.107	224	0.188	-0.080*
LOSS (Subsidiary)	224	0.330	224	0.366	-0.036
CHANGEASSOCIATES	224	0.02	224	-0.03	0.05*
MERGER	224	0.058	224	0.036	0.022
SOLD	224	0.161	224	0.188	-0.027
Firms with a decrease in subsidiaries post-IFRS 10					
	N	*mean*	*N*	*mean*	*Stat Diff.*
SUBS NONMAJORITY (Dummy)	120	0.258	120	0.183	0.075
SUBS NONMAJORITY (Proportion)	120	0.018	120	0.011	0.007
ROA (Consolidated)	120	0.005	120	-0.024	0.028
ROA (Subsidiary)	120	-0.017	120	0.010	-0.027
LOSS (Consolidated)	120	0.225	120	0.275	-0.050
LOSS (Subsidiary)	120	0.500	120	0.433	0.067
CHANGEASSOCIATES	120	0.01	120	-0.03	0.04
MERGER	120	0.008	120	0.017	-0.008
SOLD	120	0.392	120	0.483	-0.092
Firms with no change in subsidiaries post-IFRS 10					
	N	*mean*	*N*	*mean*	*Stat Diff.*
SUBS NONMAJORITY (Dummy)	160	0.062	160	0.069	-0.006
SUBS NONMAJORITY (Proportion)	160	0.014	160	0.013	0.001
ROA (Consolidated)	160	0.012	160	-0.065	0.076**
ROA (Subsidiary)	160	0.008	160	-0.061	0.069**
LOSS (Consolidated)	160	0.269	160	0.344	-0.075
LOSS (Subsidiary)	160	0.356	160	0.469	-0.113*
CHANGEASSOCIATES	160	0.01	160	0.01	-0.00
MERGER	160	0.013	160	0.000	0.013
SOLD	160	0.062	160	0.100	-0.037

This table reports univariate statistics on a sample observation split into groups based on their net change in subsidiaries post-IFRS 10 (increase, decrease or no change) and by pre-IFRS 10 and post-IFRS 10 period. A statistical test of difference in means pre- and post- IFRS 10 are presented in Column (3). A *t*-test is used for continuous variables and a *χ2*-test for binary variables. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix 1.

Panel D: Change in subsidiaries around IFRS 10 adoption

	Pre-IFRS 10		Post-IFRS 10	
Year relative to IFRS 10 adoption	*t-2*	*t-1*	*t+1*	*t+2*
Opening number of subsidiaries	27.421	27.893	29.31	28.988
Subsidiaries acquired during year	0.04	0.024	0.012	0.028
Subsidiaries sold during year	1.044	0.869	1.333	0.976
Change in subsidiaries for other reasons	1.476	2.262	0.999	2.143
Closing number of subsidiaries	27.893	29.31	28.988	30.183

Table 3

The adoption of IFRS 10 and change in the number of subsidiaries (H$_1$)

Dependent Variable:	(1) CHANGE SUB COUNT
POST	-0.039*
	(-1.82)
LEVERAGE	-0.027
	(-0.93)
CEO OWNERSHIP	-0.434
	(-0.85)
LOSS	0.036
	(1.37)
BIG4	-0.042*
	(-1.72)
TOTAL ASSETS	0.114**
	(1.99)
CURRENT RATIO	-0.003
	(-1.00)
MARKET TO BOOK	-0.013
	(-1.24)
BOARD SIZE	-0.002
	(-0.23)
CEO BONUS	-0.009
	(-0.40)
MERGER	0.088
	(1.46)
SOLD	-0.048**
	(-2.36)
DEC YEAR END	-0.033
	(-0.95)
Constant	0.121***
	(2.96)
N	1,008
Industry controls	Yes
Adjusted R2	0.022

This table reports the impact of IFRS 10 on the change in the number of subsidiaries around the adoption of IFRS 10. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. All continuous control variables are specified as a change (*i.e.,* current year value minus prior year value). Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 4
The adoption of IFRS 10 and the consolidation of subsidiaries
with ownership at or below 50% (H$_2$)

Dependent Variable:	(1) SUBS NONMAJORITY (Binary)	(2) SUBS NONMAJORITY (Proportion)
POST	-0.017	-0.003*
	(-1.36)	(-1.89)
LEVERAGE	-0.006	-0.002*
	(-0.67)	(-1.90)
CEO OWNERSHIP	-0.176***	-0.042***
	(-2.82)	(-3.97)
LOSS	0.065**	0.002
	(2.46)	(0.36)
BIG4	-0.085***	-0.023***
	(-3.42)	(-3.18)
TOTAL ASSETS	0.036***	0.001
	(3.29)	(1.15)
CURRENT RATIO	-0.003*	-0.000**
	(-1.83)	(-2.07)
MARKET TO BOOK	-0.004	-0.000
	(-0.90)	(-0.47)
BOARD SIZE	-0.055	-0.002
	(-1.17)	(-0.36)
CEO BONUS	-0.028	-0.007
	(-1.18)	(-1.49)
MERGER	-0.048	-0.003
	(-0.74)	(-0.29)
SOLD	0.032	0.003
	(1.25)	(0.89)
LAG SUBS COUNT	0.084***	0.004***
	(10.14)	(5.74)
DEC YEAR END	0.027	-0.000
	(1.21)	(-0.04)
Constant	-0.633***	0.002
	(-3.61)	(0.12)
N	1,008	1,008
Industry controls	Yes	Yes
Adjusted R2	0.155	0.025

Column (1) of this table presents the results of estimating a linear probability model regression testing the impact of IFRS 10 on the likelihood of consolidation of subsidiaries with ownership levels at or below 50%. In Column (2) an OLS model is used examining the impact of IFRS 10 on the proportion of subsidiaries consolidated with non-majority ownership. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 5
The impact of the adoption of IFRS 10 on consolidated and subsidiary profits (H₃)

Dependent Variable:	*(1)* ROA (Consolidated)	*(2)* ROA (Consolidated)	*(3)* ROA (Subsidiary)	*(4)* ROA (Subsidiary)
POST	-0.041***	-0.065***	-0.019*	-0.032*
	(-3.77)	(-3.70)	(-1.92)	(-1.70)
DOWNWARD CHANGE	-	-0.051	-	-0.004
		(-1.57)		(-0.24)
DOWNWARD CHANGE*POST	-	0.078**	-	0.059**
		(2.35)		(2.15)
UPWARD CHANGE	-	0.001	-	0.005
		(0.08)		(0.57)
UPWARD CHANGE *POST	-	0.033	-	0.007
		(1.40)		(0.33)
LEVERAGE	-0.032***	-0.032***	-0.009	-0.009
	(-4.61)	(-4.57)	(-1.27)	(-1.33)
CEO OWNERSHIP	0.095	0.100	-0.093	-0.092
	(1.37)	(1.43)	(-1.10)	(-1.06)
BIG4	-0.043***	-0.041**	-0.029**	-0.030**
	(-2.73)	(-2.52)	(-2.13)	(-2.15)
TOTAL ASSETS	-0.089***	-0.086***	0.021***	0.021***
	(-2.81)	(-2.81)	(3.47)	(3.38)
CURRENT RATIO	0.021***	0.021***	0.004**	0.004**
	(5.43)	(5.33)	(2.13)	(2.17)
MARKET TO BOOK	0.046*	0.044*	0.001	0.001
	(1.85)	(1.76)	(0.33)	(0.38)
BOARD SIZE	0.064***	0.064***	-0.021	-0.018
	(4.78)	(4.79)	(-0.74)	(-0.65)
CEO BONUS	0.000	0.000	0.025***	0.024***
	(0.09)	(0.18)	(3.08)	(2.93)
MERGER	-0.046**	-0.045**	0.020	0.019
	(-2.18)	(-2.02)	(1.29)	(1.34)
SOLD	-1.072***	-1.069***	-0.006	-0.014
	(-6.56)	(-6.55)	(-0.64)	(-1.60)
DEC YEAR END	-0.019*	-0.016	-0.054*	-0.055
	(-1.89)	(-1.35)	(-1.68)	(-1.67)
Constant	-0.041***	-0.065***	-0.361***	-0.360***
	(-3.77)	(-3.70)	(-3.34)	(-3.30)
N	1,008	1,008	1,008	1,008
Industry controls	Yes	Yes	Yes	Yes
Adjusted R2	0.315	0.319	0.049	0.054

This table presents the results of estimating an OLS regression examining the impact of IFRS 10 on the likelihood of consolidating loss-making subsidiaries. The dependent variable is consolidated return on assets (Columns (1)-(2)) or subsidiary return on assets (Columns (3)-(4)). All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 6
Incentives for non-consolidation and the impacts from the adoption of IFRS 10 (H4)

Dependent:	*(1)* CHANGE SUB COUNT	*(2)* SUBS NONMAJORITY *(Dummy)*	*(3)* SUBS NONMAJORITY *(Proportion)*
POST	0.093**	-0.019	-0.006
	(2.28)	(-0.35)	(-0.38)
LEVERAGE	-0.000	-0.002	-0.002
	(-0.01)	(-0.20)	(-1.29)
LEVERAGE*POST	-0.031	-0.005	-0.000
	(-1.67)	(-0.35)	(-0.03)
CEO OWNERSHIP	-0.350	-0.301***	-0.055***
	(-0.77)	(-3.52)	(-3.53)
CEO OWNERSHIP*POST	-0.104	0.248**	0.024
	(-1.07)	(2.19)	(1.45)
LOSS	0.059	0.073***	-0.001
	(1.45)	(2.96)	(-0.10)
LOSS*POST	-0.055	-0.017	0.006
	(-1.26)	(-0.38)	(0.64)
BIG4	-0.006	-0.091**	-0.023***
	(-0.22)	(-2.55)	(-3.74)
BIG4*POST	-0.071*	0.010	0.001
	(-1.89)	(0.21)	(0.11)
TOTAL ASSETS	0.114*	0.035***	0.002
	(1.76)	(3.18)	(1.09)
CURRENT RATIO	-0.003	-0.003*	-0.000*
	(-1.20)	(-1.68)	(-1.98)
MARKET TO BOOK	-0.014	-0.005	-0.000
	(-1.15)	(-0.99)	(-0.36)
BOARD SIZE	-0.003	-0.051	-0.002
	(-0.40)	(-1.10)	(-0.30)
CEO BONUS	-0.011	-0.029	-0.007
	(-0.55)	(-1.24)	(-1.43)
MERGER	0.082*	-0.052	-0.003
	(1.78)	(-0.78)	(-0.31)
SOLD	-0.045*	0.032	0.003
	(-1.78)	(1.23)	(0.87)
LAG SUBS COUNT	-	0.084***	0.004***
		(10.29)	(5.88)
DEC YEAR END	-0.029	0.025	-0.001
	(-0.80)	(1.10)	(-0.12)
Constant	*0.087****	*-0.621****	*0.002*
	(3.32)	*(-3.54)*	*(0.09)*
N	1,008	1,008	1,008
Industry controls	Yes	Yes	Yes
Adjusted R2	0.026	0.152	0.022

This table reports whether the impact of IFRS 10 on the change in the number of subsidiaries (Column (1)) and the likelihood of consolidating non-majority owned subsidiaries (Columns (2) and (3)) is impacted by variables which are predicted to change the likelihood of accurate consolidation. All continuous control variables are specified as a change (*i.e.,* current year value minus prior year value) in Column (1) when the dependent variable is also a change variable. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 7

The adoption of IFRS 10 and value relevance (H$_5$)

	(1)	(2)	(3)	(4)	(5)
Sample:	Full sample	Full sample	UPWARD CHANGE Sample	DOWNWARD CHANGE Sample	NO CHANGE Sample
Dependent Variable:	MVE	MVE	MVE	MVE	MVE
BVE	1.037***	0.605**	0.100	0.049	0.979***
	(2.77)	(2.29)	(0.28)	(0.18)	(8.62)
EBIT	7.490***	8.499***	10.136***	11.277***	6.678***
	(3.96)	(5.38)	(5.01)	(5.82)	(7.77)
POST	-	-0.269	-0.165	0.288	-0.849***
		(-0.83)	(-0.25)	(0.59)	(-2.65)
BVE*POST	-	0.735*	1.299***	0.678**	0.578*
		(1.74)	(2.80)	(2.12)	(1.69)
EBIT*POST	-	-1.601	-4.440	-3.693*	1.610
		(-0.72)	(-1.48)	(-1.79)	(0.83)
LOSS	1.826***	1.754***	2.254***	1.625***	1.646**
	(3.71)	(3.46)	(2.74)	(3.29)	(2.51)
Constant	-1.579**	-1.359**	-1.953	-1.660*	0.098
	(-2.18)	(-2.01)	(-1.41)	(-1.80)	(0.23)
N	1,008	1,008	355	177	476
Industry controls	Yes	Yes	Yes	Yes	Yes
Adjusted R2	0.755	0.769	0.765	0.921	0.787

This table reports the results of an OLS regression examining whether the adoption of IFRS 10 increases the value relevance of financial statements. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 8
The first- and second-year post-adoption of IFRS 10

	(1)	(2)	(3)	(4)	(5)	(6)
Sample:		Full Sample		First year post- and Final year pre-IFRS 10		
Dependent Variable:	CHANGE SUB COUNT	SUBS NONMAJORITY (Dummy)	SUBS NONMAJORITY (Proportion)	CHANGE SUB COUNT	SUBS NONMAJORITY (Dummy)	SUBS NONMAJORITY (Proportion)
FIRST POST	-0.054**	-0.023*	-0.003**	-0.049**	-0.010	-0.002
	(-1.97)	(-1.74)	(-2.28)	(-2.36)	(-0.77)	(-0.97)
SECOND POST	-0.024	-0.011	-0.002	-	-	-
	(-0.94)	(-0.59)	(-0.86)			
LEVERAGE	-0.028	-0.006	-0.002*	-0.084	-0.011	-0.002
	(-0.96)	(-0.68)	(-1.90)	(-0.98)	(-0.90)	(-0.90)
CEO OWNERSHIP	-0.462	-0.177***	-0.042***	0.330	-0.129	-0.037**
	(-0.91)	(-2.84)	(-3.96)	(0.55)	(-1.32)	(-2.67)
LOSS	0.034	0.064**	0.002	0.044	0.058	-0.009
	(1.29)	(2.38)	(0.35)	(1.15)	(1.48)	(-1.14)
BIG4	-0.042**	-0.085***	-0.023***	-0.021	-0.094**	-0.024**
	(2.82)	(-3.41)	(-3.17)	(-0.88)	(-2.70)	(-2.38)
TOTAL ASSETS	0.115**	0.036***	0.001	0.323***	0.033*	-0.000
	(2.00)	(3.30)	(1.15)	(3.61)	(2.01)	(-0.19)
CURRENT RATIO	-0.003	-0.003*	-0.000**	-0.005	-0.005**	-0.001***
	(-1.02)	(-1.84)	(-2.10)	(-0.96)	(-2.22)	(-3.54)
MARKET TO BOOK	-0.013	-0.004	-0.000	0.001	-0.006	-0.001
	(-1.25)	(-0.89)	(-0.47)	(0.04)	(-1.07)	(-1.34)
BOARD SIZE	-0.002	-0.054	-0.002	0.004	0.006	0.010
	(-0.22)	(-1.16)	(-0.35)	(0.42)	(0.07)	(0.87)
CEO BONUS	-0.009	-0.028	-0.007	-0.035	-0.050	-0.013
	(-0.40)	(-1.18)	(-1.49)	(-1.68)	(-1.56)	(-1.68)
MERGER	0.085	-0.050	-0.003	0.095	-0.056	-0.014**
	(1.41)	(-0.75)	(-0.30)	(1.15)	(-0.77)	(-2.62)
SOLD	-0.048**	0.032	0.003	-0.065	0.019	0.002
	(-2.35)	(1.25)	(0.89)	(-1.64)	(0.54)	(0.48)
LAG SUBS COUNT	-	0.084***	0.004***	-	0.081***	0.004***
		(10.14)	(5.77)		(7.25)	(3.45)
DEC YEAR END	-0.033	0.027	-0.000	-0.109**	0.016	-0.001
	(-0.95)	(1.21)	(-0.04)	(-2.35)	(0.65)	(-0.30)
Constant	0.122***	-0.631***	0.003	0.133***	-0.627**	0.026
	(2.97)	(-3.62)	(0.12)	(3.91)	(-2.34)	(0.91)
N	1,008	1008	1008	504	504	504
Industry controls	Yes	Yes	Yes	0.084	0.128	0.010
Pseudo/Adjusted R2	0.022	0.154	0.024	504	504	504

This table reports whether the impact of IFRS 10 on the change in the number of subsidiaries (Columns (1) and (4)) and the consolidation of non-majority owned subsidiaries (Columns (2), (3), (5) and (6)). Columns (1)-(3) examine differences in the first and second year post-IFRS10 while Columns (4)-(6) compare the first year post-IFRS10 to the year immediately preceding. Continuous control variables in Columns (1) and (4) are specified as a change (*i.e.,* current year value minus prior year value). All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 9
Changes in subsidiaries and associates post-IFRS 10 adoption

	(1) Full Sample	(2) UPWARD CHANGE Sample	(3) DOWNWARD CHANGE Sample
Sample:			
Dependent Variable:	CHANGE SUB COUNT	CHANGE SUB COUNT	CHANGE SUB COUNT
POST	-0.035*	-0.055	-0.017
	(-2.14)	(-1.46)	(-0.34)
CHANGE ASSOCIATES	0.118**	0.199**	0.183
	(3.50)	(2.85)	(1.34)
CHANGE ASSOCIATES*POST	-0.052	-0.223*	-0.097
	(-0.60)	(-2.23)	(-0.31)
LEVERAGE	0.113	0.198**	-0.245
	(1.42)	(2.86)	(-0.83)
CEO OWNERSHIP	-0.041**	-0.072	0.071
	(-2.78)	(-1.99)	(1.53)
LOSS	-0.458	-2.232*	0.196
	(-0.63)	(-2.65)	(0.21)
BIG4	-0.027	-0.009	-0.180
	(-0.64)	(-0.21)	(-1.16)
TOTAL ASSETS	-0.002	-0.020*	-0.017
	(-0.33)	(-2.78)	(-0.63)
CURRENT RATIO	-0.003	-0.007	-0.003
	(-1.21)	(-1.34)	(-0.46)
MARKET TO BOOK	-0.012	-0.023	-0.091
	(-1.49)	(-1.20)	(-1.96)
BOARD SIZE	-0.011	-0.019	0.011
	(-0.43)	(-0.84)	(0.10)
CEO BONUS	0.036	0.093	0.006
	(1.80)	(1.78)	(0.05)
MERGER	0.083**	0.041	0.263**
	(3.30)	(0.60)	(4.46)
SOLD	-0.049*	-0.044	0.091
	(-2.16)	(-0.80)	(2.05)
DEC YEAR END	-0.041	0.011	-0.113
	(-0.84)	(0.26)	(-0.84)
Constant	0.120***	0.287***	-0.241
	(8.43)	(5.38)	(-1.62)
N	1,008	355	177
Industry controls	0.025	0.098	0.104
Adjusted R2	-0.035*	-0.055	-0.017

This table reports the impact of IFRS 10 on the change in the number of subsidiaries after controlling for the change in the number of associates. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. All continuous control variables in Columns (1) to (3) are specified as a change (*i.e.,* current year value minus prior year value). Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 10

Divestitures and Acquisitions of Subsidiaries post-IFRS 10 adoption

	(1)	*(2)*
Sample:	*Firms with at least one subsidiary in prior year*	*Full Sample*
Dependent Variable:	*SOLD*	*MERGER*
POST	0.046**	-0.008
	(2.06)	(-0.91)
LEVERAGE	0.006	-0.006
	(0.43)	(-1.18)
CEO OWNERSHIP	-0.008	0.013
	(-0.06)	(0.37)
LOSS	0.057**	-0.026*
	(2.12)	(-2.48)
BIG4	0.072**	0.014
	(2.19)	(0.72)
TOTAL ASSETS	0.040***	-0.002
	(3.01)	(-0.35)
CURRENT RATIO	0.005	-0.002***
	(0.86)	(-10.38)
MARKET TO BOOK	-0.007	0.004
	(-1.05)	(1.30)
BOARD SIZE	0.047	-0.003
	(0.67)	(-0.17)
CEO BONUS	0.033	0.024**
	(1.22)	(3.27)
DEC YEAR END	-0.090**	-0.025**
	(-2.58)	(-2.96)
Constant	-0.870***	0.099
	(-3.25)	(1.04)
N	919	1,008
Industry controls	Yes	Yes
Adjusted R2	0.047	0.019

This table reports the impact of IFRS 10 on divestitures and acquisitions of subsidiaries. All continuous variables are winsorized at the 1% and 99% levels. Standard errors are clustered by year. The *, ** and *** represent statistical significance at the ten, five and one percent levels, respectively. Industry controls are based on two-digit GICS codes and controls for industry fixed effects. All variables are defined in Appendix 1.

Table 11
Excluding firms with subsidiary divestures and acquisitions

		(1)		(2)	(3)
		Pre-IFRS 10		**Post-IFRS 10**	
Firms with no divestitures or acquisitions during the sample period					
	N	mean	N	mean	Stat Diff.
CHANGE SUB COUNT	246	0.068	246	0.029	0.038
SUBS NONMAJORITY (Dummy)	246	0.106	246	0.118	-0.012
SUBS NONMAJORITY (Proportion)	246	0.015	246	0.014	0.001
ROA (Consolidated)	246	0.040	246	-0.014	0.054**
ROA (Subsidiary)	246	0.008	246	-0.033	0.041*
LOSS (Consolidated)	246	0.195	246	0.252	-0.057
LOSS (Subsidiary)	246	0.370	246	0.415	-0.045
CHANGE ASSOCIATES	246	0.027	246	-0.004	0.031
Firms with an increase in subsidiaries post-IFRS 10 and no divestitures or acquisitions during the sample period					
	N	mean	N	mean	Stat Diff.
CHANGE SUB COUNT	114	0.107	114	0.153	-0.046
SUBS NONMAJORITY (Dummy)	114	0.140	114	0.175	-0.035
SUBS NONMAJORITY (Proportion)	114	0.012	114	0.012	0.000
ROA (Consolidated)	114	0.070	114	0.033	0.037*
ROA (Subsidiary)	114	0.017	114	-0.009	0.026
LOSS (Consolidated)	114	0.140	114	0.228	-0.088
LOSS (Subsidiary)	114	0.386	114	0.404	-0.018
CHANGE ASSOCIATES	114	0.037	114	-0.003	0.040
Firms with a decrease in subsidiaries post-IFRS 10 and no divestitures or acquisitions during the sample period					
	N	mean	N	mean	Stat Diff.
CHANGE SUB COUNT	14	0.096	14	-0.729	0.825**
SUBS NONMAJORITY (Dummy)	14	0.071	14	0.071	0.000
SUBS NONMAJORITY (Proportion)	14	0.004	14	0.005	-0.000
ROA (Consolidated)	14	-0.014	14	-0.070	0.056
ROA (Subsidiary)	14	-0.072	14	-0.023	-0.048
LOSS (Consolidated)	14	0.143	14	0.143	0.000
LOSS (Subsidiary)	14	0.286	14	0.286	0.000
CHANGE ASSOCIATES	14	0.018	14	-0.073	0.091
Firms with no change in subsidiaries post-IFRS 10 and no divestitures or acquisitions during the sample period					
	N	mean	N	mean	Stat Diff.
CHANGE SUB COUNT	118	0.026	118	0.000	0.026
SUBS NONMAJORITY (Dummy)	118	0.076	118	0.068	0.008
SUBS NONMAJORITY (Proportion)	118	0.018	118	0.017	0.001
ROA (Consolidated)	118	0.018	118	-0.053	0.071*
ROA (Subsidiary)	118	0.010	118	-0.057	0.067*
LOSS (Consolidated)	118	0.254	118	0.288	-0.034
LOSS (Subsidiary)	118	0.364	118	0.441	-0.076
CHANGE ASSOCIATES	118	0.019	118	0.002	0.016

This table reports univariate statistics on a sample observation split into groups based on their net change in subsidiaries post-IFRS 10 (increase, decrease or no change) and by pre-IFRS 10 and post-IFRS 10 period after including firms with subsidiary acquisition or divestitures during the period. A statistical test of difference in means pre- and post- IFRS 10 are presented in Column (3). A *t*-test is used for continuous variables and a $\chi 2$-test for binary variables. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix 1.

Appendix 1: List of variables and definitions used in this study

Variable	Definition
Number of subsidiaries	The number of subsidiaries disclosed
Change in number of subsidiaries	The number of subsidiaries disclosed in the current year minus the prior year value.
CHANGE SUB COUNT	The natural log of the number of subsidiaries disclosed in the current year minus the prior year value.
SUBS NONMAJORITY (dummy)	An indicator variable equal to one if a firm consolidates at least one subsidiary with an ownership level at or below 50%, zero otherwise.
SUBS NONMAJORITY (proportion)	The proportion of subsidiaries disclosed by a firm with an ownership level at or below 50%, zero otherwise.
ROA (consolidated)	A firm's consolidated return on assets calculated as consolidated profit after tax divided by total assets.
ROA (subsidiary)	A firm's subsidiary return on assets calculated as consolidated profit after tax minus parent profit after tax, divided by total assets.
MVE	A firm's market capitalisation at the balance date divided by the number of ordinary shares issued.
POST	An indicator variable denoting the two financial years after the implementation of IFRS 10, zero otherwise.
FIRST POST	An indicator variable denoting the first financial year after the implementation of IFRS 10, zero otherwise.
SECOND POST	An indicator variable denoting the second financial year after the implementation of IFRS 10, zero otherwise.
DOWNWARD CHANGE	An indicator variable equal to one if the number of subsidiaries reported by a firm decreased from the prior year, zero otherwise.
UPWARD CHANGE	An indicator variable equal to one if the number of subsidiaries reported by a firm increases from the prior year, zero otherwise.
NO CHANGE	An indicator variable equal to one if the number of subsidiaries reported by a firm does not change from the prior year, zero otherwise.
LEVERAGE	A firm's leverage using the ratio of total assets to total equity
CEO OWNERSHIP	The percentage of the firm's ordinary shares owned by the CEO.
LOSS (Consolidated)	An indicator variable equal to one if a firm reports a loss, zero otherwise.
LOSS (Subsidiary)	An indicator variable equal to one if a firm's subsidiaries collectively incur a loss, zero otherwise.
BIG4	An indicator variable equal to one if a firm is audited by a Big 4 auditor, zero otherwise.
TOTAL ASSETS	The natural logarithm of a firm's total assets.

CURRENT RATIO	The ratio of current assets to current liabilities.
MARKET TO BOOK	The market value of equity of a firm at the balance date divided by the book value of equity.
BOARD SIZE	The natural logarithm of the total number of directors appointed to a firm's board.
CEO BONUS	An indicator variable equal to one if a firm's CEO is paid a cash bonus based on accounting profit.
MERGER	An indicator variable equal to one if a firm made a successful acquisition during the financial year, zero otherwise.
SOLD	An indicator variable equal to one if a firm disclosed the sale of a subsidiary, zero otherwise.
LAG SUB COUNT	The natural log of the count of the number of subsidiaries disclosed by a firm in their notes to the financial statements in the prior year.
DEC YEAR END	An indicator variable equal to one if a firm's financial year ends on 31 December, zero otherwise.
BVE	The book value of equity divided by the number of ordinary shares issued by a firm.
EBIT	The net income before interest and tax divided by the number of ordinary shares issued by a firm.
CHANGE ASSOCIATES	The natural log of the yearly change in reported associates.