

# **Do you have to adopt to adopt? Evidence on IFRS Spillovers in conglomerates**

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# Do you have to adopt to adopt? Evidence on IFRS spillovers in conglomerates

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## ABSTRACT

I study the impact of a parent firm's IFRS adoption on the accounting properties of their private non-IFRS-adopting European subsidiaries. In contrast to public European firms, private European firms are typically not required to adopt IFRS. I examine the private subsidiaries that do not adopt IFRS even though their parents do, and find spillover effects on the accounting properties of non-adopting subsidiaries as a result of parental adoption. I present evidence that private subsidiaries report lower earnings management after their parents are mandated to adopt, which I interpret as the subsidiary's earnings becoming more IFRS-like. These effects are stronger for subsidiaries whose parents have a larger ownership stake, and for subsidiaries that are located in a different country than their parent.

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## 1. Introduction

In this paper, I study the spillover effects of a change in parents' financial reporting practices on the financial reporting practices of their private subsidiaries. Understanding the broad impact of changes in financial reporting practices, including spillover effects, helps policy makers and standard setters perform more accurate cost-benefit analysis of prior and future mandated standard changes (Leuz and Wysocki 2016). In fact, financial reporting externalities are sometimes cited as one of the primary justifications for financial reporting regulation (Admati and Pfleiderer 2000). Moreover, though conglomerates are a common form of business structure, little is known in the literature about the role of financial reporting within these organizations.

I take advantage of the mandatory adoption of International Financial Reporting Standards (IFRS) for public entities by the EU and several other countries (e.g. Australia, South Africa) in 2005 to test spillover effects to private subsidiaries as a result of their parent's reporting change.<sup>1</sup> Adopting countries mandated a common set of financial reporting standards – IFRS – for the consolidated financial statements of all publicly traded companies as of 2005.<sup>2</sup> For unconsolidated as well as private company financial statements, however, these countries varied in whether they require, permit, or prohibit IFRS adoption. Most EU countries permit, but do not require or prohibit, IFRS for consolidated and unconsolidated statements of unlisted firms (De Simone 2016, Deloitte's IAS Plus).<sup>3</sup> This situation creates a dichotomy where a public parent located in an adopting country must adopt IFRS for its consolidated financial statements, while its private subsidiary need not.

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<sup>1</sup> I collectively refer to all countries that adopted IFRS for public firms in 2005 as adopting countries.

<sup>2</sup> See Regulation (EC) No 1606/2002 for example.

<sup>3</sup> <https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>

At the same time, the public parents that adopt IFRS in my sample must follow consolidation standard IAS 27 to consolidate subsidiaries' financials into their books.<sup>4</sup> According to IAS 27, consolidated financial statements should be prepared using “uniform accounting policies for like transactions and other events in similar circumstances,” (IAS 27:24) and adjustments should be made if a member of the group uses different standards (IAS 27:25). It is plausible that most subsidiaries would be too complex for a parent to be able to make a simple high level adjustment to change local GAAP values to IFRS, requiring the private subsidiary to prepare two sets of financials: one under IFRS towards consolidation, and another under local GAAP for government filing. At the very least, the private subsidiary is likely to be aware of the nature of its financial statements under IFRS. I exploit this setting by concentrating my analysis on those private European firms that do not themselves report under IFRS, some of which are subsidiaries of public firms in IFRS adopting countries and some of which are not.<sup>5</sup>

Based on the above discussion and prior research which shows that (1) a parent exerts significant influence on the subsidiary's financial reporting decisions (Beuselinck, Cascino, Deloof, and Vanstraelen 2016) and (2) that private firms that are part of a conglomerate structure are more likely to adopt IFRS (e.g. Bassemir 2012), I reason that a private subsidiary's accounting properties become more IFRS-like as a result of its public parent's IFRS adoption. Specifically, I hypothesize that earnings management (as one earnings quality proxy) will decrease post adoption for those subsidiaries that have a parent who adopts IFRS.<sup>6</sup>

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<sup>4</sup> Standard IAS 27 was in effect from 2003 to 2013, at which time it was replaced by IFRS 10. IFRS 10 broadens the definition of control in response to criticism during the financial crisis that not enough related entities were consolidated on companies' financial statements.

<sup>5</sup> To mitigate selection issues associated with the subsidiary's choice not to adopt IFRS, an alternative analysis can be based on only those countries that prohibit IFRS, though this would reduce the sample by about 67%.

<sup>6</sup> I focus on earnings management proxies because it has been the focus of prior studies such as Burgstahler, Hail and Leuz (2006), Barth, Landsman, and Lang (2008), among others.

I see three potential mechanisms for this phenomenon. First, the institutional forces a parent faces change upon IFRS adoption (e.g. increased investment as in DeFond, Hu, Hung, and Li 2011), which can create changed business objectives at the parent level (Watts and Zimmerman 1986). The parent then passes these changed objectives down to the subsidiary it consolidates with in the form of more IFRS-aligned incentives, where they act to bring the subsidiary's non-IFRS financials' properties closer to IFRS. Another potential mechanism may be through a monitoring force resulting from the parent's added visibility into a set of higher quality IFRS financials. The subsidiary may be motivated to closer align its local GAAP with IFRS in order to avoid large deviations between internal IFRS and external local GAAP reporting. Lastly, the effect could occur because the subsidiary anticipates its own future IFRS adoption.

I use Amadeus data for my analysis. Amadeus is a Bureau Van Dijk database that contains financial and ownership information about European public and private firms. It lists parent information (name, country) even if the parent is outside of Europe, but does so only for European subsidiaries. I center the data around the 2005 mandatory IFRS adoption in Europe, limiting my analysis to years 2003 through 2008.<sup>7</sup> I define a treated firm as a European subsidiary who has a parent in a country that mandated public company IFRS adoption as of 2005.<sup>8</sup> I then create two control groups: first, I use the set of all European non-IFRS reporting private firms that either do not have a parent or have a parent in a country that did not mandate an IFRS adoption during the sample period. Second, I create a control group that includes only private subsidiaries of other firms (i.e. excludes standalone firms) to address potential concerns that standalone firms may be too inherently different from treated firms. Although the sample size is significantly reduced by

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<sup>7</sup> Due to data limitations, 2003 is the first year of reasonably well-populated data available.

<sup>8</sup> For now I am assuming all parents of reasonably sized subsidiaries are public. In the future, I can match my sample to Datastream data to identify the listing status of parents.

using the second, restricted, control group, the benefit is that firms that are subsidiaries are more likely to be comparable to the treatment firms.

The dependent variable in my analysis is based on the Leuz, Nanda, and Wysocki (2003) earnings management index, which is applied to private firms in Burgstahler, Hail, and Leuz (2006). That index is composed of four proxies, but I concentrate on the proxies most related to earnings smoothing and timeliness. The first proxy is the median ratio of absolute accruals divided by the absolute cash flows from operations. The second proxy is the ratio of the standard deviation of accruals divided by the standard deviation of cash flows from operations. The third proxy is the Spearman correlation between changes in accruals and changes in cash flows. I then create an aggregate measure composed of the average of the percentile rank of three proxies. All of these proxies, and thus the aggregate measure, are calculated at the industry-country level separately for the pre/post and treatment/control groups.

I find evidence that, controlling for firm characteristics associated with earnings management in Burgstahler et al. (2006), a parent's adoption of IFRS is associated with a reduction in the earnings management of its private subsidiary who did not change to IFRS reporting by about 7.5% of the mean for the full control samples, and 12% of the mean for the restricted control sample. That is, the change in reporting at the immediate owner level yields an IFRS-like effect on the earnings management of the non-adopting subsidiary, namely, earnings management decreases (as in Barth, Landsman, Lang 2008). The result is weaker though still present when using the alternative control group of firms that excludes standalone firms.

Additional cross sectional tests help in testing whether the parent's incentives are getting pushed onto the subsidiary, the reporting change acts as a monitoring tool, or the subsidiary anticipates eventual IFRS adoption. I use the parent's concentration of ownership in its subsidiary

as a proxy for its level of influence, and find that results are more concentrated in the high percentage ownership subsidiaries, potentially indicating that a parental push mechanism is at work. I also use geographic distance between the parent and the subsidiary as a proxy for the level of information asymmetry between the firms. I find that results are more concentrated in those firms that are located in different countries than their parents, that is, where there are the most gains from information asymmetry reduction. I interpret this as potentially indicating that the monitoring mechanism is also at work. Further analysis is required to tease out these channels. For the adoption anticipation channel, I propose a test on the predictive power of the subsidiary's change in earnings management on its future actual IFRS adoption.

This paper contributes to research on financial reporting within conglomerates, a relatively less studied area of the literature. In particular, the paper provides evidence of spillover effects from a parent's reporting change onto the subsidiary's reporting practices. While there are studies showing peer spillover effects of firms' disclosure decisions, this study finds IFRS-related spillover effects within a conglomerate structure. There is evidence in the literature that the information output of a firm can have an impact on the information output of related firms. For example, Baginski and Hinson (2016) find evidence of a free-riding effect in management forecast disclosure among industry peers. Breuer, Hombach, and Müller (2016b) similarly show evidence that mandating disclosure for some firms crowds out voluntary disclosure by their peers. There is comparatively little evidence in the literature about spillover effects within the context of a parent-subsidiary structure. While Shroff, Verdi, and Yu (2014) document spillover effects of subsidiaries' information environments on the parent's information set, this study finds IFRS-related spillover effects within a conglomerate structure. Prior research has examined various



effects of IFRS adoption (see De George, Li, and Shivakumar 2016 for a review), but not the spillover effects of this mandated change.

## 2. Institutional background, literature review and hypothesis development

### 2.1 Institutional Background

In this paper I study the impact of IFRS adoption in a setting where a public parent firm has a private European subsidiary. It is therefore important to understand the rules surrounding both European private firm reporting (impacting the subsidiaries), and the applicable IFRS consolidation rules (impacting the parents). This section describes these two institutional details.

#### 2.1.1 European private firm reporting

Although IFRS is required for the consolidated financial statements of all EU public firms for fiscal year ended December 31, 2005 and onwards, member states are given the choice of what to require of their private firms' statements.<sup>9</sup> While member states vary in their choices, the majority do not require IFRS for consolidated and unconsolidated non-financial private firm statements. Similarly, non-EU European adopting countries vary in their requirements for private firms. Out of the 27 subsidiary countries that comprise my sample, consolidated subsidiary statements are permitted but not required to be reported under IFRS in 24 countries, while two countries permit IFRS as long as the firm is not large and one country prohibits it.<sup>10</sup> For unconsolidated subsidiary statements, IFRS is permitted in 16 countries, prohibited in nine countries, and permitted as long as the firm is not large in two countries.<sup>11</sup> Appendix I presents a breakdown of the rules for the

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<sup>9</sup> According to REGULATION (EC) No 1606/2002 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:243:0001:0004:en:PDF>)

<sup>10</sup> Large firms are defined differently in different countries. These definitions are typically based on meeting or exceeding two or more of the cutoffs related to employee count, sales and/or assets (e.g. Bernard et al. 2017)

<sup>11</sup> Source: Deloitte's IAS Plus (<https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>)

countries in my treatment sample. For the purposes of this analysis, I concentrate on private subsidiaries within non-requiring countries that do not adopt IFRS.

### 2.1.2 Consolidation rules under IFRS

The relevant standard that guides consolidation practices for the duration of my sample is IAS 27.<sup>12</sup> IAS 27 defines consolidated statements as “the financial statements of a group presented as those of a single economic entity.” (IAS 27:4) It also states that “a parent [...] shall present consolidated financial statements in which it consolidates its investments in subsidiaries in accordance with this Standard.” (IAS 27:9). IAS 27 defines a subsidiary as “an entity, including an unincorporated entity such as a partnership, that is controlled by another entity (known as the parent).” This raises the question of how control is determined. According to IAS 27:

*“Control is presumed to exist when the parent owns, directly or indirectly through subsidiaries, more than half of the voting power of an entity”<sup>13</sup>*

With regards to the mechanics of statement preparation, the standard instructs that “in preparing consolidated financial statements, an entity combines the financial statements of the parent and its subsidiaries line by line by adding together like items of assets, liabilities, equity, income and expenses.” (IAS 27:18) It further states that “[c]onsolidated financial statements shall be prepared using uniform accounting policies for like transactions and other events in similar circumstances. If a member of the group uses accounting policies other than those adopted in the consolidated financial statements for like transactions and events in similar circumstances,

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<sup>12</sup> IAS 27 was in effect from 2003 to 2013, at which time it was replaced by IFRS 10. IFRS 10 broadens the definition of control in response to criticism during the financial crisis that not enough related entities were consolidated on companies’ financial statements.

<sup>13</sup> It also lists additional cases where control can exist even in the absence of this most basic definition, which are related to having influence over governance decisions within the company

appropriate adjustments are made to its financial statements in preparing the consolidated financial statements.” (IAS 27:24-25) This indicates that there must be IFRS statements prepared for the subsidiary, either through high level adjustments to local GAAP numbers at the parent level, or, more likely for complex subsidiaries, at the subsidiary level where the largest portion of the knowledge about the business operations is likely held.

Although there are exceptions to the consolidation rules (i.e. some parents may not need to consolidate under certain circumstances), they do not apply to publicly traded firms (IAS 27:10). Thus, all publicly traded parents must consolidate subsidiary information on their IFRS financial statements. In the next two sub-sections, I provide the economic link between these rules and my predictions.

## 2.2 Literature review and hypothesis development

Prior research has provided some evidence that IFRS adoption increases accounting quality in public firms. Barth et al. (2008) show that IFRS adopting firms exhibit less earnings management, more timely loss recognition, and greater value relevance post-adoption compared to their pre-adoption financials, as well as compared to firms applying non-US domestic standards. Although they study voluntary adopters, they control for various characteristics typically associated with the reporting choice to mitigate selection bias. I concentrate my analysis on one aspect of accounting quality - earnings management - and ask whether these effects at the public parent level spillover to its subsidiaries’ financials.

There are a variety of documented peer spillover effects related to a firm’s disclosure practices, but considerably fewer as related to financial reporting and IFRS in particular. Badertscher, Shroff, and White (2013) show that private firms in industries with greater public firm presence tend to

have higher investment efficiency, pointing to spillover effects on private firms from the mandated disclosure of public firms. Baginski and Hinson (2016) find evidence of a free-riding effect, where a firm's decision to stop quarterly management forecasts is associated with industry peers that previously did not issue such forecasts to begin issuing them. Breuer et al. (2016b) similarly show evidence that mandating disclosure for some firms crowds out the voluntary disclosure of their peers. Chen, Young, and Zhuang (2013) show evidence that additional disclosures mandated by IFRS had a positive effect on peer firms' investment efficiency. There are no studies I am aware of that look at spillover effects of IFRS in the context of a conglomerate structure.

Within a conglomerate structure, Beuselinck et al. (2016) show that parents have significant power to influence their subsidiary's reporting decisions. I therefore hypothesize that the parent's adoption of IFRS and subsequent internal requirement of the subsidiary to report IFRS numbers towards consolidation, serve to make the subsidiary's local GAAP reporting more IFRS-like.

It is possible that spillover effects of parental IFRS adoption do not exist at the private subsidiary level. Public and private firms' financial information is consumed and demanded by different forces, notably through differences in primary financing channels (e.g. Ball and Shivakumar 2005, Ball and Shivakumar 2008, Burgstahler et al. 2006). It is not obvious that changing reporting requirements at the public parent's level will necessarily move the private subsidiary's local GAAP reporting to be more IFRS-like. That is, the equilibrium level of earnings management may not shift, if, for example, users of IFRS and local GAAP financials differ in how and why they use these statements.

*H1: a parent's adoption of IFRS is associated with a decrease in the earnings management of the private subsidiary.*

I see three potential channels for this phenomenon. One channel for spillover could be through a push of the parent's changing business environment post adoption onto the subsidiary. Following IFRS adoption a parent may face changing institutional forces, such as better access to capital markets (Watts Zimmerman 1986, DeFond et al. 2011) which can cause it to adjust objectives to satisfy new investors. To the extent that a parent has the power to push these changed objectives onto the subsidiary through an incentive change, the subsidiary's managerial incentives may change. Prior research shows that incentive compatibility plays an important role in determining accounting quality (e.g. Ball et al. 2013, Christensen, Lee, Walker, and Zeng 2015), so a change in subsidiary incentives induced by a parent's change to IFRS would create financial reporting numbers that are more IFRS-like (i.e. have lower earnings management). This effect would be especially strong for those parents that are better able to push their demands onto the subsidiary. Taking the percentage ownership as a proxy for the power that a parent has to align the incentives of the subsidiary with its own, I hypothesize:

*H2: The main effect in H1 is stronger when the parent owns a large portion of the subsidiary.*

Another potential channel could be through parental subsidiary monitoring. Parents have a strong interest, rooted in their goal of efficient capital allocation, to monitor their subsidiaries. However, they face many costly information frictions in monitoring, such as managerial moral hazard that results from the parent's inability to perfectly observe the subsidiary (e.g. Dominguez-Martinez, Swank and Visser 2007). The introduction of a higher quality IFRS set of financials alongside the subsidiary's local GAAP financials allows the parent to reduce its information asymmetry, for example by comparing the two resulting sets of financials to prevent large unexplained deviations. Since IFRS consolidation rules force the parent to internalize the subsidiary's IFRS financials, the parent places emphasis on IFRS, and the subsidiary's local GAAP

values' properties move closer to IFRS. To the extent that IFRS statements are higher quality than previous consolidation standards, I expect the effect to be higher when there is more ex-ante information asymmetry. Taking geographic distance as one measure of the extent of information friction between the subsidiary and its parent I hypothesize:

*H3: The main effect in H1 is stronger for subsidiaries that are located in a different country than their parent.*

A third channel can be through anticipatory effects. Anecdotal evidence suggests that companies begin preparing and investing in IFRS education and systems when they anticipate the change to IFRS, well before the change actually takes effect. If the subsidiary understands that a parent's switch will likely lead to its own eventual IFRS adoption, it may begin to move its financials in that direction before formally adopting IFRS.

*H3: the main effect of H1 is stronger for those subsidiaries that subsequently adopt IFRS.*

### 3. Data and sample

Financial statement and ownership data is obtained from the Amadeus database, provided by Bureau Van Dijk. This database contains mostly unconsolidated financial data on European public and private firms, with direct ownership information provided even when parents are located outside of Europe, so long as the subsidiary is European. Amadeus tracks financials information on a rolling 10 year basis, and I have been able to obtain data as of the beginning of 2011 which goes back to 2001, although data is spotty before 2003. To ensure that the data is well centered on the event year of 2005, I restrict the sample to years 2003 through 2008. The ownership data includes information on the immediate owner of the firm as well as the immediate owner's country

of domicile.<sup>14</sup> I treat subsidiaries where the immediate owner is listed as a person as standalone firms.

I select private (not quoted) European firms that are not classified as small firms by Amadeus that have ownership information in the database.<sup>15</sup> I remove the small firms for two reasons. First, these firms' accounting is likely to be less sophisticated and may have fewer disclosure and audit requirements (Bernard, Burgstahler, and Kaya 2017). Second, I concentrate on larger private firms because they are more likely to have stable, public owners. I remove firms that have instances of negative entries in stock variables of interest where such values do not make sense, such as assets and liabilities. I additionally require each firm to have at least one observation pre and post the event of interest (IFRS adoption as of 12/31/2005) and exclude firms in the financial and real estate industry, as classified by Campbell (1996). As described in Section 2, the governing consolidation standard applicable at the time of this study defines control, the relevant concept for consolidation, as "a parent owning, directly or indirectly, more than half of the voting power of an entity." (IAS 27:13) Therefore, I restrict my sample to those subsidiaries that are at least 50.01% owned in total by their parents as a proxy for control.<sup>16</sup> IAS 27 also provides an exception to the obligation to consolidate, but this exception does not apply to public firms (IAS 27:10). Since I assume all parents are public, they all consolidate their financial statements in accordance to IAS 27.

I next correct for some data issues within the Amadeus financials. The data is coded in the units in which it appears in the company's financials, with a UNIT variable included to indicate a

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<sup>14</sup> Ownership data is static as of 2011 but I do not expect large changes over time given the size of the subsidiaries, and the majority ownership stake of the parents in them.

<sup>15</sup> Amadeus classified companies as small when they have: Operating Revenue < 1 million EUR, Total assets < 2 million EUR (2.6 million USD), and number of Employees < 15

<sup>16</sup> As stated in section 2 footnote 14, there are additional cases where control is presumed even without 50%+ ownership. There are also additional rules for consolidating SPEs. I ignore these cases for this analysis.

need to multiply the values (e.g. 3 if the numbers of in thousands, 6 if in millions). I note that sometimes there is a discrepancy in the relationship, where the values may have already been multiplied by the UNIT variable. A further multiplication creates very large incorrect numbers. I conservatively correct for this phenomenon by identifying cases with extreme asset growth (more than 1000 times) and adjusting the digits of the asset variables to bring it in line with more reasonable values. I use the size cutoffs Amadeus provides to determine what a reasonable value is, and my approach is admittedly ad-hoc. However, when combined with winsorizing, this approach allows me to keep more of the data rather than discard it. I then apply the same correcting factor to other financial balance sheet and income statement variables of interest. It appears that in the majority of cases such issues carry through all items and thus they too require correction, but I ensure that the factor does not again create unreasonable results by flagging unreasonable sales/asset ratios and reversing the adjustment for those. The results in this paper are robust to excluding firms that are identified to have the above data issues rather than correcting them.

Upon implementing the above fix, following Burgstahler et al. (2006) I remove any firms that have assets or sales less than 1 million dollars. I also remove entries that have blank values for variables of interest, including the calculated dependent variable, as described in the next section. Lastly, I remove those firms who are reported to have changed their accounting basis to IFRS during the sample period.

#### 4. Research design and descriptive statistics

I aim to study the changes in earnings management of subsidiaries as a result of experiencing treatment post parents' mandated IFRS adoption. For this, I construct a difference-in-differences regression and follow the methodology from Burgstahler et al. (2006) in constructing the



dependent variable as well as the controls. The construction of the dependent variable is further described in the next sub-section. The regression is as follows:

$$EM_{aggr} = \beta_0 + \beta_1 Post + \beta_2 Treatment \times Post + \beta_3 LnSize + \beta_4 Leverage + \beta_5 Growth + \beta_6 ROA + \beta_7 Cycle + Year\ Fixed\ Effects + Firm\ Fixed\ Effects$$

Where the dependent variable is an average of three proxies as described in the next sub-section, LnSize is the natural log of assets, Leverage is the ratio of noncurrent liabilities to total assets, Growth is the percentage change in revenue over the year, ROA is return of assets included in the Amadeus database, and Cycle is calculated as  $\frac{average\ AR}{revenue/360} + \frac{average\ Inventory}{COGS/360}$ , where COGS is calculated as revenue minus operating income. The treatment group consists of private subsidiaries of parents who are located in countries that mandated IFRS adoption as of December 31, 2005. I construct two control groups. The full control group consists of both standalone firms and firms who had a parent who adopted IFRS after the time that the sample ends (post 2008).<sup>17</sup> The restricted control group excludes standalone firms. The assumption here is that parents tend to be public firms and thus country mandates would necessarily apply to them.<sup>18</sup> The firm fixed effects subsume the Treatment variable from the regression. Post is identified despite the inclusion of year fixed effects because the year 2005 has some pre and some post entries (namely those on December 31, 2005 are post while all others are pre). All variables are winsorized at the 5<sup>th</sup> and 95<sup>th</sup> percentile and I cluster standard errors at the country-industry level to take into account the difference in the level of the dependent and independent variables.

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<sup>17</sup> There are 25,571 firms in the treatment group, 29,793 firms in the full control group, and 2,038 firms in the restricted control group.

<sup>18</sup> Amadeus does not provide listing status for firms outside of Europe. Planned future work includes merging this dataset with Datastream using parent names and key financials to get historical parent information. In addition, it is possible that some public firms voluntarily adopted before the mandate. Including these firms should bias my analysis against finding results, since the spillover effect, if any, would happen at the time of adoption.

#### 4.1 Earnings management index construction

To compute the earnings management measures, I require a measure of accruals. For this, I use the balance sheet approach from Dechow, Sloan, and Sweeney (1995) as applied in Burgstahler et al. (2006), because cash flow information within Amadeus is sparsely populated and unreliable:

$$\begin{aligned} \text{Accruals} = & (\Delta \text{current assets} - \Delta \text{cash}) - (\Delta \text{current liabilities} - \Delta \text{short term debt}) \\ & - \text{depreciation expense} \end{aligned}$$

As in Burgstahler et al. (2006), if change in cash or short term debt is missing, I assume the change to be zero.

I then compute each of the earnings management measures at the country-industry level (to reduce noise) based on industry classification from Campbell (1996), separately for each of the treatment/control and pre/post groups. Before calculating the measures, I ensure that there are at least 20 observations in each group and winsorize all input variables at the 1<sup>st</sup> and 99<sup>th</sup> percentile.

First, I compute a proxy that aims to capture the extent to which accruals are used. Since earnings are primarily manipulated through accruals, a heavy accruals user is more likely to be a manipulator vs. a lighter accruals user. I take the median of absolute accruals scaled by cash flows from operations among the group for each country-industry-treatment-post group. This measure, EM\_ACF, corresponds to EM2 from Burgstahler et al. (2006).

Second, I compute a measure to infer the extent to which accruals are used to reduce income variability, a primary goal of earnings management. I calculate the standard deviation of operating income divided by the standard deviation of cash flows. A higher ratio implies that the standard deviations are closer together, which means that the firm is less of an earnings manager. To be

consistent with the measure above, I multiply by -1 so that a higher value means higher amount of earnings management. This measure, EM\_SD, corresponds to EM3 from Burgstahler et al. (2006).

Third, I compute the Spearman correlation between changes in accruals and changes in cash flows, again multiplying by -1 for consistency with the previous measures. I expect the correlation itself to be very negative if accruals are used to smooth performance (i.e. report better results in bad times and worse results in good times). This measure, EM\_CORR, corresponds to EM4 from Burgstahler et al. (2006).

Having computed the three measures above, I compute an aggregate EM measure (EM\_AGGR) as the average of the percentile ranks of each of the three measures.

#### 4.2 Descriptive Statistics

Table 1 Panel A presents descriptive statistics for my final sample. All values are presented in USD. The full sample contains approximately 509 thousand observations, with mean total assets 24.1 million USD and mean total sales of 31.3 million USD.

Of these observations, Table 1 Panel B shows that about 235 thousand are in the treatment group, with the remainder in the full control group. The restricted control group is significantly smaller and has only about 19 thousand observations. On average, treatment firms are larger, lower manipulators, have higher ROA, and smaller cycle as compared to firms in the full control sample. Once standalone firms are removed, the treatment and control firms are much more similar along control characteristics, consistent with individual-owned firms tending to be smaller and have less well developed financials.<sup>19</sup>

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<sup>19</sup> An untabulated series of t-tests on the differences in the means reveal differences that are significant at normal levels. A potential way to mitigate this is through a propensity matching algorithm.

## 5. Results

Table 2 Panel A presents univariate differences in difference matrices for the aggregate earnings management measure for both the full control sample and the restricted control sample. The earnings management measure is based on a percentile rank methodology and therefore changes for both the treatment and control groups based on the composition of the sample. The table shows that the treatment aggregate measure decreases by 2.5% during the post period, whereas the control decreases only 2.1%. The result is even more striking using the restricted control sample, where the EM aggregate measure actually increases for the control sample in the post period. Table 2 Panel B shows the correlation matrices between the different EM proxies and the aggregate measure. The correlations are positive but not close to 1, indicating that each proxy is picking up somewhat different information and thus there is merit in studying their aggregate.

Table 3 Panel A presents the regression results using the full control sample where the dependent variable is the aggregate EM measure described in section 4.1, and it also shows the regression results for each proxy separately. The coefficient on the variable of interest Treatment x Post, is negative and significant. It indicates that treatment firms' aggregate earnings management percentile rank decreases post parental IFRS adoption by approximately 3.1 points, or 7.5% of the treatment mean. Size and ROA are negatively related to the extent of earnings management, which indicates that larger, more profitable firms tend to have lower earnings manipulation scores. On the other hand, leveraged firms, growth firms, and firms with longer business cycles tend to have higher earnings manipulation. These results are robust to lower winsorization levels and various specifications of the control variables.

Table 3 Panel B presents similar regression results but for the restricted control sample. The coefficient on the variable of interest is more negative in this regression, indicating a larger impact

of the treatment in the post period although the significance is somewhat lower. The coefficient of -5.5 indicates an approximately 13% decrease in the mean aggregate measure for the treatment firms. Many of the control variables are not significant, which can be potentially taken as a sign that the control and treatment sample better matched along these dimensions.

### 5.1 Additional Tests

To develop a deeper understanding of the mechanism through which this push happens, I test whether the results are more concentrated when the parent owns a high or low percentage of the subsidiary. Table 4 Panel A presents the results of this test. The results are concentrated in the high ownership group, potentially pointing to an incentive pushing channel. Table 4 Panel B presents the results of a test based on whether the parent and subsidiary are located in the same country. The effect is stronger in those subsidiaries that have a parent in a different country than itself, indicating a possible monitoring channel, as discussed in Section 2. It can be that both of these channels are acting together - further work is needed to tease out these mechanisms more precisely.

To study the anticipatory mechanism, I can test the predictive power of a subsidiary's change in earnings management on its future (out of sample) IFRS adoption. If the subsidiaries who have the most change in earnings management are the ones who are more likely to later adopt IFRS, this may be evidence of an anticipatory effect within the subsidiaries.

## 6. Conclusion

This paper studies reporting spillover effects within a conglomerate structure. Specifically, I study the effect of a public parent's IFRS adoption on the extent of earnings management in its non-IFRS adopting private European subsidiary. I exploit a setting where IFRS adoption is not mandatory for private firms to isolate the impact of spillover effects and show evidence consistent

with private subsidiaries' financials' earnings management properties becoming more IFRS-like upon its public parent's adoption of IFRS.

I contribute to the literature by providing evidence on the existence of spillover effects of a financial reporting change at one level of a conglomerate on the earnings properties of a different level of the conglomerate – one that did not otherwise experience a change in financial regulation. This study increases our understanding of the role of financial reporting within a conglomerate's structure, and I hope to refine this contribution through the identification of the precise mechanism for this impact. I also plan to show evidence of subsequent effects on the internal decision making of the firm, for example through changes in a parent's capital allocation decisions.

## References

- Admati, A., Fleiderer P. P., 2000. Forcing Firms to Talk: Financial Disclosure Regulation and Externalities. *The Review of Financial Studies* 13, 479–519.
- Badertscher, B., Shroff N., White H., 2013. Externalities of Public Firm Presence: Evidence from Private Firms' Investment Decisions. *Journal of Financial Economics* 109, 682–706.
- Baginski, S., Hinson. L., 2016. Cost of capital free-riders. *The Accounting Review*, 91 (5), 1291–1313.
- Ball, R., Shivakumar, L., 2005. Earnings Quality in U.K. Private Firms. *Journal of Accounting and Economics*, 83–128.
- Ball, R., Shivakumar, L., 2008. Earnings quality at initial public offerings. *Journal of Accounting and Economics* 45, 324–349.
- Ball, R., Robin A., Wu J., 2003. Incentives Versus Standards: Properties of Accounting Income in Four East Asian Countries. *Journal of Accounting and Economics* 36, 235–270

- Barth, M., Landsman W., Lang M., 2008. International Accounting Standards and Accounting Quality. *Journal of Accounting Research* 46, 467–498.
- Bassemir, M., 2012. Why do private firms adopt IFRS? Working Paper, University of Frankfurt. Available from: <https://ssrn.com/abstract=1896283>.
- Bernard, D., Burgstahler D., Kaya, D., 2017. Size management by European private firms to avoid disclosure and audit costs. Working Paper, London Business School. Available from: <https://ssrn.com/abstract=2484161> .
- Beuselinck, C., Cascino, S., Deloof, M., Vanstraelen, A., 2017. Earnings management within multinational corporations. Working Paper, Catholic University of Lille. Available from: <https://ssrn.com/abstract=1599678>.
- Breuer, M., Hombach, K., and Müller, M.A., 2016b. When you talk, I remain silent: spillover effects of peers' mandatory disclosures on firms' voluntary disclosures. Working Paper, University of Chicago. Available from: <https://ssrn.com/abstract=2820209>
- Burgstahler, D., Hail L., Leuz C., 2006. The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms. *The Accounting Review* 81, 983– 1017.
- Campbell, J. 1996. Understanding risk and return. *Journal of Political Economy* 104, 298–345.
- Chen, C., Young D., and Zhuang Z., 2013. Externalities of Mandatory IFRS Adoption: Evidence from Cross-Border Spillover Effects of Financial Information on Investment Efficiency. *The Accounting Review* 88, 881–914.
- Christensen, H. B., Lee E., Walker M., Zeng C., 2015. Incentives or standards: What determines accounting quality changes around IFRS adoption. *European Accounting Review* 24(1), 31–61.
- De George, E., Li, X., Shivakumar L., 2016. A review of the IFRS adoption literature. *Review of Accounting Studies*, 21 (3), 898–1004.
- De Simone, L., 2016. Does a common set of accounting standards affect tax-motivated income shifting for multinational firms? *Journal of Accounting and Economics* 61, 145-165.
- Dechow, P. M., Sloan R. G., Sweeney A. P., 1995. Detecting Earnings Management. *The Accounting Review* 70, 193-225.
- DeFond M., Hu X., Hung M., Li S., 2011. The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability. *Journal of Accounting and Economics* 51, 240–258.
- Deloitte's IAS Plus. Use of IFRS by Jurisdiction (<https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>)
- Dominguez-Martinez, S., Swank, O. H., Visser, B, 2008. In Defense of Boards. *Journal of Economics & Management Strategy*, 17: 667–682.

European Union, 2002. Regulation (EC) No 1606/2002 of the European parliament and of the council of 19 July 2002 on the application of international accounting standards. Official Journal of the European Communities September 11, 2002, L. 243/1 - L. 243/4

European Commission, 16 Sept 2009. International Accounting Standard 27 Consolidated and Separate Financial Statements.  
([http://ec.europa.eu/internal\\_market/accounting/docs/consolidated/ias27\\_en.pdf](http://ec.europa.eu/internal_market/accounting/docs/consolidated/ias27_en.pdf))

Leuz C., Nanda D., and Wysocki P., 2003. Earnings management and investor protection: An international comparison. *Journal of Financial Economics* 69, 505–527.

Leuz C., and Wysocki P., 2016. The Economics of Disclosure and Financial Reporting Regulation: Evidence and Suggestions for Future Research. *Journal of Accounting Research* 54, 525–622.

Minnis M., and Shroff N., 2017. Why regulate private firm disclosure and auditing? *Accounting and Business Research*, 47:5, 473-502

Shroff, N., Verdi R. S., Yu G., 2014. Information environment and the investment decisions of multinational corporations. *The Accounting Review* 89(2), 759–790.

Watts, R. L., and J. L. Zimmerman. *Positive Accounting Theory*. Englewood Cliffs, N.J.: Prentice-Hall, 1986.



## Appendix I

Current IFRS rules for private firm consolidated and unconsolidated financial statements in each country in my sample. Source: IAS Plus (<sup>1</sup> <https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs>)

<u>Country</u>	<u>Consolidated</u>	<u>Unconsolidated</u>
Austria	Permitted	Prohibited
Belgium	Permitted	Prohibited
Bosnia and Herzegovina	Permitted	Permitted
Bulgaria	Required for large, permitted for others	Required for large, permitted for others
Croatia	Required for large, permitted for others	Required for large, permitted for others
Czech Republic	Permitted	Permitted
Estonia	Permitted	Permitted
Finland	Permitted	Permitted
France	Permitted	Prohibited
Germany	Permitted	Prohibited
Great Britain	Permitted	Permitted
Greece	Permitted	Permitted
Hungary	Permitted	Prohibited
Iceland	Permitted	Permitted
Italy	Permitted	Permitted
Latvia	prohibited	prohibited
Luxembourg	Permitted	Permitted
Netherlands	Permitted	Permitted
Norway	Permitted	Permitted
Poland	Permitted if parent use IFRS	Permitted if parent use IFRS
Portugal	Permitted	Permitted if parent use IFRS
Romania	Permitted if parent use IFRS	Prohibited
Slovenia	Permitted	Permitted
Spain	Permitted	Prohibited
Sweden	Permitted	Prohibited
Switzerland	Permitted	Permitted
Ukraine	Permitted	Permitted

Table 1

### Descriptive Statistics

Panel A presents the descriptive statistics for all variables of interest for the full sample, including treatment and control firms. Panel B presents the means and differences for the full and the restricted control samples. The full control sample is comprised of firms who either did not have parents or had parents who did not adopt IFRS throughout the sample period. The restricted sample excludes the standalone firms. In the tables below, TOTAL ASSETS is the total assets of the firm in US dollars; TOTAL SALES is the total sales of the firm in US dollars; EM\_AGGR is the aggregate earning management measure calculated as an average of the percentile rank of three earnings management measures. The first is the country-industry median of the ratio of absolute accruals to absolute cashflows. The second is the standard deviation of operating income divided by the standard deviation of cashflows at the country-industry level, multiplied by -1. The third is the country-industry Spearman correlation between changes in accruals and cashflows, multiplied by -1.; LNSIZE is the natural log of the total assets; LEVERAGE is computed as non-current liabilities scaled by total assets; GROWTH is computed as the percent change in revenues; ROA is return on assets; CYCLE is calculated as  $\frac{\text{average AR}}{\text{revenue}/360} + \frac{\text{average Inventory}}{\text{COGS}/360}$ . Values are winsorized at the 5 and 95 percentiles.

Panel A	N	Mean	SD	P25	P50	P75
<i>Total Sample (2003-2008)</i>						
TOTAL ASSETS	508,861	24,100,000	39,900,000	3,648,000	7,551,000	21,200,000
TOTAL SALES	508,861	31,300,000	49,400,000	5,034,000	10,600,000	29,300,000
EM_AGGR	508,861	50.16	25.20	27.60	48.15	70.85
LNSIZE	508,861	16.10	1.25	15.11	15.84	16.87
LEVERAGE	508,861	0.14	0.15	0.02	0.08	0.21
GROWTH	508,861	0.11	0.21	-0.05	0.11	0.25
ROA	508,861	0.06	0.08	0.01	0.04	0.10
CYCLE	508,861	122.70	82.15	62.56	105.20	163.00
Panel B		Treatment Mean	Full Control Mean	Treatment vs. Full Control difference	Restricted Control Mean	Treatment vs. Restricted Control difference
TOTAL ASSETS		37,100,000	12,900,000	24,200,000	48,900,000	-11,800,000
TOTAL SALES		47,500,000	17,400,000	30,100,000	65,100,000	-17,600,000
EM_AGGR		41.140	57.930	-16.790	37.98	3.160
LNSIZE		16.600	15.680	0.920	16.97	-0.370
LEVERAGE		0.130	0.140	-0.010	0.122	0.008
GROWTH		0.113	0.112	0.001	0.108	0.005
ROA		0.065	0.052	0.013	0.067	-0.003
CYCLE		105.700	137.300	-31.600	107.5	-1.800
N		235498	273363		18935	

Table 2

**Correlations and univariate analysis**

Panel A presents the univariate differences in difference results for the aggregate EM measure calculated as an average of the percentile rank of three earnings management measures. The first (EM\_ACF) is the country-industry median of the ratio of absolute accruals to absolute cashflows. The second (EM\_SD) is the standard deviation of operating income divided by the standard deviation of cashflows at the country-industry level, multiplied by -1. The third (EM\_CORR) is the country-industry Spearman correlation between changes in accruals and cashflows, multiplied by -1. The full control sample is comprised of firms who either did not have parents or had parents who did not adopt IFRS throughout the sample period. The restricted sample excludes the standalone firms. The post period is defined as any time after December 31, 2005. Panel B presents the correlations between the earnings management measures.

**Panel A**

<b>Full Control</b>	Pre	Post	Change
Treatment	39.618	38.595	-2.58%
Control	41.016	40.137	-2.14%

<b>Restricted Control</b>	Pre	Post	Change
Treatment	46.026	44.576	-3.15%
Control	45.844	52.048	13.53%

**Panel B**

<b>Full Control</b>	EM_ACF	EM_SD	EM_CORR	EM_AGGR
EM_ACF	1	0.6127	0.5061	0.7988
EM_SD	0.6636	1	0.7323	0.9198
EM_CORR	0.6052	0.8324	1	0.776
EM_AGGR	0.8467	0.926	0.9016	1

<b>Restricted Control</b>	EM_ACF	EM_SD	EM_CORR	EM_AGGR
EM_ACF	1	0.3745	0.2354	0.6896
EM_SD	0.4568	1	0.5176	0.8104
EM_CORR	0.3045	0.5322	1	0.6147
EM_AGGR	0.7475	0.8321	0.765	1

Table 3

### Regression result for the effect of parent IFRS adoption on the accounting quality of the subsidiary

The table presents the results from regressing EM\_AGGR and its comprising proxies, on the interaction of indicator variables for the post-adoption period and treatment firm, as well as control variables. The full control sample is comprised of firms who either did not have parents or had parents who did not adopt IFRS throughout the sample period. The restricted control sample includes only firms who had parents that did not adopt IFRS throughout the sample period. The dependent variable is an average of the percentile rank of three earnings management measures. The first (EM\_ACF) is the country-industry median of the ratio of absolute accruals to absolute cashflows. The second (EM\_SD) is the standard deviation of operating income divided by the standard deviation of cashflows at the country-industry level, multiplied by -1. The third (EM\_CORR) is the country-industry Spearman correlation between changes in accruals and cashflows, multiplied by -1. The independent variables are defined as follows: POST is an indicator variable that equals one for fiscal years ending after December 31, 2005; TREATMENT is an indicator variable that equals one for treatment firms (i.e., firms that have parents in countries that adopted IFRS in 2005); LNSIZE is the natural log of the total assets; LEVERAGE is computed as non-current liabilities scaled by total assets; GROWTH is computed as the percent change in revenues; ROA is return on assets; CYCLE is calculated as  $\frac{\text{average AR} + \text{average Inventory}}{\text{revenue}/360}$ . The t-statistics are clustered at the country-industry level to account for the level of the dependent variable. Industry classification is done according to Campbell (1996). \*, \*\*, \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively, using a two-tailed t-test. Values are winsorized at the 5 and 95 percentiles.

Panel A	Full Control Sample							
	EM_ACF		EM_SD		EM_CORR		EM_AGGR	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
POST	7.344***	-3.33	1.109	-0.83	0.221	-0.12	2.594**	-2.04
TREATMENT x POST	-6.176**	-2.33	-3.205	-1.63	-1.279	-0.66	-3.100**	-1.99
LNSIZE	-1.085***	-2.76	-0.417*	-1.8	-0.524	-1.56	-0.661***	-2.82
LEVERAGE	1.686**	-2.41	1.688***	-4.34	-0.197	-0.4	0.909***	-2.73
GROWTH	0.851***	-2.87	0.475***	-2.87	0.126	-0.56	0.409**	-2.6
ROA	-3.031***	-2.7	-1.195**	-2.07	-1.402	-1.64	-1.884***	-3.14
CYCLE	0.019***	-4.33	0.009***	-3.49	-0.001	-0.36	0.007***	-2.9
Year Indicators	Included		Included		Included		Included	
Firm Indicators	Included		Included		Included		Included	
Adjusted R-Squared	0.944		0.971		0.958		0.976	
No. of Observations	508861		508,861		508,861		508,861	
Panel B	Restricted Control Sample							
	EM_ACF		EM_SD		EM_CORR		EM_AGGR	
	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic
POST	2.454	0.59	5.246	1.41	8.859**	2.36	6.073**	2.17
TREATMENT x POST	1.125	0.26	-6.710*	-1.67	-9.345**	-2	-5.454*	-1.77
LNSIZE	-0.759	-1.48	-0.166	-0.49	-0.662	-1.44	-0.486	-1.6
LEVERAGE	0.977	1.19	0.631	1.01	-0.756	-0.91	0.354	0.66
GROWTH	-0.328	-0.7	-0.546	-1.12	-0.044	-0.1	-0.314	-0.9
ROA	-6.139***	-4.52	-2.142*	-1.78	-0.917	-0.83	-2.992***	-3.5
CYCLE	0.001	0.15	-0.003	-0.38	0.001	0.08	0	-0.07
Year Indicators	Included		Included		Included		Included	
Firm Indicators	Included		Included		Included		Included	
Adjusted R-Squared	0.884		0.91		0.863		0.912	
No. of Observations	254433		254,433		254,433		254,433	

Table 4

### Cross sectional tests for the impact of geographic distance and percentage ownership on results

Panel A presents results from regression runs as defined in Table 3, but for high vs. low percentage ownership. High ownership is defined as the parent owning 75% or more of the firm and small ownership is defined as owning less than 75% of the firm. Panel B presents the results from regression runs as defined in Table 3, but separately for subsamples of firms where the subsidiary and parent are in the same country and not in the same country. All tests are run on the restricted control sample.

<i>Panel A: Percentage Ownership</i>				
<b>Control Sample:</b>	<i>Restricted Control Sample</i>			
<b>Dependent Variable:</b>	<i>EM_AGGR</i>			
<b>Cross Section:</b>	<i>Low % Owner</i>		<i>High % Owner</i>	
	Coefficient	<i>t</i> -Statistic	Coefficient	<i>t</i> -Statistic
<i>POST</i>	4.357	0.69	6.110**	2.2
<i>TREATMENT</i> × <i>POST</i>	-6.583	-1.09	-5.273*	-1.69
<i>LNSIZE</i>	-0.757	-1.56	-0.454	-1.48
<i>LEVERAGE</i>	0.073	0.06	0.394	0.75
<i>GROWTH</i>	0.643*	1.74	-0.37	-1.07
<i>ROA</i>	-3.581**	-2.08	-2.994***	-3.51
<i>CYCLE</i>	0.008	1.06	-0.001	-0.15
<i>Year Indicators</i>	Included		Included	
<i>Firm Indicators</i>	Included		Included	
Adjusted R-Squared	0.941		0.909	
No. of Observations	23487		230946	
<i>Panel B: Geographic Location</i>				
<b>Control Sample:</b>	<i>Restricted Control Sample</i>			
<b>Dependent Variable:</b>	<i>EM_AGGR</i>			
<b>Cross Section:</b>	<i>Parent and Sub in Same Country</i>		<i>Parent and Sub in Different Country</i>	
	Coefficient	<i>t</i> -Statistic	Coefficient	<i>t</i> -Statistic
<i>POST</i>	-12.317	-0.89	6.218**	2.22
<i>TREATMENT</i> × <i>POST</i>	13.962	1	-6.277**	-2.05
<i>LNSIZE</i>	-0.117	-0.29	-0.705**	-2.23
<i>LEVERAGE</i>	0.679	0.95	0.144	0.25
<i>GROWTH</i>	-0.202	-0.54	-0.331	-0.83
<i>ROA</i>	-3.153***	-2.87	-2.863***	-3.03
<i>CYCLE</i>	0.004	0.7	-0.002	-0.42
<i>Year Indicators</i>	Included		Included	
<i>Firm Indicators</i>	Included		Included	
Adjusted R-Squared	0.921		0.908	
No. of Observations	96456		157977	