

**International Financial Reporting Standards
and Accounting Comparability**

by

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Business Administration
Duke University

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Dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy in
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ABSTRACT

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Abstract

This thesis includes three papers that consider the effects of IFRS adoption on accounting comparability in the European Union (EU). In the first paper, I use actual financial statement data to create a measure of distance (my accounting measure of comparability) from local GAAP to IFRS prior to the adoption of IFRS in 2005. Specifically, I identify 27 accounting items and I examine recognition and disclosure practices of 296 firms listed on Euronext before and after 2005. In contrast to prior work, which conducted such analyses at a *de jure* level, this *de facto* level analysis of accounting differences provides evidence about firms' actual reporting choices in their annual reports. This analysis is particularly important when accounting standards (both local GAAPs and IFRS) allow a variety of methods for recognition and disclosure.

My tests suggest that the change in comparability due to the adoption of IFRS is not uniform. In jurisdictions where local GAAP was more distant from IFRS the increase in comparability was larger than the increase in comparability that occurred in jurisdictions where local GAAP was closer to IFRS prior to IFRS adoption. This result is important because it provides a refined measure that can be used to appraise the actual IFRS effect on various outcome variables.

In the second study I predict that, if IFRS adoption has led to positive market effects, there would be larger IFRS adoption effects among firms domiciled in countries

where local GAAP was further from IFRS prior to 2005 than among firms domiciled in countries where local GAAP was closer to IFRS prior to 2005. I exploit my measure of distance (developed in the first paper) to examine whether firms domiciled in Euronext countries where the distance between local GAAP and IFRS was greater prior to IFRS adoption exhibited larger improvements in the usefulness of their earnings announcements. I measure usefulness as the short-term price and volume reactions to earnings announcements. My analysis proceeds in two steps. First, I confirm an increase in absolute returns and volume reactions, similar to observations in prior research (e.g., Landsman et al., 2011). Second, and more importantly, I find that these increased reactions are not due to IFRS adoption per se, but rather to the inclusion of concurrent information in firms' press releases, most prominently statement of cash flows information. A potential explanation for this result is the regulators' recommendation to expand disclosures in firms' press releases in 2005. I cannot rule out, however, that IFRS had an effect, because the greater consistency in rules and format for the statement of cash flows may have led to an increase in the disclosure of cash flow information in firms' press releases.

In my third study I expand my sample to all European Union countries and I investigate how cross-border earnings information transfer (my market measure of comparability) changed after IFRS adoption. I explore this effect through two intermediate and complementary effects: accounting uniformity and reporting quality.

First, I examine whether an increase in accounting uniformity has led to a greater transfer of market information. Using a sample of firms in the European Union 2001 – 2010, I find support for the presence of a positive change in earnings information transfer after IFRS adoption. Second, I exploit differences across countries in accounting distance and legal enforcement to consider a separate (but related) effect of IFRS on reporting quality. I measure reporting quality as value relevance (the explanatory power of the two summary accounting variables, earnings and book value of equity, in price regressions). I find that IFRS had a positive effect on reporting quality, but only in countries that exhibited strong enforcement and large accounting distance prior to IFRS adoption. In the final test, I partition the countries into groups according to the change in reporting quality after IFRS adoption. I fail to find significant differences in comparability across groupings: the increase in comparability in countries that experienced a positive change in reporting quality is not distinguishable from the change in comparability occurred in countries that did not exhibit an increase in reporting quality around IFRS adoption.

Contents

Abstract	iv
List of Tables	x
List of Figures	xii
1. IFRS and Accounting Comparability	1
1.1 Introduction.....	1
1.2 Institutional Setting and Hypotheses on Accounting Comparability.....	9
1.2.1 Euronext.....	9
1.2.2 Differences in Accounting Systems	11
1.2.3 Accounting Items.....	17
1.3 Measuring Comparability	29
1.4 Sample and Method	33
1.5 Empirical Evidence.....	44
1.5.1 Main Findings.....	44
1.5.2 The Effect of Non-Disclosure.....	56
1.5.3 Additional Tests.....	67
1.6 Conclusions	68
2. The Effect of IFRS on the Usefulness of Earnings Announcements	71
2.1 Introduction.....	71
2.2 Prior Research and Hypothesis Development	78
2.2.1 Prior Research.....	79

2.2.2 Hypothesis Development.....	83
2.3 Sample, Data and Research Design.....	89
2.3.1 Sample Selection and Data.....	89
2.3.2 Research Design.....	92
2.4 Empirical Results.....	94
2.4.1 Descriptive Statistics	94
2.4.2 Competing Explanations for the Increased Usefulness of Earnings Announcements Following IFRS Adoption	99
2.4.3 Additional Tests.....	115
2.5 Conclusions	121
3. IFRS, Accounting Comparability and Earnings Information Transfer	123
3.1 Introduction.....	123
3.2 IFRS and Information Transfer.....	130
3.3 Hypotheses and Research Design.....	134
3.3.1 Hypotheses.....	134
3.3.2 Research Design.....	136
3.4 Data and Sample.....	143
3.5 Empirical Evidence.....	152
3.5.1 Descriptive Statistics	152
3.5.2 The Effect of IFRS on EIT (H1).....	155
3.5.3 The Effect of IFRS on Reporting Quality (H2).....	158
3.5.4 The Effect of IFRS on EIT Conditional on Reporting Quality (H3).....	160

3.5.5 Robustness Checks	163
3.6 Conclusions and Future Research.....	166
Appendix A.....	168
Appendix B.....	177
References	177
Biography	190

List of Tables

Table 1: Sample Selection.....	36
Table 2: Sample Distribution (by country)	37
Table 3: IFRS Effect on National Comparability (Large Firms).....	45
Table 4: IFRS Effect on National Comparability (Small Firms).....	47
Table 5: IFRS Effect on International Comparability – (Large Firms)	50
Table 6: IFRS Effect on International Comparability – (Small Firms).....	52
Table 7: IFRS Effect on National Comparability.....	57
Table 8: IFRS Effect on National Comparability.....	59
Table 9: IFRS Effect on International Comparability	62
Table 10: IFRS Effect on International Comparability	64
Table 11: Sample description.....	91
Table 12: Sample composition of earnings announcements by country and by year	92
Table 13: Descriptive Statistics.....	95
Table 14: Trend analysis in market responses	96
Table 15: Difference-in-difference analysis of the two measures of market response (MaxAAR(std) and AVOL) conditional on accounting distance	98
Table 16: Trend analysis of unexpected earnings ($ UE $).....	101
Table 17: Distribution of absolute unexpected earnings in earnings announcements....	102
Table 18: Time and IFRS trend in market responses to earnings announcements	104
Table 19: Descriptive statistics for the content analysis.....	107

Table 20: IFRS trend in market responses to unexpected earnings and concurrently-released disclosure in earnings announcements	111
Table 21: IFRS, market responses to UE and concurrently-released disclosure	114
Table 22: Sample Selection.....	144
Table 23: Announcing firms' annual earnings announcements.....	146
Table 24: Announcing and non-announcing firms' earnings announcements by country-partitions based on accounting distance and legal enforcement	149
Table 25: Descriptive Statistics	152
Table 26: Pearson Correlations.....	154
Table 27: Test of the effect of IFRS on EIT (H1): eq. (2).....	156
Table 28: Test of the change in value relevance following IFRS adoption in the three EU country-partitions clustered on accounting distance and enforcement: eq. 3 (H2).....	159
Table 29: Test of IFRS effect on EIT conditional on reporting quality (H3): eq. (4)	161

List of Figures

Figure 1: Sample firms by industry.....	37
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1. IFRS and Accounting Comparability

1.1 Introduction

I investigate whether the level of financial reporting comparability among firms listed on Euronext increased after the 2005 mandatory switch from local (national) GAAP to IFRS in the European Union (EU). I choose Euronext for three reasons. First, Euronext provides a common regulatory, technological, and institutional platform for the four countries whose shares are listed on it: France, Belgium, the Netherlands, and Portugal.¹ Given my focus on the influence of accounting standards, this common platform is important because it holds many institutional factors constant over my sample period. Second, Euronext firms used local GAAP until 2005, and in Euronext jurisdictions where IFRS was permitted to be adopted early (i.e., prior to 2005), few firms did.² Reducing the effect of early adoption is important in my study because I wish to

¹ As of July 31, 2010, 1,370 of the 1,584 Euronext securities (i.e., 88 percent) are French, Belgian, Dutch and Portuguese. As discussed in section 2.1, I eliminate Portugal because of the paucity of firms and because Portugal joined Euronext in 2002, the pre-year of my study.

² In the Netherlands, in Belgium and in France, national laws allowed firms to adopt IFRS before 2005. In the Netherlands, article 362, par. 2, Book 2, Title 9 of the civil code permitted firms “to adopt generally acceptable accounting principles to provide such an insight as to enable a sound judgment regarding the results and the financial position of the enterprise.” In Belgium, Bulletin no. 44 by the Commission on Accounting Standards allowed the possibility for “Belgian global players to apply to the Ministry for Economic Affairs for permission to prepare their consolidated financial statements either according to IFRS or US GAAP”. In 1998, in France, the parliament introduced article 357-8-1 in French commercial law allowing enterprises with shares admitted on regulated stock markets to choose IFRS (not US GAAP) for their consolidated financial statements in lieu of local GAAP. On average, in Belgium and in the Netherlands about 5 percent of firms adopted IFRS before 2005. In France, as the Accounting Regulatory Committee did not

examine whether and how firms changed their accounting disclosure in response to the mandated change in authoritative guidance. Third, within the Euronext countries, there is cross-sectional variation in the distance between local GAAP and IFRS before 2005; this variation allows me to develop cross-sectional predictions about the effect of IFRS on comparability. Notably, I expect that countries whose local GAAP was further from IFRS prior to 2005 (France and Belgium) are more likely to experience larger increases in comparability than are firms whose local GAAP was close to IFRS (the Netherlands). I document and confirm these countries' distance from IFRS using a self-constructed measure that encompasses 27 accounting items reported in firms' financial statements.

An investigation of accounting comparability changes in response to mandatory IFRS adoption is important because the objective of the 2000 EU financial reporting strategy was to provide a set of accounting standards that serve investors' needs so as to increase the relevance, transparency, and comparability of financial statements (COM 2000, 359). My research question addresses whether IFRS achieved the comparability goal. Comparability refers to whether similar transactions are accounted for and reported similarly, and whether dissimilar transactions or events are accounted for and

authorize the company law change before 2005, no firm fully adopted IFRS for the preparation of their consolidated financial statements before 2005. In my analysis I exclude early adopters.

reported differently (see, Schipper (2003), Barth and Schipper (2008)). Comparability, either across entities or across time, is desirable because it makes accounting information more useful. For example, widespread IFRS adoption should reduce accounting standard-induced differences in financial reporting across jurisdictions. The reduction in differences should decrease the costs to financial analysts and investors of following firms from different countries and facilitate cross-border comparisons of financial data (Bae et al. (2008), Tan et al. (2009)).

I measure comparability using the *T* index. The *T* index (Taplin (2004)) provides an assessment of the probability that the financial statements of two companies, selected either from the same country (national comparability) or from different countries (international comparability), use the same accounting method for the same accounting item. A larger (smaller) value of the index indicates that firms' accounting choices for the same or similar transactions are clustered around similar (dissimilar) methods. The *T* index is the most appropriate methodology to measure accounting comparability for three reasons: (a) the *T* index permits comparison of firms operating in the same country as well as in different countries; (b) the *T* index allows researchers to determine the degree of comparability of alternative accounting methods; and (c) the *T* index is more flexible with respect to the treatment of non-disclosure (irrespective of whether non-disclosure stems from non applicability of the accounting standard or from a firm's

failure to report information).³

I calculate the *T* index across firms in different countries and for firms within the same country at two points in time, 2002 and 2008. My sample consists of 296 firms that are listed on Euronext in both 2002 and 2008 and have consolidated financial statements available for both of these years. This setting allows me to study the effects of IFRS adoption on accounting comparability using a within-firm, pre-post IFRS design. In addition, the domestic standards from the three countries I examine (France, Belgium and the Netherlands) were differentially close to IFRS in 2002 (Nobes (2001), Ding et al. (2007), Bae et al. (2008)), which provides for cross-sectional predictions about the effect of IFRS on national and international comparability.

In particular, I predict that the greater the distance between local GAAP and IFRS, the larger the benefit of IFRS to national comparability. Following Ding et al., local GAAP may differ from IFRS on two dimensions: absence and divergence. Absence measures the extent to which the rules regarding certain accounting issues are missing in local GAAP, but are covered in IFRS. In the absence of national rules, firms may: (a) look to IFRS, or other internationally accepted financial reporting regimes for

³ The *T* index generalizes and improves upon other harmonization indices used in international accounting literature (e.g., the *H*, *C*, *I* and various modifications of these indices). For example, Taplin (2004) documents that the *I* index has undesirable properties when it is used to measure comparability for more than two countries. He also shows that the *T* index is more flexible than the *H* and the *C* index with respect to the weights attributed to each sample country.

authoritative guidance (e.g., US GAAP); or (b) not disclose information that is not required. The variation in their choices reduces comparability.

Divergence measures the extent to which the rules regarding the same accounting issue differ in local GAAP and IFRS. For example, a divergence occurs when, for a given accounting item, local GAAP provides a different number of options or different disclosure requirements than IFRS. This means that, prior to IFRS adoption, firms' accounting choices vary as a function of the number of accounting choices allowed under local GAAP. After the mandate, if IFRS reduces the accounting choice set, inconsistencies are reduced, leading to the prediction that comparability increases. Therefore, for each jurisdiction, I expect that the larger the number of absences and divergences (i.e., the further the distance between local GAAP and IFRS), the greater the increase in national comparability after IFRS adoption.

Moreover, I predict that if national comparability increases, international comparability also increases. To see why, note that in the three sample jurisdictions, local GAAPs were differentially close to IFRS prior to 2005, implying they are also likely differentially close to each other. If the distance between each local GAAP and IFRS decreases after IFRS adoption, cross-sectional differences among firms' practices from different countries should decrease as well, leading to an increase in international comparability. I predict this effect is greater: (a) for accounting items where IFRS

reduced the scope of acceptable accounting treatments, relative to the set permitted under local GAAP; and (b) for accounting items covered under IFRS, but not covered under local GAAP. Finally, I expect the changes in international comparability to be less pronounced for items that were similarly regulated under the reporting regimes.

My analysis shows five results. First, I find that the change in comparability is not uniform across jurisdictions. In jurisdictions where local GAAP was more distant from IFRS (i.e., France and Belgium) the increase in comparability (19 percent and 33 percent, respectively) is larger than the increase in comparability occurred in jurisdictions where local GAAP was closer to IFRS (the Netherlands, 11 percent). Second, and consistent with the increase in national comparability in the three countries examined, I document that international comparability increases by 31 percent. Third, I find that comparability increases most for items where IFRS reduced the accounting treatment set and for items where no regulation existed under local GAAP prior to 2005; when IFRS preserved the accounting choice set prescribed under local GAAP comparability does not increase. Fourth, I find similar results when I consider small firms: in France and in Belgium, national comparability increases by 23 percent, whereas in the Netherlands by 11 percent. The international accounting comparability of small firms increases by 38 percent. Finally, I observe that my conclusions are sharper when I control for non-disclosure and that this effect is more pronounced for small firms:

comparability increases by 476 percent, 491 percent and 109 percent in France, Belgium and the Netherlands, respectively, whereas international comparability increases by 541 percent.

My study relates to the harmonization literature on the *de jure* versus the *de facto* accounting harmonization. *De jure* harmonization refers to the extent that regulations in local GAAP are aligned across countries. *De facto* harmonization refers to companies' accounting practices within a given regulatory framework (Tay and Parker (1990)). I assume that national (international) comparability can be achieved if three conditions are simultaneously met: (a) firms adopt the same financial reporting regime; (b) within the same financial reporting regime, local GAAP requires only one accounting method for the same accounting item; and (c) there are no differences in management's implementation choices (Schipper (2006)).

Measures of *de jure* harmonization based on GAAP differences (e.g., Bae et al.) may not perfectly reflect the effective degree of accounting comparability because they do not consider how far apart firms' accounting choices actually are. This noise can emerge even when firms from different jurisdictions adopt the same financial reporting regime (e.g., IFRS), because accounting standards may allow multiple options for the recognition, measurement, or disclosure of the same accounting item. In contrast, using firms' actual accounting choices, I rely on a measure of *de facto* harmonization that

captures the effective degree of comparability among firms' financial statements.

However, a limitation of this measure is that it does not capture the implementation aspect of the financial reporting process that is attributable to management and auditors' judgments and decisions.

I contribute to the extant accounting literature in three ways. First, I investigate the relative power of IFRS on *de facto* harmonization by exploiting a research setting where institutional factors are constant across jurisdictions and over time, but where accounting standards vary (Schipper (2005)). Second, I propose a self-constructed measure of local GAAP difference that is grounded on *de jure* differences among local GAAPs, and I apply it to a broader set of accounting items than those examined in prior literature (Murphy (2000), Cairns et al. (2010)). Third, by analyzing two periods that span the mandatory switch to IFRS in 2005, I reduce the effect of local GAAP-IFRS convergence strategies during the last years of local GAAP adoption (2003 - 2004) on comparability. This allows me to exploit larger cross-sectional variation among local GAAPs prior to IFRS adoption.

The remainder of the paper is organized as follows. Section 1.2 describes the economic setting of the study and develops the hypotheses. Section 1.3 discusses the related research on comparability. Section 1.4 describes the sample and the method. Section 1.5 presents the empirical results and findings. Section 1.6 concludes.

1.2 Institutional Setting and Hypotheses on Accounting Comparability

All firms in this study are listed on the same stock market (i.e., Euronext) but are located in jurisdictions that were differentially distant from IFRS before 2005. That is, prior to 2005 some local GAAPs were closer to IFRS than others, while all sample firms shared a common regulatory, technological, and institutional platform. Therefore, it is important to understand three issues: (a) the institutional environment where Euronext firms operate; (b) the distance between each local GAAP and IFRS pre-2005; and (c) the *de jure* change from local GAAP to IFRS. Section 1.2.1 begins by summarizing the characteristics of Euronext and the requirements to adopt IFRS by firms listed on this market. Section 1.2.2 describes the institutional and accounting characteristics of the jurisdictions represented on Euronext. This subsection also develops the hypotheses. Section 1.2.3 proposes an alternative GAAP difference measure to those previously adopted in the literature and discusses, at the *de jure* level, the accounting changes that occurred after the switch from local GAAPs to IFRS.

1.2.1 Euronext

A feature that supports an analysis of Euronext firms is the presence of a common institutional framework across jurisdictions. For example, Euronext has been operating a common trading platform, the Nouveau System Cotation (NSC), since 2001. The integration of Euronext's trading platforms is fostered and accompanied by

regulatory harmonization. Regulation of Euronext and its constituent markets is conducted by the respective national regulatory authorities pursuant to a memorandum of understanding (MOU) relating to the cash and derivatives markets.

The MOU contains standard enforcement information sharing, market surveillance, and confidentiality provisions. Moreover, two rulebooks contain a set of harmonized rules and a set of exchange-specific rules. Specifically, Rulebook 1 contains rules about cross-membership, trading and enforcement that are contractual agreements among the market participants of Euronext. It also comprises a common set of rules of listing qualifications and disclosure requirements applicable to all listed companies.⁴

Euronext was formed in 2000 by a merger between the Paris Stock Exchange and the exchanges of Amsterdam, Brussels, and, in 2002, Lisbon. Euronext includes, therefore, firms from four jurisdictions: France, Belgium, the Netherlands and Portugal. I focus on three of these jurisdictions in my paper: France, Belgium, and the Netherlands. I exclude Portugal for two reasons: 1) I find only 15 Portuguese firms (7 large and 8 small) listed on Euronext both in 2002 and 2008 to carry out my tests on comparability; 2) Euronext Lisbon was formed in mid-2002, and the institutional alignment of the four exchanges in this year may have been arguably low.

⁴ Rulebook 2 contains specific rules that are applicable to each jurisdiction's regulated capital markets.

Another feature that supports an analysis of Euronext firms is that, prior to 2005, the majority of Euronext firms were subject to their jurisdiction-specific GAAP for the preparation of their financial statements.⁵ After 2005, Euronext firms use IFRS for their consolidated financial statements, as endorsed by the European Commission.⁶

In summary, Euronext provides a rich research setting to test the ability of IFRS to achieve accounting comparability. On the one hand, it allows me to hold many institutional and regulatory factors constant. On the other hand, the fact that Euronext firms used local GAAP before 2005, allows me to exploit cross-sectional variation among the four financial reporting regimes in terms of the relative differences between local GAAP and IFRS.

1.2.2 Differences in Accounting Systems

A 2001 survey of the Fédération Des Experts Comptables Européens (FEE) suggests that the institutional setting for financial reporting in the three stock Euronext markets I examine was fairly homogeneous. In particular, common rules apply in France, Belgium and the Netherlands with regard to: 1) the preparation, the approval, and the auditing of financial reports of listed companies; 2) the system of sanctions for

⁵ See footnote 2.

⁶ Not all firms with equities listed on Euronext prepare their financial statements according to IFRS. Non-EU firms, for example, are allowed to adopt the accounting standards of the country where the issuer has its registered office, or any other accounting standards allowed by national regulations (Rulebook I, par. 6.7).

management and auditors; and 3) the institutional oversight system over financial reporting.

Although their institutional settings related to accounting are similar, systematic differences arise among local GAAPs from the heritage of cultural and political frameworks regarding different attitudes towards accounting and financial reporting. The solution for bridging these conflicting interests and views among EU countries was found in agreeing on a compromise through the incorporation in the European Directives (hereinafter, directives) of a considerable number of options on format, recognition and valuation of accounting items.

Influenced by the national accounting traditions, EU countries implemented the directives' options into national company laws in different ways. Moreover, accounting standards, developed by local standard setting bodies to interpret and integrate with more details the national company laws, must be in conformity both with the law and with the directives. This mechanism has three important consequences. First, the respect of local GAAP may be enforced through the normal mechanisms of the legal system. Second, the term local GAAP refers to both the accounting provisions contained in company laws and the accounting standards issued by local standard setting bodies.⁷

⁷ Hereinafter, I use term local GAAP to refer to both the company law on financial reporting, and to the accounting standards, as issued by the local standard setter bodies.

Third, before 2005, local GAAPs may exhibit cross-sectional differences across EU countries as a result of different implementation of the directives in the company laws. Consequently, local GAAPs in the three sample jurisdictions are differently close to IFRS before 2005.

Differences among local GAAPs may become more pronounced over time as a consequence of the degree of legal system adaptability (Beck et al. (2002)). Legal system adaptability refers to the ability of jurisdictions to evolve over time in order to minimize the gap between the contracting needs of the economy and the legal systems.

Specifically, the three sample countries differ also in their IFRS convergence strategies prior to 2005. According to a 2006 KPMG publication (KPMG (2006)), between 1998 and 2003, Dutch GAAP was rapidly converging with IFRS. In France and Belgium, however, this process started after 2005 with the implementation of the EU provisions to modernize the accounting directives in their national jurisdictions.⁸ Nobes (2001) documents that, between 2000 and 2002, Dutch GAAP became closer to IFRS in 11 accounting areas. During the same period, in France and Belgium no difference between local GAAP and IFRS was removed. This pattern is also noted by Haller (2002), who

⁸ I refer to the European Directives EC/2001/65 and EC/2003/51 that have modified the EU Directive 78/660/EEC (i.e., the fourth directive) and the EU Directive 83/349/EEC (i.e., the seventh directive) in order to reduce the number of differences between local GAAP and IFRS. The EU Commission required Member States to implement these changes in their national jurisdictions before January 2004 and January 2005, respectively.

documents that, before 2005, the UK, Ireland and the Netherlands were the European countries where local GAAPs complied the most with IFRS. As a result, the number of differences between local GAAP and IFRS in the Netherlands, prior to 2005, was smaller than in Belgium and France.

International accounting classification research has attempted to measure cross-sectional variation among national financial reporting regimes using two approaches: (a) a deductive approach that identifies specific institutional patterns among jurisdictions (Mueller (1967), Nobes (1983), Choi and Mueller (1984)); and (b) an inductive approach that analyses firms' practices to identify accounting patterns and measure distances across countries' financial reporting regimes. Both approaches yield similar results concerning the ranking of the three jurisdictions in my sample.

Specifically, using a deductive approach, Mueller (1967) and Nobes (1983) include the Netherlands in the group of countries where accounting is deeply entrenched with the development of business practices. In contrast, Belgium and France are included in the group of countries where accounting is considered as a tool for economic management and business control by the government. Following an inductive approach, Bae et al. examine differences between local GAAPs and IFRS along 21 accounting dimensions. They find that in 2001 local GAAP in France and Belgium did not conform to IFRS in 12 and 13 cases (out of 21), respectively. In contrast, Dutch GAAP

differed from IFRS in only four cases.

Ding et al. provide a more refined analysis of the differences between local GAAP and IFRS. Ding et al. measure the extent to which accounting rules regarding certain issues were missing in local GAAP but covered in IFRS (absence), and the extent to which accounting rules regarding the same issues differed in local GAAP and IFRS (divergence). Using the 2001 Nobes' survey, they show that in the Netherlands there were 10 cases where local GAAP differed from IFRS because of the absence of specific rules on recognition, measurement and disclosure. In France and Belgium, local GAAP differed from IFRS in 21 and 22 cases, respectively. In the absence of accounting standards, preparers of financial statements may look elsewhere for guidance: (a) they adopt accounting standards of other financial reporting regimes (e.g., US GAAP or IFRS); (b) they turn to jurisdiction-specific practices (Schipper (2005)); or (c) they may not disclose or recognize accounting items. The absence of local GAAP would then result in diminished comparability. Turning to divergence, Ding et al. find that Dutch GAAP had 25 inconsistencies with IFRS, while French and Belgian GAAP had 34 and 32, respectively.

Overall, I expect that the larger the number of national accounting absences and divergences, the greater the increase in national comparability following IFRS adoption. In particular, in 2001 the number of accounting differences (absence and divergence)

between IFRS and Dutch, Belgian, and French GAAP was 35, 54, and 55 respectively.

Based on these data, I expect that the effect of IFRS on national comparability is likely to be more pronounced in France and Belgium than in the Netherlands:

H1: The increase in de facto national comparability attributable to IFRS was larger for France and Belgium and smaller for the Netherlands.

Mandatory adoption of IFRS by the EU means that the same accounting rules apply across countries. This implies that, if the distances (both absence and divergence) between national accounting systems and IFRS decrease (H1), cross-sectional differences among national accounting rules also decrease. As a consequence, I predict that IFRS increases *de facto* international comparability:

H2: IFRS increased de facto international comparability.

The degree to which financial reports converge towards the use of the same accounting methods may depend on the characteristics of the distance between local GAAP and IFRS. As I discuss further in section 1.2.3, local GAAP may exhibit three forms of relation with IFRS: divergence, absence and similarity. Specifically, local GAAPs may diverge from IFRS (and from one another) when they prescribe different options and disclosure requirements for the same accounting item, causing firms to make different choices. Furthermore, local GAAPs may not prescribe authoritative guidance for some particular accounting items, causing firms to refer to jurisdiction-

specific practices, to IFRS or other internationally recognized accounting regimes (e.g., US GAAP), or to not disclose or recognize accounting items. In both cases (divergence and absence) the induced variation in firms' choices reduces comparability. After 2005, as IFRS become mandatory in all sample countries, I expect that divergences and absences are eliminated and firms to use the same set of options for the same accounting item. As a result, I expect comparability to increase.

In contrast, it seems intuitive to predict that the increase in comparability for items where IFRS preserves the same approaches (i.e., similarity) as those prescribed under local GAAP is not as great as when local GAAPs are absent or diverge from IFRS:

H3: The effect of IFRS on de facto comparability is not uniform across different accounting areas: it is larger (smaller) depending on the characteristics of the distance between local GAAP and IFRS.

1.2.3 Accounting Items

All three of my hypotheses are predicated on the belief that in 2002 local GAAPs in the three sample countries were differentially close to IFRS in the following way: Dutch GAAP was closer to IFRS than was French GAAP and Belgian GAAP. This conclusion is, however, based on prior research that did not examine *de facto* disclosure. Since my analysis is grounded on firms' reported choices, I verify whether those beliefs are in fact valid when I investigate *de facto* disclosure. In this section I first describe

measures of accounting comparability in prior research. Second, I introduce my GAAP difference measure, and I correlate it with those used in prior studies. Third, I cluster the accounting items of my GAAP difference measure in five categories, depending on the characteristics of each local GAAP and IFRS in 2002. Finally, I use this discussion to develop cross-sectional predictions concerning international comparability (H2 and H3).

Measuring the distance between local GAAP and IFRS is difficult for at least two reasons. First, financial statements do not always contain enough information to determine what choices firms actually made with respect to the selected items. Put differently, it is not always the case that local GAAP prescriptions, stated at the *de jure* level, are reflected in financial statements at the *de facto* level. GAAP provisions may range from the statement of general accounting principles to a long list of details, options and exceptions on which different standards may agree or differ (Bae et al.). Second, it is necessary that there is cross-sectional (*de jure*) variation across the three sample countries' local GAAPs in order to assess the extent to which IFRS affects it both at the *de jure* and the *de facto* level.

Within the accounting literature on comparability, research uses the 2001 Nobes survey, the Ding et al. measure and the Bae et al. measure of GAAP differences (e.g., Wang, (2011), Li, (2010), Yu, (2010), De Fond et al. (2011)). The Nobes survey relies on the answers of partners of seven audit firms in 62 countries who were asked to

benchmark their local GAAP and practices against 80 accounting measures for the financial reporting period ending December 31, 2001. Ding et al. and Bae et al. build on the Nobes survey and construct indices of accounting distance.

Specifically, Ding et al. measure accounting distance as the sum of items that are differently regulated under local GAAP with respect to IFRS. A possible shortcoming of this measure is that it is not possible to assume the same degree of uniformity across countries. For each country, the Nobes survey reports a different (in number and type) list of accounting dimensions on which local GAAP differs with IFRS. It is not possible, however, to understand the reasons that determine the exclusion of other accounting items from the list proposed for each country. Some possible explanations include: they are not pertinent to the analysis; no answer in the survey was provided; there is no difference between local GAAP and IFRS.

To overcome this limitation, Bae et al. identify 21 accounting items (out of the 80 in the survey) that create variation in all 62 countries in terms of their difference with IFRS. However, the Bae et al. measure may refer to accounting items for which it is not possible to collect information from financial statements, in that they refer to phases of the financial reporting process that firms do not usually disclose.⁹ Furthermore, the Bae

⁹ Examples from the 2001 Nobes survey are the following: 1) tax-based depreciation is sometimes not corrected in consolidated statements; 2) it is possible not to include indirect production costs

et al. measure may contain misclassification errors.¹⁰

For these reasons, I construct my measure of GAAP difference that relies on a self-constructed set of accounting items. To ensure that the comparability index can be calculated for the largest number of firms in the sample, I read the financial statements of 30 randomly selected firms from France, Belgium and the Netherlands. For these financial statements, I identify the accounting areas where information is commonly disclosed within and across countries. Then, for each accounting item identified, I analyze the provisions contained in each country's local GAAP and in the corresponding IFRS in force at December 31 2002.¹¹

I investigate a list of 27 accounting items, detailed in Appendix A. My GAAP

in the cost of inventories and contracts in progress; 3) extraordinary items are defined more widely.

¹⁰ For example, Bae et al. report that no difference existed between Belgian GAAP and IFRS with regard to the requirement of a primary statement of changes in equity. In contrast, they show that, for the same accounting item, Dutch and French GAAP differed from IFRS in 2001. In fact, my analysis of local GAAP reveals that in all three countries examined a statement of changes in equity was not required as a separate document of the financial statement (IAS 1). Rather, in all three countries firms were required to disclose in the notes information about the change in equity. Moreover, Bae et al. report no difference between French GAAP and IFRS for the option to capitalize research costs. However, my analysis shows that under French GAAP applied research costs could be capitalized (and some sample firms actually chose this option), whereas under IAS 38 all research costs are to be charged to expenses.

¹¹ For the sources of local GAAP, I examine the following documents (2002 version): for France, the Code de Commerce and the Plan Comptable Général; for Belgium, the Code des Sociétés and the Royal Decree January 30 2001; for the Netherlands, the Civil Code and the national accounting standards (Richtlijnen voor de jaarverslaggeving - RJ). For the sources of IFRS, I use the 2002 version of IFRS available online at www.ifrs.org.

difference measure overlaps along 11 of the 21 dimensions included in the Bae et al. measure, and covers eight of the 16 IFRS items examined in Bae et al. measure.¹² My set of accounting items is larger than Bae et al.'s because I include both accounting items that were regulated under local GAAP, but not under IFRS, and accounting items for which local GAAP provided a bland regulation, referring firms to IFRS for authoritative guidance.

To compute the distance between local GAAP and IFRS, I assign a score of one if, for a given accounting item, the local GAAP differed from IFRS on at least one dimension (i.e., the number and the type of accounting options or the number of disclosure requirements), and zero if all options and disclosure requirements allowed under local GAAP were similar to those under IFRS.

I classify accounting differences in three categories: 1) absence; 2) divergence (as in Nobes and Ding et al.) and 3) similarity. I add the third category to account for cases where accounting items are regulated similarly under local GAAP and IFRS at the same point in time. My analysis suggests that, in 2002, absence was the highest in Belgium and France (eight and six cases, respectively) and the lowest in the Netherlands (no case). Similarly, divergence was the highest in Belgium and in France (13 cases in both

¹² I exclude 12 items of the Bae et al. measure because firms rarely disclose information in their financial statements on these dimensions. For example, Bae et al. examine if firms account for their financial instruments based on substance over form. None of the sample firms discloses on this issue.

countries), whereas it was the lowest in the Netherlands (nine cases). Consequently, the number of similarities between local GAAP and IFRS was the highest in the Netherlands (18 cases), and the lowest in France and Belgium (eight and six cases, respectively).

Appendix A details, by country, the distribution of accounting items in terms of distance between local GAAP and IFRS. Specifically, I observe that Belgium and France had the most differences from IFRS in 2002 (21 and 19 out of 27, respectively), while the Netherlands the least (9 out of 27). This pattern is similar to that outlined in the Nobes survey, and in the Ding et al. and Bae et al. measures.

Appendix A compares my GAAP difference measure with the Bae et al. GAAP difference measure in terms of different accounting items (i.e., absence and divergence) over the total number of items investigated. The correlation between these two measures is 0.99 and statistically significant (p -value of 0.04), providing confidence that my measure captures what is intended to capture.

Overall, I believe my measure is consistent with the following conclusions. First, my GAAP difference measure is more suitable than Nobes' and Bae et al.'s to capture accounting comparability both at the *de jure* and *de facto* level, because my measure is based on the information that firms actually disclose in their financial statements. Second, although my measure overlaps on only about half of the 21 dimensions included in the Bae et al. measure, it yields similar results, thus supporting the

predictions stated in H1.

For the international comparability analysis (H2 and H3), I aggregate the 27 items in three categories: 1) divergence; 2) absence; and 3) similarity. I note that the level of aggregation at the international level may not reflect the classification proposed at the national level according to the three categories because, for the same accounting item, local GAAPs may be differently distant from IFRS. In this case, the choice to allocate one accounting item to one of the three categories hinges on the characteristics of the local GAAP that is the furthest away from IFRS. For example, in the case of depreciation of PPE, Dutch GAAP is similar to IFRS, whereas French and Belgian GAAP diverge. I assign depreciation of PPE to the category divergence.

The only case where local GAAPs are uniformly aligned under the same category occurs when, for a specific accounting item, they are equally distant from IFRS (i.e., zero score or one score in all three countries examined). Specifically, when IFRS preserves the same type and number of options as those in local GAAPs (i.e., zero score for all three accounting regimes), I assign the accounting item to the category similarity. I also assign an accounting item to the category similarity when, in contrast to local GAAP, IFRS does not prescribe an accounting method (i.e., one score for all three accounting regimes), because in this case, firms are likely to adopt the same disclosing policy they were under

local GAAP.¹³ Finally, local GAAPs may equally differ from IFRS when they prescribe different types and number of options, or when they do not provide any guidance (i.e., one score for all three accounting regimes). In this case I assign an accounting item to the category divergence and absence, respectively.

Examples of uniformly similar accounting items are: investment in associates, method for the classification of the statement of cash flow, disclosure of the subsidiaries, associates and joint ventures included in the scope of consolidation. The three countries' local GAAPs are equally divergent, for example, in the case of the valuation and depreciation method of PPE, the treatment of positive goodwill on acquisition, investment in joint ventures. I do not find cases where the three local GAAPs examined are equally absent.

To further assess the direction of the change in international comparability over time, I decompose the three categories into five clusters, according to the effect of IFRS on the set of accounting choices and on disclosure requirements about the presentation of specific information (H3). The five clusters are the following:

1) Accounting choices under IFRS are more stringent than under local GAAP.

For some accounting items IFRS provides a more stringent set of accounting methods

¹³ See further discussion in section 1.2.3.

relative to local GAAP. If the range of choices available to firms is smaller, then firms' accounting policies should converge and accounting comparability should increase. Specific cases where IFRS are more stringent than local GAAP relate to the accounting for 1) property, plant and equipment (PPE); 2) development costs; 3) depreciation of PPE; 4) inventory costing; 5) positive goodwill on acquisition; 6) treatment of positive goodwill on acquisition; 7) investments in joint ventures; 8) research costs; and 9) treasury share recognition.

2) Local GAAP provides general guidelines (or refers to IFRS), while IFRS is more precise.

Local GAAP and IFRS may both provide regulation on accounting items. However, differences may emerge with regard to the level of detail and the format through which financial information is disclosed. Specifically, local GAAP may require firms to disclose about the same accounting item as IFRS, but demand less information; alternatively, local GAAP may not provide guidance on an accounting item, but recommends following IFRS. In the first case, under local GAAP, accounting information may appear as less specific than under IFRS. In the second case (local GAAP refers to IFRS), since IFRS is not legally mandatory and, thus not enforceable under company law, I expect firms to exhibit variation in its implementation. In both cases I expect a low level of international comparability. Accounting items with these characteristics are: 1) the

presentation of the statement of change in equity (SOCE); 2) the disclosure of minority interests within the SOCE; 3) the presentation of the statement of cash flow as primary statement; 4) the indication of the cash flow from income taxes and from interests on debt in the statement of cash flow; 5) segment reporting.

Because cluster (1) and cluster (2) include accounting items that are covered in both local GAAP and IFRS, but diverge in terms of option sets and disclosure requirements, I aggregate them in the category divergence. I predict that if national divergences disappear as a consequence of IFRS adoption in the three countries examined, then the changes in international comparability for the accounting items aggregated within the category divergence will be positive.

3) Local GAAP does not regulate, IFRS does. Local GAAP does not cover all accounting items.

Beginning in 2005, IFRS covers those accounting items that were not previously covered under local GAAP. Prior to 2005, under no authoritative guidelines firms might have displayed two possible patterns in the process of recognition and disclosure of accounting items: 1) follow internationally accepted financial reporting regimes for authoritative guidance (e.g., IFRS, US GAAP), even if not allowed under local GAAP; 2) not disclose information that is not required. After 2005, the adoption of IFRS causes international comparability to increase for two reasons. First, IFRS provides guidance

inducing firms to display a more uniform pattern in the process of recognition and disclosure of accounting items. Second, and as a result of the first point, firms should disclose more information in their financial statements, thus eliminating a potential factor of non-comparability. Example items from this category include the following: 1) impairment of fixed assets; 2) accounting for post-employment benefits from defined benefit plans.

Because the rules regarding certain accounting items were missing under local GAAP while covered in IFRS, I aggregate cluster (3) accounting items within the category absence. Specifically, I predict that if national absences disappear, as a result of IFRS adoption, the changes in international comparability are positive and significant, especially when controlling for non-disclosure.

4) Under IFRS, the accounting methods allowed under local GAAP are preserved.

In some cases the options allowed under IFRS are the same as those allowed under local GAAP. Given the characteristics of a firm's business model and the costs that firms would incur to change their valuation and reporting systems, I expect firms to choose the same valuation and reporting method used under local GAAP, if allowed under IFRS. In particular, I expect that firms' accounting policies do not change after IFRS adoption. Some specific examples are: 1) investment in associates; 2) method for the

presentation of the statement of cash flow; 3) cost classification in the income statement; 4) recognition of minority interests in the balance sheet; and 5) accounting for financial leasing.

5) In contrast to local GAAP, IFRS does not prescribe an accounting method.

There are a few situations where an accounting method required under local GAAP is not required under IFRS. This is, for example, the case for the disclosure of subsidiaries, associates and joint ventures in the scope of consolidation in the notes. In this case, firms may continue to adopt the same accounting method they were using under local GAAP, without breaking any accounting rule (since IFRS does not require disclosure).

I aggregate cluster (4) and cluster (5) accounting items in the category similarity and I predict that when IFRS prescribe the same set of accounting options and disclosure requirements as local GAAP or do not regulate a specific accounting area covered under local GAAP, the change in international comparability is not significant.

For comparison, Appendix A displays the distribution of my GAAP difference measure and the Ding et al. GAAP difference measure. The correlation between the two measures is equal to 0.97 and is significant at conventional levels (p -value 0.009). This result provides confidence that the allocation of the 27 accounting items to the three categories in my study largely reflects the level of accounting aggregation in Ding et al.

measure.¹⁴

To summarize, I construct a measure of local GAAP differences across countries. In contrast to prior measures existing in the literature (Nobes, Ding et al., Bae et al.), I identify 27 accounting items that exhibit variation at the *de jure* level, and for which I can directly extract information from financial statements to measure *de facto* comparability. I use this measure to assess how far each country's local GAAP is from IFRS. Then, I allocate the 27 accounting items of my GAAP difference measure to three categories: absence, divergence and similarity, according to the distance exhibited by each country's local GAAP from IFRS relative to that of other countries' local GAAP. Finally, I use this design for my comparability analysis (H3), predicting larger increases in international comparability for accounting items included in the categories divergence and absence, and predicting smaller or not significant changes for those aggregated within the category similarity.

1.3 Measuring Comparability

Although the debate about accounting comparability exists at the conceptual level (Ashbaugh and Pincus (2001)), little direct research evidence exists because of the difficulty in operationalizing comparability. Prior studies on accounting comparability

¹⁴ Ding et al. do not provide data with regard to the accounting items included for each country and category, but they display only a summary number for each category. Therefore, I am not able to determine how many items included in my measure overlap with the Ding et al. measure.

can be broadly classified into two categories: (1) studies that use indirect measures of comparability and (2) studies that use direct measures of comparability.

The first category includes research that infers (or assumes) changes in comparability from changes in market outcomes, in financial statement users' behavior, and in corporate governance mechanisms around IFRS adoption. Li (2010) argues that improvements in comparability contribute to her finding lower cost of equity for EU firms after mandatory IFRS adoption. Wu and Zhang (2010) use the change in the behavior of financial statement users related to relative performance evaluation (RPE) to infer comparability. They document a post-adoption increase in the use of accounting-based RPE relative to foreign peers, consistent with improved cross-country accounting comparability subsequent to mandatory IFRS adoption. De Franco et al. (2009) measure comparability as the similarity of the mapping between accounting earnings and stock returns across US firms. This design can be noisy because it relies on the assumption that the same stock return reflects the same underlying economic events across firms from different countries (De Franco et al. (2009)).

Bae et al. (2008) examine the effect of accounting differences between local GAAP and IFRS on foreign analysts. In an information transfer context, Wang (2011) investigates whether a firm's price and volume reactions to a foreign firm's earnings announcement are significantly higher for firms reporting under the same rather than

different accounting standards. DeFond et al. (2011) examines the benefits of improved accounting comparability from IFRS adoption in the EU using the change in US mutual fund ownership. Collectively, these studies document that an increase in accounting comparability is associated with improvements in the information environment, international information transfer, and mutual fund ownership.

The second category includes research that adopts surveys and statistical approaches to directly measure accounting comparability. Using survey data, prior studies relate accounting comparability to the concept of distance between local GAAPs and IFRS. For example, Hung (2001) uses the 1993 International Accounting Summary by Coopers & Lybrand to compare local GAAPs in 11 areas for 21 countries. Nobes (2001) identifies commonly occurring differences between accounting rules in 62 countries and IFRS. While survey data represent a rich source to construct measures of accounting differences among local GAAPs, they also have limitations. For example, the questions may not be of the same relative importance in capturing the variable the researcher is interested in (Tay and Parker (1990)), and they may contain inaccuracies and inconsistencies in that the questions may imply the same degree of uniformity across countries (Nobes (1981)).

Using statistical methods, prior studies assess the level of *de facto* comparability. For example, Van der Tas (1988, 1992) introduces the H (Herfindahl index), the C and

the I indices to estimate the degree of harmonization among firms' accounting choices at the national and international level. The literature that refers to this approach includes, among others, Herrmann and Thomas (1995), Tay and Parker (1990, 1992), Taplin (2003, 2004, 2010). These studies examine comparability at two different points in time, holding local GAAPs constant and considering changes in comparability as the results of changes in firms' practices and local GAAPs' convergence strategies.

Research on the effect of IFRS on *de facto* comparability of firms' financial statements is limited. Murphy (2000) examines the change in accounting comparability for a sample of 16 Swiss firms that voluntarily adopted IFRS in 1992. While her results suggest that comparability increased for four accounting practices, she does not conclude that this change is attributable to the adoption of IFRS. Cairns et al. (2010) adopt the *T* index to measure the use of fair value measurement and its effect on accounting comparability in the UK and in Australia in response to IFRS adoption. The authors find that comparability increased only for accounting areas where IFRS requires fair value measurement.

In summary, there are two approaches to study accounting comparability: (1) the indirect approach that suggests (or infers) that IFRS adoption is associated with an increase in comparability; and (2) the direct approach that examines accounting comparability by surveying and statistically assessing the change in national and

international comparability among accounting practices. However, all the studies that employ a direct approach (except Cairns et al.) assess the change in accounting comparability holding local GAAPs constant over time without considering the effect of the switch to IFRS.

Because my study exploits the variation in the distance between local GAAPs and IFRS to measure the change in accounting comparability among firms' practices, I consider the direct approach as the most appropriate. Moreover, and in contrast to prior research, my research setting allows accounting regimes to change over time; this design feature increases the likelihood that any observed change in comparability is attributable to the change in accounting standards. Finally, given the limitations of survey data, I believe that a statistical index is more appropriate to directly assess the degree of accounting comparability. I defer a detailed discussion of the T index to the next section.

1.4 Sample and Method

My sample includes two sets of firms from Euronext. The first set consists of firms from Euronext 100 and Next 150, representing the largest 250 firms in terms of market capitalization (hereinafter, large firms). The second set includes firms included in the compartment C of Euronext, that is firms with a market capitalization that is lower than 150 million Euro (hereinafter, small firms). For my study, I include only firms that

are listed in both 2002 and 2008.¹⁵ This criterion ensures a consistent analysis between the same firms at two different moments of time, thus providing a matched sample for the analysis. I choose 2002 and 2008 as reference dates because by taking two 'distant' (to 2005) fiscal years I avoid possible noise or bias related to the anticipation of IFRS adoption effects.¹⁶ Moreover, on November 3rd 2008 the European Commission adopted a consolidated text of all the IFRS in force in the EU. This consolidated version aggregates all IFRS endorsed before October 15th 2008¹⁷ and increases confidence that in 2008 firms refer to the same regulatory text for the preparation of their financial statements.

Table 1 presents a summary of the sample selection. I find 147 large firms and

¹⁵ To ensure that a firm is included in the index at both periods, I cross check the list of firms on Euronext 100 and Next 150 at December 2002 and at December 2008 using monthly data obtained from Euronext Paris.

¹⁶ Some firms may comply with some IFRS or pseudo-IFRS before 2005. This phenomenon is particularly evident in the Netherlands and in France. For example, in 2002 the Dutch accounting standard RJ 271 was modified to be compliant with IAS 19 (employee benefits). Similarly, the French Plan Comptable Général was modified for three times on several accounting issues from 2002 to 2004. In both countries, the changes were mandatory from 2005, although earlier adoption was allowed from 2003-2004. Thus, I had begun my analysis in 2003 or 2004 and some of my sample firms opted for an early adoption of the accounting changes, I would have found that the distances between the Dutch and French GAAP, and IFRS was smaller than in 2002.

¹⁷ The method of implementing IFRS in the European Union is based on a standard-by-standard endorsement approach by public authorities. As a result, individual pieces of the content of IFRS have implementation dates that are different from IFRS as issued by the IASB, and parts of IFRS can be deleted (as in the case of the 'carve-out' from IAS 39). The resulting EU package of standards is not to be referred to as IFRS, but 'IFRS as adopted by the European Union' (ARC 2005; FEE 2005). Nevertheless, the titles, the numbering and the wording of the standards are the same.

308 small firms that are listed on Euronext in both 2002 and 2008. I remove financial firms, such as banks and insurance companies (those with industry code 8000 in Euronext), because these firms have unique operating characteristics and are governed by specific regulations. I eliminate Portuguese firms, firms with no financial statement available in 2002, and firms that do not prepare a consolidated financial statement. I collect the remaining firms' consolidated financial statements for 2002 and 2008 from Thomson One Banker. If I do not find a firm's consolidated financial statement in Thomson One Banker I obtain it from the firm's website. I use the English version of firms consolidated financial statements and if I cannot find it, I read and code the Dutch and the French versions.¹⁸ Because I require that firms use local GAAP for the preparation of consolidated financial statements in 2002 and IFRS in 2008, I exclude 10 firms that do not comply with this criterion (i.e., seven large firms and three small firms). After their exclusion, I have 296 firms: 112 large firms and 184 small firms.¹⁹

¹⁸ 195 firms (i.e., 63 percent of my sample) do not present an English version of their financial statement in at least one of the two years considered in this study.

¹⁹ Large firms account for 44 percent of the Euronext market capitalization as of December 31 2008. Small firms account for 0.4 percent of the Euronext market capitalization as of December 31 2008.

Table 1: Sample Selection

Criterion	N# of distinct large firms	N# of distinct small firms
Firms on listed on Euronext in Dec. 2002 and Dec. 2008	147	308
Financial firms (Isin code 8000 in Euronext)	(20)	(48)
Portuguese firms	(8)	(7)
Firms without financial statement available in 2002	0	(54)
Firms that do not prepare consolidated financial statements	0	(12)
Firms adopting IFRS before 2005	(7)	(3)
Firms with available financial statement in 2002 in accordance to local GAAP and in 2008 in accordance to IFRS	112	184

Table 1 explains the sample selection process followed in this study.

Table 2 shows that French firms account for 77 percent of the sample, whereas Belgian and Dutch firms account for 10 percent and 13 percent, respectively. These proportions also reflect the distribution of the average number of Euronext firms in 2002 and 2008 (70 percent, 13 percent and 16 percent in 2002 and 66 percent, 17 percent and 17 percent in 2008, in France, Belgium and the Netherlands, respectively).

Table 2: Sample Distribution (by country)

Country	Large	Small	Large + Small	Large (%)	Small (%)	Large + Small (%)	EU NEXT	EU NEXT (%)
France	77	151	228	69	82	77	684	69
Belgium	11	19	30	10	10	10	144	15
Netherlands	24	14	38	21	8	13	164	17
Total	112	184	296				992	

Table 2 shows the sample distribution. The column “Euronext” refers to the average number of Euronext firms (from the three countries) at December 2002 and at December 2008.

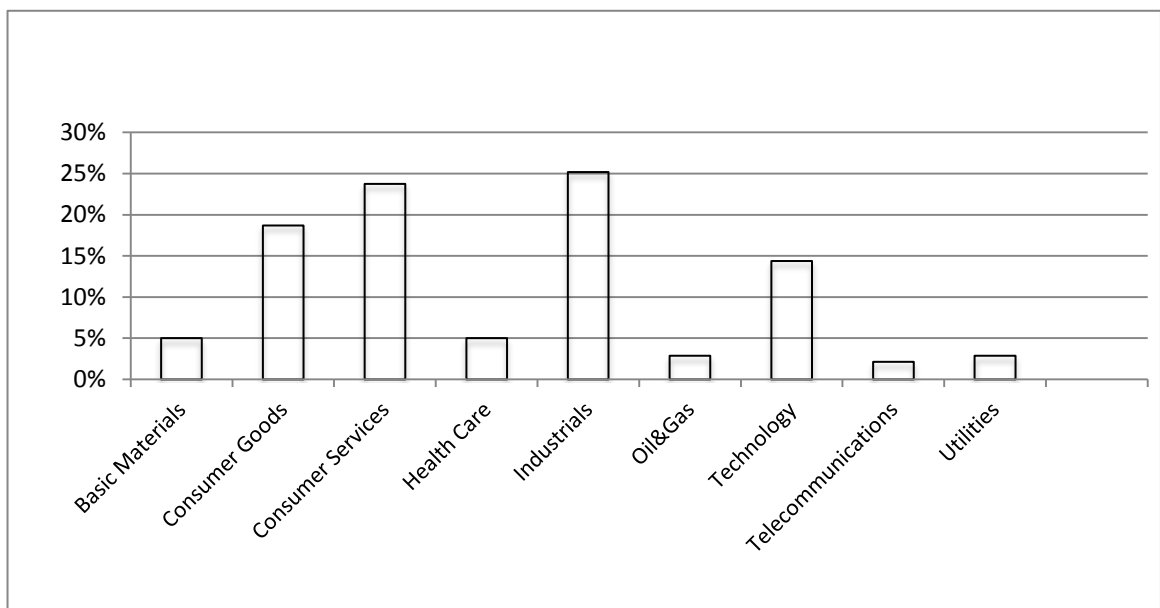


Figure 1: Sample firms by industry

Figure 1 reports the distribution of sample firms by industry. The figure shows that more than 75 percent of sample firms operate in the consumer good, consumer

service, technology and the industrials sectors.

In terms of the method I use to conduct the analysis, I follow four steps.

Step 1: After reading the formats and the notes of 592 firm/documents (296 consolidated financial statements in 2002 and 296 consolidated financial statements in 2008), I adopt a checklist to collect data about firms' accounting choices in relation to the valuation of each accounting item in 2002 and 2008. This research design allows me to use each sample firm as its own control by comparing two documents for the same firm: one in 2002 and one in 2008. For each country I generate a list of each firm's accounting choices in relation to each accounting item under local GAAP and IFRS. For example, for inventory and for each sample firm, I record the cost flow assumptions used *de facto* (i.e., FIFO, LIFO, weighted-average, similar methods) under local GAAP in 2002 and under IFRS in 2008.

In some cases, firms do not disclose the accounting choice for a particular item in the accounting policy section of the notes. Non-disclosure may occur for two reasons: a) the accounting item is recorded and/or disclosed in the consolidated financial statement, however, the firm does not disclose its accounting policy in relation to that item; or b) the accounting item is not recorded and/or disclosed in the consolidated financial statement because it is not applicable. To ascertain which of a) or b) is the case I further read the consolidated balance sheet and income statement, and other sections of the

explanatory notes, and for each accounting item I consider two possibilities: 1) no disclosure and 2) not applicable. If a particular accounting policy is not relevant for the firm (e.g., no research and development costs), then I code it as Not Applicable. Alternatively, I consider that the firm is not willing to disclose its accounting policy and I classify its choice in the category No Disclosure.

Step 2: Using Taplin's (2004) method, I compute the T index for 2002 and 2008. In doing so, I use only the information disclosed and extracted from consolidated financial statements. The resulting index can be interpreted as the probability that two randomly selected companies have comparable accounts. The general formula of the T index is given by equation (1):

$$T = \sum_{i=1}^N \sum_{j=1}^N \sum_{k=1}^M \sum_{l=1}^M \alpha_{kl} \beta_{ij} \rho_{ki} \rho_{lj} \quad (1)$$

where: α_{kl} is the coefficient of comparability between accounting methods k and l ; β_{ij} is the weighting for the comparison between companies in countries i and j . It represents the probability that the first randomly selected firm belongs to country i and the second to country j . The values for the β_{ij} are determined by the weightings that should be given to firms depending on the country they belong to and whether the index is to compare firms within the same country, between different countries, or overall; ρ_{ki} is the proportion of firms in country i that use accounting method k ; ρ_{lj} is the proportion of

firms in country j that use accounting method l ; M is the number of countries (from 1 to 3) and N is the number of alternative accounting methods.

I construct α_{kl} , β_{ij} , ρ_{ki} , ρ_{lj} in matrix form and estimate the T index as follows:

$$T = \sum_{i=1}^N \sum_{j=1}^N \sum_{k=1}^M \sum_{l=1}^M \alpha_{kl} \beta_{ij} \rho_{ki} \rho_{lj} = \sum_{i=1}^N \sum_{j=1}^N \beta_{ij} T_{ij} \quad (2)$$

where $T_{ij} = \sum_{k=1}^M \sum_{l=1}^M \alpha_{kl} \rho_{ki} \rho_{lj}$ represents the two-country index quantifying the level of comparability between country i and j , and β_{ij} is the matrix of weights assigned to the \tilde{T} matrix when computing the weighted average. The T index ranges from zero (no two companies are comparable) to one (all companies are comparable with one another). It captures the level of *de facto* accounting comparability among firms in an international setting.

For the calculation of the T matrix, at least three issues should be considered when interpreting the results.

(a) Firm and country weightings. There are three ways to estimate the components, b_i , in the matrix β_{ij} . (1) Equally-weight firms in each country (i.e., $b_i = n_i/n$, where n_i is the number of companies from country i and n is the total number of firms in the sample). This means that a country receives weight proportional to the number of firms sampled for that country. (2) Equally-weight each country (i.e., $b_i = 1/N$). This option does not seem realistic, as the number of sample firms varies greatly across the

countries investigated. (3) Weight countries according to the actual population of firms in the country (i.e., $b_i = u_i / \sum_{i=1}^N u_i$, where u_i is, for example, the actual number of firms listed on country i 's stock exchange). This method seems appropriate for my tests because if two firms are randomly selected from the population of all listed companies, it is more likely that these firms are from France rather than from the Netherlands, and Belgium. Therefore, in my empirical analysis I use method (3).²⁰

(b) The *alpha* matrix. The determination of the α_{kl} matrix is subjective. As mentioned above, it is a square, symmetric matrix that represents the level of comparability between accounting methods k and l . Every entry in the matrix takes on a number from zero (non comparability) to one (perfect comparability). The diagonal consists of 1s as every method is comparable with itself. I assign value zero in cases where two different methods are compared (e.g., FIFO vs. LIFO for the inventory costing method). Not all firms, however, clearly disclose that they use a single method. Given the economic substance of transactions, management may adopt multiple accounting treatments, even though they do not specify the scope of application of each method. For example, if a firm uses both FIFO and average weighted cost for the assessment of

²⁰ Given that the number of sample firms from all three jurisdictions is proportionally equal to the universe of Euronext firms, I expect that method 1 and method 3 yield approximately the same results. In a sensitivity test I will calculate the index using method 1.

inventory cost, in most cases no mention is made about the class or the fraction of inventory evaluated with each method. However, a firm that uses this cost flow combination should not be treated as completely incomparable with a firm that adopts FIFO only. In this case I consider partial comparability among accounting methods.

To determine partial comparability between accounting methods I first compute the expected probability that an accounting item is evaluated according to one of the methods expressed in the combination. This probability is a function of the number of accounting methods in the combination. For instance, if a firm uses both the FIFO and weighted average method, I expect that half of its inventory cost is evaluated at FIFO and half at the weighted average. This means that a firm using FIFO and average cost method is 50 percent comparable with a firm using FIFO only or, alternatively, that 50 percent of firms that use FIFO and weighted average cost method are actually using FIFO.

(c) Treatment of non-disclosure. There are four ways to deal with situations where firms do not disclose the accounting treatment they use for a given item: a) not applicable, companies that do not disclose a particular item are removed from the sample (only for that item); b) comparable to everything; c) comparable to nothing; d) comparable to the standard in force.

In my study I exclude observations where the accounting standard is not

applicable as I am confident that non-disclosure is attributable to inapplicability of accounting standards. As for non-disclosure firms, (that is, firms that voluntarily did not disclose their accounting method even if it was applicable) I use two methods: (a) I remove them and (b) in further tests I treat non-disclosure as an accounting method that is comparable to nothing. Using the second option results in a lower level of comparability when non-disclosure exists and the decrease is greatest where the level of non-disclosure is highest.²¹

Step 3: I compute the *T* index in order to assess the level of comparability before and after IFRS adoption. First, to test H1 (the change in comparability is larger in countries that prior to 2005 were more distant from IFRS), I compute the within-country *T* index by giving zero weighting to the comparison between companies from different countries. For each accounting item and for all three sample jurisdictions I estimate the average (across all accounting items) percentage change in the *T* index from 2002 to 2008. I interpret it as the effect of IFRS on national comparability.

Second, to test H2, I calculate the between-country *T* index by giving zero weighting to the comparison within companies from the same country. I weight each country according to the actual population of Euronext firms for each country. I estimate

²¹ In this case, the alpha matrix includes a non-comparable method (i.e., non-disclosure), thus causing the *T* index to decrease, especially in cases where non-disclosure is pronounced.

the average change in international comparability across all five accounting categories and I interpret it as the effect of IFRS on international comparability.

Third, to test H3, I cluster my sample accounting items following the classification in section 2.3. Given the results from the test on H2, for each category I compute the average change in international comparability and I interpret it as the effect of IFRS on each category of accounting standard.

Step 4. To estimate the standard errors and the p -values of the T index for national and international comparability, I use the formulae in Taplin (2003; 2010). Specifically, I follow three steps. First, for each accounting item I determine the variance of the T index and I derive the standard errors.²² Second, I compute the standard errors for the difference between the T index in 2002 and in 2008. Third, using the standard errors of the difference in T index, I construct a confidence interval around the difference and compute the p -values.

1.5 Empirical Evidence

1.5.1 Main Findings

I begin by investigating the effect of IFRS on national comparability. Tests of H1 are shown in Table 3 (for large firms) and Table 4 (for small firms).

²² Formulae for the determination of the variance and standard errors of the T index are available upon request.

Table 3: IFRS Effect on National Comparability (Large Firms)

Accounting items	France(%)			Belgium (%)			Netherl. (%)			Δ% item
	2002	2008	Δ%	2002	2008	Δ%	2002	2008	Δ%	
PPE	92	97	5	100	100	0	77	100	30*	12
PPE Deprec.	82	97	18	52	100	92**	89	100	12	41
Impairment Fixed assets	40	56	40**	60	60	0	71	72	1	14
Res. costs	66	100	52**	69	100	45*	100	100	0	32
Dev.costs	68	65	(4)	83	70	(16)	76	83	9	(4)
Goodwill on acquis.	97	100	3	100	100	0	85	100	18	7
Goodwill treatment	52	100	92***	36	100	178***	72	100	39*	103
SCE - position	97	100	3	40	70	75**	92	78	(15)	21
SCE minorities recognition	73	95	30*	63	100	59**	63	100	59**	49
Post-employment benefits (provision recognition)	72	100	39**	65	100	54*	100	100	0	31
Actuarial gains/losses on DBP	48	44	(8)	70	44	(37)*	34	46	35*	(3)
Determination of DBO	63	100	59**	60	100	67**	100	100	0	42
SCF (method)	87	100	15	83	100	20	100	100	0	12
SCF (position in the financial statement)	69	100	45**	49	100	104***	100	100	0	50
SCF (taxes on income)	93	63	(32)*	70	100	43*	57	85	49*	20
SCF (interest exp.)	88	53	(40)**	70	70	0	51	71	39	0
Segment reporting	46	100	117***	57	100	75***	83	100	49*	20
Investment in associates	100	100	0	100	100	0	100	100	0	0
Investment in joint ventures	90	72	(20)	68	51	(25)	51	54	6	(13)
Inventory costing flow	34	27	(21)	24	54	125***	41	46	12	39
Cost class. in IS	52	50	(4)	58	50	(14)	56	51	(9)	(9)
Recognition minority interests	100	100	0	100	100	0	100	100	0	0

Table 3: IFRS Effect on National Comparability (Large Firms)

Treasury shares	51	100	96***	100	100	0	100	100	0	32	
List of subs. consolid. Details for each group entity	61	70	15	70	100	43*	33	33	0	19	
EPS	80	100	25	100	100	0	34	34	0	8	
Financial leasing	100	100	0	100	100	0	100	100	0	0	
Av. $\Delta\%$ in nat. comp.			19				33				11

Table 3 shows the *T* index of national comparability in 2002 and in 2008, for each accounting item and for large firms. The last column shows the average national change per accounting item. The last row reports the change in national comparability obtained by averaging the changes in comparability across all accounting items. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

Table 4: IFRS Effect on National Comparability (Small Firms)

Accounting items	France (%)		Δ%	Belgium (%)		Δ%	Nether. (%)		Δ%	Δ% item
	2002	2008		2002	2008		2002	2008		
PPE	91	100	10	90	90	0	100	100	0	3
PPE Deprec. Impairment	72	96	33**	65	100	54***	100	100	0	29
fixed assets	88	42	(52)**	67	52	(22)*	76	51	(33)**	(36)
Res. costs	37	73	97***	48	100	108***	76	100	32**	79
Dev.costs	51	59	16	44	80	82***	76	76	0	33
Goodwill on acquisition	81	100	23**	90	100	11	70	100	43***	26
Goodwill treatment	56	100	79***	55	100	82***	80	100	25**	62
SCE - position	57	82	44***	73	90	23*	87	54	(38)**	10
SCE minorities recognition	56	80	43***	52	79	52***	74	53	(28)**	22
SCF (method)	99	100	1	100	100	0	100	100	0	0
SCF (position)	53	100	89***	56	100	79***	100	100	0	56
SCF (taxes)	99	100	1	90	100	11	50	100	100***	37
SCF (interest exp.)	99	51	(48)***	90	38	(58)***	44	87	98***	(3)
Inventory costing flow	37	39	5	34	51	50***	60	56	(7)	16
Cost class. in IS	68	72	6	90	90	0	51	59	16	7
Recognition of min. interests	72	74	3	90	81	(10)	66	51	(23)*	(10)
Treasury shares	67	100	49***	100	100	0	100	100	0	16
List of subs. consolid.	100	100	0	100	100	0	46	56	22*	7
Details for each group entity	100	100	0	100	100	0	46	56	22*	7
EPS	100	100	0	100	100	0	100	100	0	0
Fin. leasing	53	100	89***	89	100	12	100	100	0	34
Av. Δ% in nat. comp.			23			23			11	

Table 4 shows the *T* index of national comparability in 2002 and in 2008 for each accounting item and for small firms. The last column shows the average national change per accounting item. The last row reports the change in national comparability obtained by averaging the changes in comparability across all accounting items. For the small firm analysis I focus on 21 accounting items, rather than 27. I remove 6 accounting items because, in almost all cases, they were not

pertinent to the firms' business model. The 6 items are: investment in associates, investment in joint ventures, segment reporting, Recognition of actuarial gains/losses on defined benefit plans, Recognition of provisions for post-employment benefits (defined benefit plans), Disclosure of defined benefit plan assumptions. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

The last row in both tables show that in all three sample countries, comparability increases following IFRS adoption. This change is more pronounced in countries where local GAAP was more distant from IFRS prior to 2005. Specifically, in France and in Belgium comparability of large firms increases by 19 percent and 33 percent, respectively, compared to an 11 percent increase in the Netherlands where local GAAP was already close to IFRS prior to 2005. Moreover, I find that in Belgium and in France the increase in comparability is statistically more reliable than in the Netherlands. Specifically, for 9 and 11 accounting items in Belgium and in France, respectively, I find positive and significant changes in comparability. In the Netherlands only six items show a statistically significant increase in comparability.²³

For the analysis of the IFRS effect on the accounting comparability of small firms I remove six accounting areas where local GAAP and IFRS are systematically not applicable (i.e., three items related to the accounting for post-employment benefits; investments in joint ventures, investment in associates and segment reporting). I

²³ In France and in Belgium I also find significant decrease in comparability for two and one accounting items, respectively.

examine the remaining 21 accounting items and I find the same pattern shown in Table 3. Specifically, I find that the increase in national comparability is larger in France and in Belgium (+23 percent in both countries) than in the Netherlands where accounting comparability increases by (only) 11 percent. However, in contrast to the large firms, I observe that the reliability of the change in comparability is similar across the three countries (nine statistically significant positive changes in France, eight in Belgium and seven in the Netherlands).

Overall, these results provide evidence that IFRS adoption increased national accounting comparability, especially in countries where local GAAP was further from IFRS, prior to 2005. The last column of Table 3 and Table 4 show the average change in national comparability per accounting item. I find that, following IFRS adoption, firms are *de facto* more comparable in terms of the treatment of goodwill on acquisition (+103 percent and +62 percent for large and small firms, respectively) and presentation of the statement of cash flow (+50 percent and +56 percent for large and small firms, respectively). Table 5 shows results of the test of H2 (i.e., the adoption of IFRS increased international accounting comparability) for large firms, and Table 6 presents similar information for small firms.

Table 5: IFRS Effect on International Comparability – (Large Firms)

	Local GAAP 2002 (%)	IFRS 2008 (%)	Change (%)	
Panel A: IFRS is more stringent than local GAAP				
Divergence	PPE	89	100	12
	Dev. Costs	42	69	64**
	PPE Depreciation	74	95	28*
	Inventory costing flow	42	41	(2)
	Goodwill on acquis.	95	100	5
	Goodwill treatment	50	100	100***
	Investment in joint ventures	64	44	(31)*
	Res. costs	48	95	98***
	Treasury shares	60	100	67***
	<i>Average change in comparability panel A</i>			38
Panel B: Local GAAP provides general guidelines or refers to IFRS, IFRS is more precise				
Divergence	SCE – position	43	84	95***
	SCE – minority recognition	54	91	69***
	SCF - position	56	100	79***
	SCF (taxes)	50	76	52**
	SCF (interest exp.)	49	60	22*
	Segment reporting	47	100	113***
	<i>Average change in comparability panel B</i>			72
Average divergence (Panel A, Panel B)			55	
Panel C: Local GAAP does not regulate, IFRS does				
Absence	Impairment fixed assets	41	49	20
	Post-employment benefits (provision recognition)	81	100	23*
	EPS	76	100	32*
	Actuarial gains/losses on defined benefit plans	41	43	5
	Disclosure of defined benefit plan assumptions	55	100	82***
<i>Average change in comparability panel C</i>			32	
Average absence (Panel C)			32	

Table 5: IFRS Effect on International Comparability – (Large Firms)

Panel D: IFRS preserves the same options (type and number) in Local GAAP				
Similarity	Investment in associates	100	100	0
	SCF (method)	94	99	5
	Cost classification in IS	54	50	(7)
	Minority interest in group equity	91	96	5
	Financial leasing	100	100	0
<i>Average change in comparability panel D</i>			1	
Panel E: Local GAAP regulates, IFRS does not				
	List of subsidiaries consolidated	47	54	15
	Details for each group entity	55	58	5
<i>Average change in comparability panel E</i>			10	
<i>Average similarity (Panel D, Panel E)</i>			8	
<i>Average change in international comparability (Large Firms)</i>			31	

Table 5 shows the *T* index of international comparability in 2002 and in 2008 for all of my sample accounting items, clustered according to the categories discussed in section 2.3, and for large firms. The last row reports the change in international comparability obtained by averaging the average changes in international comparability across the five panels (A-E). In this analysis non-disclosure is not considered as a separate, non-comparable, accounting method. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

Table 6: IFRS Effect on International Comparability – (Small Firms)

	Local GAAP 2002	IFRS 2008	Change %
Divergence			
Panel A: IFRS are more stringent than local GAAP			
PPE	93	100	8
Dev. costs	50	68	36*
PPE depreciation	81	100	23*
Inventory costing flow	39	41	5
Goodwill on acquis.	78	100	28*
Goodwill treatment	31	100	223***
Res. costs	32	85	166***
Treasury shares	36	100	178***
<i>Average change in comparability panel A</i>			83
Panel B: Local GAAP regulate blandly or refer to IFRS, IFRS regulate precisely			
SCE - Position	67	57	(15)
SCE - Minority information	45	58	29*
SCF – position	35	100	186***
SCF - taxes	80	55	(31)*
SCF - interest exp.	87	39	(55)**
<i>Average change in comparability panel B</i>			23
Average divergence (Panel A, Panel B)			53
Absence			
Panel C: Local GAAP do not regulate, IFRS do			
Impairment test of fixed assets	74	44	(41)**
EPS	36	100	178***
Average absence (Panel C)			69
Similarity			
Panel D: IFRS preserve the same options (type and number) in Local GAAP			
SCF (method)	96	100	4
Cost classification in IS	58	51	(12)
Minority interest in group equity	78	84	8
Financial leasing	70	100	43**
<i>Average change in comparability panel D</i>			11
Panel E: Local GAAP regulate, IFRS do not			
List of subsidiaries consolidated	76	81	7
Details for each group entity	64	67	5
<i>Average change in comparability panel E</i>			6
Average similarity (Panel D, Panel E)			8
Average change in international comparability (Small Firms)			38

Table 6 shows the *T* index of international comparability in 2002 and in 2008 for all of my sample accounting items, clustered according to the categories discussed in section 1.2.3, and for the small firms. The last row reports the change in international comparability obtained by averaging the average changes in international comparability across the five panels (A-E). In this analysis non-disclosure is not considered as a separate, non-comparable, accounting method. For the small firm analysis I focus on 21 accounting items, rather than 27. I remove 6 accounting items because, in almost all cases, they were not pertinent to the firms' business model. The 6 items are: investment in associates, investment in joint ventures, segment reporting, Recognition of actuarial gains/losses on defined benefit plans, Recognition of provisions for post-employment benefits (defined benefit plans), Disclosure of defined benefit plan assumptions. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

The last row of each table reports the average change in *de facto* international comparability from 2002 to 2008 across the accounting items examined. As predicted, the international *T* index increases: by 31 percent for large firms and by 38 percent for small firms. This value corresponds to the average of the five values of international comparability reported in Panel A-E and indicates that the probability that the financial statements of two large (small) companies from two different countries use the same accounting methods for the same accounting item after IFRS adoption, increased, on average, by 31 percent (38 percent).

Turning to H3 (i.e., the effect of IFRS on financial statements' comparability is not uniform across different accounting areas), I find, as expected, that the largest increase in accounting comparability occurs when IFRS reduces the number of choices allowed in local GAAP to a single method. Panel A of Table 5 shows that in the case of large firms, after IFRS adoption, the change in the *T* index for goodwill on acquisition is +100

percent, +98 percent for research costs, +67 percent, for treasury shares recognition. However, the change in international comparability for PPE and inventory costing are smaller and non significant (about 12 percent and -2 percent, respectively). The analysis of small firms in Table 6, Panel A yields similar and sharper results: the international *T* index increases by 223 percent for the treatment of positive goodwill on acquisition, by 166 percent for research costs, and by 178 percent for treasury shares recognition. The change in the *T* index for inventory costing is not reliably different from zero. Overall, these results confirm that the largest changes in comparability occur when IFRS allows a single method for the same accounting item, whereas the changes are more modest when IFRS allows more than one method.

Panel B of Table 5 and Table 6 shows that when IFRS becomes legally mandatory in the three countries examined, international comparability increases significantly relative to the case where local GAAP refers to IFRS for further guidance prior to 2005. Specifically, I find that large firms exhibit positive and significant changes in the *T* index from 2002 to 2008 on all the accounting items included in Panel B, Table 5. I find that the positive changes in international comparability are less pronounced and significant for small firms (Panel B, Table 6). One explanation for this pattern concerns the effect of non-disclosure: the more diffuse is non-disclosure, the larger the proportion of firms displaying a similar choice (i.e., non-disclosure), and the higher is comparability. This

effect explains why the value of the international *T* index in the case of statement of cash flow (taxes and interest on debt) is high for small firms prior to IFRS adoption.

Overall, the analysis of the divergence dimension (Panel A and Panel B in Table 5 and Table 6) suggests that the IFRS effect on the international comparability of large and small firms is positive and statistically significant (+55 percent and +53 percent for large and small firms, respectively).

Panel C of Table 5 and Table 6 show that international comparability increases when IFRS disciplines an accounting area that was not previously regulated under local GAAP. This pattern is more evident for small firms. The positive change in international comparability increases from +32 percent for large firms, to +69 percent for small firms. This result suggests that the presence of accounting guidance in areas not previously regulated under local GAAP increases international comparability more for small firms than for large firms.

Panel D, in Table 5 and Table 6 shows that when IFRS preserves the same accounting choices as in local GAAP, the change in accounting comparability is relatively small (+1 percent and 11 percent, for large and small firms, respectively). For all accounting items all changes are statistically non-different from zero. I find, however, a positive and significant change in the case of financial leasing for the small firm

sample (+43 percent).²⁴

Finally, Panel E of Table 5 and Table 6 confirms the same pattern as in Panel D for the case where local GAAP provides guidance, whereas IFRS does not. The *de facto* international comparability does not change significantly after IFRS adoption (+10 percent and +6 percent for large and small firms, respectively). Overall, for the similarity category, I find, as expected, a non-significant change in international comparability both for large and for small firms.

1.5.2 The Effect of Non-Disclosure

My second analysis focuses on the effect of non-disclosure. As discussed in Section 1.4, considering non-disclosing firms as non-comparable with all other firms results in a lower level of comparability when non-disclosure exists. Tables 7 – 10 repeat my tests of the effect of IFRS on national and international comparability with non-disclosure as a separate, non-comparable, accounting method.

²⁴ This effect is due to the fact that, before IFRS adoption, some small firms in France continued to recognize financial leasing as operative leasing in their consolidated financial statements.

**Table 7: IFRS Effect on National Comparability
(Large firms – with Non-Disclosure as Separate Accounting Method)**

Accounting items	France (%)		Δ%	Belgium (%)		Δ%	The Netherlands (%)		Δ%	National Δ% per item
	2002	2008		2002	2008		2002	2008		
PPE	92	97	5	100	100	0	77	100	30*	12
PPE Depreciation	82	97	18*	49	100	104***	89	100	12	45
Impairment fixed assets	15	56	273***	7	60	757***	68	72	6	345
Res. costs	66	100	52***	69	100	45*	100	100	0	32
Dev. costs	68	65	(4)	83	70	(16)	76	83	9	(4)
Goodwill on acquis.	97	100	3	100	100	0	85	100	18	7
Goodwill Treatment	52	100	92***	36	100	178***	72	100	39*	103
SCE - position	97	100	3	40	70	75**	92	77	(16)	21
SCE - minorities recognition	73	95	30**	6	100	1,567***	56	100	79**	558
Post-employment benefits (provision recognition)	72	100	39**	65	100	54*	100	100	0	31
Actuarial gains/losses on DBP	10	44	340***	3	44	1,367***	27	46	70**	592
Determination of the DBO	57	100	75***	7	100	1,329***	100	100	0	468
SCF (method)	87	100	15	83	100	20	100	100	0	12
SCF (position)	69	100	45**	48	100	108***	100	100	0	51
SCF (taxes exp.)	5	59	1,080***	4	100	2,400***	50	84	68**	1,183

**Table 7: IFRS Effect on National Comparability
(Large firms – with Non-Disclosure as Separate Accounting Method)**

SCF (interest exp.)	4	46	1,050***	4	70	1,650***	45	70	56*	919
Segment reporting	45	100	122***	54	100	85**	67	100	49*	86
Investment in associates	100	100	0	100	100	0	100	100	0	0
Minority interest in group equity	97	98	1	100	100	0	100	100	0	0
Treasury shares	51	100	96***	100	100	0	100	100	0	32
List of subsidiaries consolidated	61	70	15	70	100	43*	22	22	0	19
Details for each group entity	80	100	25**	100	100	0	23	23	0	8
EPS	100	100	0	52	100	92**	100	100	0	31
Financial leasing	100	100	0	100	100	0	100	100	0	0
Av. Δ% in nat. comp.			123			370			16	

Table 7 shows the *T* index of national comparability in 2002 and in 2008 for each accounting item and for each sample country. The last column shows the average national change per accounting item. The last row reports the change in national comparability obtained by averaging the changes in comparability across all accounting items. Non-disclosure is considered as a separate, non-comparable, accounting method (see Section 1.4). *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

Table 8: IFRS Effect on National Comparability
(Small firms – with Non-Disclosure as Separate Accounting Method)

Accounting items	France (%)		Δ%	Belgium (%)		Δ%	The Netherlands (%)		Δ%	National Δ% per item
	2002	2008		2002	2008		2002	2008		
PPE	90	100	11	88	100	14	100	100	0	8
PPE Depreciation	72	96	33**	63	100	59**	100	100	0	31
Impairment fixed assets	2	42	2,000***	4	49	1,125***	10	51	410***	1,178
Res. costs	27	70	159***	47	100	113***	76	100	32**	101
Dev. costs	49	58	18*	43	80	86***	76	76	0	35
Goodwill on acquis.	80	100	25**	89	100	12	70	100	43**	27
Goodwill Treatment	53	100	89***	55	100	82***	80	100	25*	65
SCE – position	56	82	46***	71	90	27*	86	54	(37)**	12
SCE - minorities recognition	44	79	80***	37	78	111***	5	15	200***	130
SCF – method	99	100	1	100	100	0	100	100	0	0
SCF - position	53	100	89***	56	100	79***	100	100	0	56
SCF - taxes exp.	2	52	2,500***	2	53	2,550***	25	66	164***	1,738
SCF - interest exp.	1	43	4,786***	1	20	2,757***	26	86	231***	2,591
Inventory costing flow	34	36	6	26	40	54**	53	53	0	20
Cost classification in the income statement	68	72	6	90	90	0	51	59	16	7
Minority interest in group equity	72	74	3	90	81	(10)	66	51	(23)*	(10)
Treasury shares	67	100	49***	100	100	0	100	100	0	16
List of subsidiaries consolidated	100	100	0	100	100	0	46	56	22*	7
Details for each group entity	100	100	0	100	100	0	46	56	22*	7
EPS	100	100	0	3	100	3,233***	100	100	0	1,078
Financial leasing	49	100	104***	89	100	12	100	100	0	39
Average Δ% in nat. comp.			476			491			109	

Table 8 shows the *T* index of national comparability in 2002 and in 2008 for each accounting item and for each sample country. The last column shows the average national change per accounting item. The last row reports the change in national comparability obtained by averaging the

changes in comparability across all accounting items. Non-disclosure is considered as a separate, non-comparable, accounting method (see Section 1.4). For the small firm analysis I focus on 21 accounting items, rather than 27. I remove six accounting items because, in almost all cases, they were not pertinent to the firms' business model. The six items are: investment in associates, investment in joint ventures, segment reporting, Recognition of actuarial gains/losses on defined benefit plans, Recognition of provisions for post-employment benefits (defined benefit plans), Disclosure of defined benefit plan assumptions. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

Table 7 and Table 8 show that the effect of non-disclosure is more pronounced in countries where local GAAP was further from IFRS prior to 2005. This effect reduces the value of the national *T* index in 2002 and amplifies the effect of IFRS on national comparability hypothesized in H1. Specifically, after controlling for non-disclosure, in France and in Belgium national comparability of large firms increases from 19 percent and 33 percent (Table 3) to 123 percent and 370 percent (Table 7), respectively. In contrast, in the Netherlands, the national *T* index increases, on average, from 11 percent (Table 3) to 16 percent (Table 7), suggesting that in this country the negative effect of non-disclosure on national comparability of large firms is not as diffuse as in Belgium and France.

Moreover, I observe that my results for large firms are statistically more reliable when I control for non-disclosure: in Belgium and in France, the number of accounting items for which I find a significant and positive change in comparability increases from nine and 11, respectively, to 16 and 14. In the Netherlands the number of accounting items for which I find a statistically significant change in comparability increases from

six to seven.

Tests of H1 for small firms, with non-disclosure as a non-comparable method, are shown in Table 8. Consistent with the results found for large firms, I observe that the increase in national comparability in countries where local GAAP was further from IFRS, is larger than in countries where local GAAP was already close to IFRS prior to 2005. For example, in France and in Belgium national comparability of small firms increases from 23 percent (Table 3) to 476 percent and 491 percent, respectively (Table 8). In the Netherlands, accounting comparability for small firms increases from 16 percent to 109 percent, when I account for non-disclosure.

I conclude from these results that: 1) after controlling for non-disclosure, the effects of IFRS on national comparability are more pronounced, and particularly so for small firms; and 2) the magnitude and the direction of the effect of IFRS on national comparability, as predicted in H1, remains unchanged (i.e., larger increases in comparability in jurisdictions where local GAAP was further from IFRS, and smaller increases in jurisdictions where local GAAP was close to IFRS prior to 2005).

**Table 9: IFRS Effect on International Comparability
(Large Firms – with Non-Disclosure as Separate Accounting Method)**

	Local GAAP 2002 (%)	IFRS 2008 (%)	Change (%)	
Divergence	Panel A: IFRS is more stringent than local GAAP			
	PPE	89	100	12
	Dev. costs	42	69	64**
	PPE Depreciation	74	95	28*
	Inventory costing flow	40	40	0
	Goodwill on acquisition	95	100	5
	Investment in joint ventures	64	44	(31)*
	Goodwill Treatment	50	100	100***
	Res. costs	48	95	98***
	Treasury shares	60	100	67***
	<i>Average change in comparability panel A</i>			38
	Panel B: Local GAAP regulates blandly or refers to IFRS, IFRS is more precise			
	SCE - Position in the financial statement	43	84	95***
	SCE - Minority information	54	91	69**
SCF - Position in the Financial Statement	57	100	75***	
SCF (taxes)	7	75	971***	
SCF (interest exp.)	8	58	625***	
Segment reporting	46	100	117***	
<i>Average change in comparability panel B</i>			326	
Average divergence (Panel A, Panel B)			182	
Absence	Panel C: Local GAAP does not regulate, IFRS does			
	Impairment of fixed assets	24	49	104***
	Post-employment benefits (provision recognition)	81	100	23*
	Actuarial gains/losses on defined benefit plans	18	43	139***
	EPS	76	100	32*
	Determination of the defined benefit obligation	47	100	113***
	<i>Average change in comparability panel C</i>			82
Average absence (Panel C)			82	

**Table 9: IFRS Effect on International Comparability
(Large Firms – with Non-Disclosure as Separate Accounting Method)**

Similarity	Panel D: IFRS preserves the same options (type and number) in Local GAAP			
	Investments in associates	100	100	0
	SCF (classification)	94	99	5
	Cost classification in IS	54	50	(7)
	Minority interest in group equity	91	96	5
	Financial Leasing	100	100	0
	<i>Average change in comparability panel D</i>			1
	Panel E: Local GAAP regulates, IFRS does not			
	List of subsidiaries consolidated	47	54	15
	Details for each group entity	55	58	5
	<i>Average change in comparability panel E</i>			10
	<i>Average similarity (Panel D, Panel E)</i>			5
<i>Average change in international comparability</i>			91	

Table 9 shows the *T* index of international comparability in 2002 and in 2008 for all of my sample accounting items, clustered according to the five categories discussed in section 2.3. The last row reports the change in international comparability obtained by averaging the average changes in international comparability across the five panels (A-E). For each accounting item non-disclosure is considered as a separate accounting method (see Section 1.4). *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

**Table 10: IFRS Effect on International Comparability
(Small Firms - with Non-Disclosure as Separate Accounting Method)**

	Local GAAP 2002 (%)	IFRS 2008 (%)	Change %	
Divergence	Panel A: IFRS are more stringent than local GAAP			
	PPE	93	100	8
	Dev.costs	50	68	36**
	PPE Depreciation	81	100	23*
	Inventory costing flow	34	39	15
	Goodwill on acquis.	78	100	28*
	Goodwill treatment	31	100	223***
	Res. costs	31	85	174***
	Treasury shares	36	100	178***
	<i>Average change in comparability panel A</i>			86
	Panel B: Local GAAP regulate blandly or refer to IFRS, IFRS regulate precisely			
Statement of change in Equity (SOCE) - Position in the financial statement	66	57	(14)	
Statement of change in Equity (SOCE) - Minority information	45	58	29*	
Statement of cash flow (position in the financial statement)	32	100	213***	
Statement of cash flow (taxes on income flow)	1	45	4,400***	
Statement of cash flow (interest on debt flow)	1	28	2,700***	
<i>Average change in comparability panel B</i>			1,466	
Average Divergence (Panel A, Panel B)			776	
Absence	Panel C: Local GAAP do not regulate, IFRS do			
	Impairment test of fixed assets	2	44	2,100***
	Earnings per shares	36	100	178***
Average absence (Panel C)			1,139	

**Table 10: IFRS Effect on International Comparability
(Small Firms - with Non-Disclosure as Separate Accounting Method)**

Similarity	Panel D: IFRS preserve the same options (type and number) in Local GAAP			
	Statement of cash flow (method)	96	100	4
	Cost classification in the income statement	58	51	(12)
	Minority interest recognized separately in group equity	78	84	8
	Financial leasing	70	100	43**
	<i>Average change in comparability panel D</i>			11
	Panel E: Local GAAP regulate, IFRS do not			
	List of subsidiaries consolidated	76	81	7
	Details for each group entity	64	67	5
	<i>Average change in comparability panel E</i>			6
Average similarity (Panel D, Panel E)			8	
Average change in international comparability (Small Firms)				541

Table 10 shows the *T* index of international comparability in 2002 and in 2008 for all of my sample accounting items, clustered according to the five categories discussed in section 2.3. The last row reports the change in international comparability obtained by averaging the average changes in international comparability across the five panels (A-E). For each accounting item non-disclosure is considered as a separate accounting method. For the small firm analysis I focus on 21 accounting items, rather than 27. I remove six accounting items because, in almost all cases, they were not pertinent to the firms' business model. The six items are: investment in associates, investment in joint ventures, segment reporting, Recognition of actuarial gains/losses on defined benefit plans, Recognition of provisions for post-employment benefits (defined benefit plans), Disclosure of defined benefit plan assumptions. *, ** and *** denote statistical significance at 0.10, 0.05, 0.01 level, respectively (two-tailed test).

Table 9 (Table 10) reports the results of my test of H2 (i.e., the adoption of IFRS increased international accounting comparability). The last row of the table shows the average change in *de facto* international comparability for large (small) firms from 2002 to 2008 across the 27 (21) accounting areas examined. Similar to the results found for the national comparability analysis, and consistent with H2, I observe that international

comparability increases after IFRS adoption. I also find that my results, when I consider non-disclosure as a distinct and non-comparable method, are sharper: +91 percent for large firms and +541 percent for small firms. Taken together, these findings suggest that firms' financial statements in the three countries examined become internationally more comparable also as a result of the increase in financial reporting disclosure.

My third and final test examines the effect of IFRS on specific areas of financial reporting (H3). Table 9 and Table 10 suggest that the main findings observed in Table 5 and Table 6 hold after considering non-disclosure. On the whole, these results are consistent with two observations. First, larger increases in international comparability occur when local GAAP was further from IFRS both in terms of divergence (+182 percent and +776 percent for large and small firms, respectively) and of absence (+82 percent and +1,139 percent for large and small firms, respectively). In contrast, smaller increases in international comparability occur when local GAAP and IFRS were similar (+5 percent and +8 percent for large and small firms respectively) prior to 2005, providing evidence that IFRS did not always increase comparability. Second, my results are sensitive to using non-disclosure as distinct, non-comparable method, especially when I consider small firms and the absence category (+1,139 percent), suggesting that IFRS adoption led to an extreme increase of information in areas of financial reporting previously not regulated under local GAAP.

1.5.3 Additional Tests

My main tests weight countries according to the actual population of firms in the country. My results are robust to an alternative method to estimate the components, b_i , in the matrix β_{ij} : I equally-weight firms in each country (i.e., $b_i = n_i/n$, where n_i is the number of companies from country i and n is the total number of firms in the sample). This method implies that each country receives weight proportional to the number of firms sampled for that country. Since the number of firms sampled reflects the actual population of Euronext firms (Table 2), I expect that results do not change. For brevity, I summarize but do not tabulate these results.

I find that national and international comparability increase following IFRS adoption. Specifically, national comparability of large firms increases more in countries where local GAAP was further from IFRS before 2005: by 22 percent and 35 percent, in France and Belgium, respectively. In the Netherlands, where local GAAP was close to IFRS prior to 2005, national comparability increases by (only) 12 percent. Results for small firms are similar in all respect to those reported (i.e., +24 percent and +26 percent in France and Belgium, respectively, and +13 percent in the Netherlands). My reported inferences about international comparability remain unchanged (+ 33 percent for large firms and +42percent for small firms).

Finally, I reestimate (1) considering the effect of non-disclosure (as separable and

non-comparable accounting method). Results of these tests are in all respect similar to those reported in Section 1.5.2.

1.6 Conclusions

I investigate the extent to which the mandatory adoption of IFRS in the EU enhanced the level of cross-sectional accounting comparability at the national and international level. I define accounting comparability as the probability that two randomly selected companies from different countries or from the same country have comparable accounts. I use a sample of firms from three EU jurisdictions that are listed on Euronext in both 2002 and 2008; these years span the mandatory switch to IFRS in 2005. This setting allows me to hold institutional and economic factors relatively constant while varying accounting standards.

I test whether mandating IFRS increased the level of accounting comparability among financial statements. Using content analysis and Taplin's (2004) index of comparability, I assess the level of comparability of 296 firms, before and after IFRS adoption. Results suggest that the increase in national comparability is more pronounced in countries that were relatively far from IFRS prior to 2005 (i.e., France and Belgium) than in countries (e.g., the Netherlands) where local GAAP was closer to IFRS.

I also test whether IFRS increases comparability at the international level. I find that, overall, IFRS enhanced the level of accounting comparability across firms from

different countries. However, this change is not uniform. Results show that only for those dimensions where local GAAPs are the farthest from IFRS (in terms of divergence and absence), is there a significant increase in international accounting harmonization. In contrast, I find that in areas where (a) IFRS preserves the accounting methods adopted under local GAAP, or (b) despite local GAAP, IFRS does not prescribe a specific disclosure method, firms continue to choose the method used under local GAAP, thus the change in international comparability is not significant. My findings are valid both for large and small firms and are more pronounced when I consider non-disclosure as non-comparable accounting method.

A limitation of my study is that I do not capture either the degree of similarity in firms' underlying economics, or the effect of the accounting standard implementation process. The *T* index is a crude indicator that measures the similarity of information disclosed in the financial statements. Furthermore, I recognize that the level of aggregation of accounting items in the three categories (absence, diverge and similarity), although consistent with the classification in other studies (Ding et al.), is arguably judgmental. Stated differently, it may be the case that the use of different criteria for the analysis of local GAAP, may have resulted in a different value of the distance between local GAAP and IFRS, which, in turn, may have conducted to different predictions. Finally, although the level of governance and enforcement is relatively unchanged

during my sample period, it could be that there are other factors at the firm level (e.g., business model) that drive accounting choices. A further investigation of these factors could enhance our understanding about the forces of accounting convergence around the world.

2. The Effect of IFRS on the Usefulness of Earnings Announcements

2.1 Introduction

A growing body of literature investigates the effect of International Financial Reporting Standards (IFRS) on the quality of the accounting information (e.g., Daske, Hail, Leuz and Verdi 2008, Barth, Landsman and Lang 2008). This literature primarily examines whether the switch from local GAAP to IFRS is associated with a change in the characteristics of accounting earnings (e.g., accrual quality, persistence, predictability) and in the implications of the change in accounting earnings on market outcomes (e.g., cost of capital, information asymmetry, liquidity). A common feature that emerges from this literature is that there is no conclusive assessment of the first order effects on capital market and accounting outcomes associated with IFRS (e.g., Soderstrom and Sun 2007; Pope and McLeay 2011). The heterogeneity of the results derives from the difficulty of a non-controlled experiment, where many factors other than the financial reporting regime are changing (Schipper 2005).

My paper contributes to this literature examining the relation between market responses and annual earnings announcements using a sample of firms listed on Euronext.¹ I choose Euronext for two reasons. Euronext provides a common regulatory,

¹ Euronext is a pan-European stock exchange. Euronext was formed on 22 September 2000 following a merger of the Amsterdam Stock Exchange, Brussels Stock Exchange, and Paris Bourse, in order to take advantage of the harmonization of the European Union financial

technological, and institutional platform for the four countries whose shares are listed on it: France, Belgium, the Netherlands, and Portugal.² Given my focus on the effect of accounting information on market reactions, this common platform is important because it ensures that the market metrics (prices or returns) used as inputs to the assessment of earnings usefulness, are homogeneous in their returns generating process. This design reduces the likelihood that earnings announcement usefulness effects are driven by unspecified cross-country capital market differences.

Second, the four Euronext countries, as members of the European Union (EU), are subject to the same institutional changes related to financial reporting (Capital Market Directives).³ This harmonized setting allows me to hold constant many institutional factors and to control for whether and how firms have changed their earnings announcement disclosure in response to the mandatory change in the financial reporting regime.

An empirical investigation on the effect of IFRS on the usefulness of earnings announcements is important for three reasons. First, on 19 July 2002, the European

markets.

² As of July 31, 2010, 1,370 of the 1,584 Euronext securities (i.e., 88 percent) are French, Belgian, Dutch and Portuguese.

³ There are four EU Directives that have been approved in concomitance with IFRS Regulation 1606/2002: (1) 2003/6/EC Directive on insider dealing and market manipulation; (2) 2004/109/EC Directive on the harmonization of transparency requirements; (3) 2007/14/EC Directive implementing Directive 2004/109/EC (3); (4) 2003/71/EC Directive on the prospectus.

Commission promulgated Regulation 1606/2002 that mandates the official adoption of IFRS for all EU listed companies starting from January 1, 2005.⁴ The proponents of this regulation asserted that IFRS would make financial statements more useful to users of financial statements. While prior research finds some evidence that mandatory IFRS adoption affects accounting qualities and capital market outcomes (e.g., Barth, Landsman and Lang 2008; Li 2010), little empirical evidence supports this assertion for the effect of IFRS adoption on the usefulness of accounting earnings.

Second, a major issue in international accounting research that investigates the effect of accounting standard changes on capital market outcomes is that it is difficult to rule out changes in other determinants of these market outcomes to convincingly attribute the observed effect (e.g., the change in the usefulness of earnings) to the introduction of IFRS. Leuz and Wysocki (2009) point out that many institutional changes occurred in securities markets around the period of IFRS introduction in the EU, and some could have affected market outcomes. For example, an important capital market change in security regulation occurred in the EU around IFRS adoption is the Transparency Directive (hereafter, TD). Christensen, Hail and Leuz (2010) find that, on average, market liquidity increases and firms' cost of capital decreases as EU member states tighten their transparency regulation.

⁴ Art. 5 of Regulation EC 1606/2002 allows exemptions or deferrals from IFRS for firms with only debt securities traded, firms that are using US GAAP at December 31, 2005, and firms traded on other than EU stock exchanges.

Third, prior research does not speak to whether the change in the usefulness of earnings announcements following IFRS adoption is attributable to a change in the measures known to affect the relation between unexpected market returns and unexpected earnings. While Landsman, Maydew and Thornock (2011) (henceforth, LMT) provide evidence consistent with the usefulness of earnings announcements being larger in countries that adopt IFRS than in countries that continue using local GAAP, they do not speak to whether the change in market price reactions is attributable to a change in the unexpected earnings distribution (news content), or in investors' behavior in response to unexpected earnings, or in the amount and the form of concurrent information released in the earnings announcements as a consequence of IFRS (Francis, Schipper and Vincent 2002) (henceforth, FSV).

To test whether IFRS affects the usefulness of earnings announcements, I use a sample of 1,430 earnings announcement observations representing 140 firms listed on Euronext with data available during 2000 – 2010. The pre-adoption period is 2000 (the year when Euronext was founded) to 2004, while the post-adoption period is 2005 to 2010. My study proceeds in three stages. In the first stage, I document the increased usefulness of earnings announcements following IFRS adoption. Consistent with prior research (e.g., DeFond, Hung, Trezevant 2007, FSV, LMT), I measure the usefulness of earnings announcements using abnormal trading volume (AVOL) during the three days surrounding the earnings announcement date. I also use a measure of earnings

usefulness as reported in FSV: the beta-adjusted absolute abnormal returns using the day with the largest abnormal return in the three days surrounding the earnings announcement date, scaled by the standard deviation of absolute abnormal returns during the estimation period (MaxAAR(std)).

My analysis shows that Euronext firms experience a significant increase in market reactions to earnings announcements after IFRS adoption: AVOL increases from 0.22 in the pre-IFRS adoption period to 0.42 in the post-IFRS adoption period (t-statistic 4.53). MaxAAR(std) increases from 7.75 in pre-IFRS adoption period to 10.39 in the post-IFRS adoption period (t-statistic 7.86)

In the second stage, following a similar research design as in FSV, I examine three explanations for this trend. These explanations are based on prior studies' findings that the magnitude (absolute value) of market reaction to earnings announcements is a function of (1) the magnitude of unexpected earnings and (2) the earnings response coefficient (ERC). Results examining the first explanation (the magnitude of unexpected earnings) suggest that the trend in the absolute magnitude of unexpected earnings is negative and significant (the average yearly decrease is 0.1 percent; t-statistic - 2.30). Results examining the second explanation (the ERC) show a non-positive change in the average investor's responses to earnings announcements before and after IFRS adoption.

In summary, I find that the increase in the usefulness of earnings announcements is not attributable to an increase in the magnitude of unexpected earnings nor to an

increase in the magnitude of the ERC.

The third explanation examines whether information released concurrently with the summary earnings number in the earnings announcement press releases contributes to explaining the increased market response to earnings announcements following IFRS adoption. I conduct a content analysis on a set of 1,062 hand-collected press releases for the 140 sample firms with at least two observations during the pre- and post-adoption period. I find an expansion in the amount of concurrent information about the balance sheet, the income statement, the statement of cash flows and the statement of changes in equity. I also find that this trend is more pronounced in Euronext countries where local GAAP was further from IFRS (i.e., Belgium, France and Portugal) than in the Euronext country where local GAAP was closer (i.e., the Netherlands). My results suggest that the inclusion of detailed statement of cash flows information in firms' earnings announcement press releases is associated with more intense return and trading volume effects following IFRS adoption. After controlling for an over-time increasing trend in the association between the market response and concurrent disclosure of detailed statement of cash flow (SCF) information, the coefficient on SCF (when interacted with IFRS) is positive and significant for both the measures of market response (t-statistics are 1.98 and 1.75 for MaxAR(std) and AVOL, respectively).

The third stage of my paper is based on the findings in prior literature on the distance between local GAAP and IFRS (Bae, Tan and Welker 2008; Tan, Wang and

Welker 2011; Ding, Jeanjean and Stolowy 2007; Siciliano 2011). In particular, I build on the evidence found in the second analysis, by exploring the interaction between concurrently-released detailed information and accounting distance. Because the effect of detailed IFRS-related information is expected to be more pronounced in countries where local GAAP was further from IFRS, I predict that the market effects of concurrent detailed information in earnings announcement press releases is more pronounced after IFRS adoption for Euronext countries that exhibit the largest distance between their local GAAP and IFRS. I find that in countries where local GAAP was further from IFRS the market response to concurrent detailed information in earnings announcement press releases is generally positive. The coefficient on the SCF (when interacted with IFRS and a proxy for accounting distance, DIS) is positive and significant for both measures of market response.

This study contributes to the international accounting literature in two ways. First, it provides insights into the economic effect of IFRS adoption on the relation between market responses and unexpected earnings. Despite a growing body of literature on the economic consequences of IFRS (e.g., Daske et al. 2008, DeFond et al. 2011, Li 2010), there is limited evidence (LMT is an exception) of the effect of IFRS on the price-earnings relation using a short-window research design.

Second, this study investigates the institutional setting around IFRS adoption and the voluntary disclosure conveyed by EU firms in earnings announcement press

releases, by using hand-collected international data over a period that spans IFRS adoption. I provide results consistent with an increase in concurrent information in firms' press releases – specifically, the inclusion of detailed statement of cash flows and statement of changes in equity. I conclude that managers' voluntary decisions to expand concurrent statement of cash flows information in earnings announcement press releases is the main factor driving the increased market response following IFRS adoption and this effect is different across countries that exhibited different distances between local GAAP and IFRS before the IFRS mandate.

The remainder of the paper is organized as follows. Section 2.2 reviews prior research and develops the hypotheses. Section 2.3 describes the sample, the data and illustrates the research design. Section 2.4 summarizes the results, while Section 2.5 concludes.

2.2 Prior Research and Hypothesis Development

In this section I begin by summarizing the challenges faced by researchers in conducting IFRS studies. These challenges are important for understanding results concerning the capital market effects of IFRS adoption in extant research and to support my research design choices. I next discuss theories as to why IFRS is expected to affect the usefulness of earnings announcements. Finally, I describe the research design that I use to test the hypotheses.

2.2.1 Prior Research

A large body of research in international accounting examines the implications of IFRS adoption on accounting and capital market outcomes. The literature has primarily focused on the effects of IFRS on firms' earnings quality, earnings management, earnings comparability, cost of capital, investor and analyst behavior (e.g., Jeanjean and Stolowi 2008; Daske et al. 2008; Li 2010; DeFranco, Kotari and Verdi 2011). This research has produced mixed results. There are at least five potential reasons for this mixed evidence: (1) differences across studies in the definition of samples, in the periods investigated and in the proxies used for the same underlying but unobservable concept (e.g., earnings quality, earnings management, earnings comparability, cost of capital); (2) identification issues attributable to the assumptions researchers make (or do not make) about simultaneous changes in compliance, incentives, regulatory environments before, around and after IFRS adoption; (3) the difference between voluntary versus mandatory IFRS adoption⁵; (4) differences in cross-jurisdictional and time-series data availability; (5) use of databases or surveys containing country environmental data that pre-date the sample period investigated (e.g., the LaPorta et al. (1998) measure of country

⁵ In the first case (voluntary adoption), if the characteristics on which voluntarily adopting firms differ are correlated with market outcomes, incorrect inferences about the effects of IFRS might be reached because of a potential selection bias. In the second case (mandatory adoption), since all firms must adopt IFRS, it is not possible to know the capital market outcomes, had IFRS not been implemented. In this scenario, as Pope and McLeay (2011) point out, a difference-in-differences design does not eliminate entirely the uncertainty associated with attributing an observed effect in the market outcome to IFRS, especially when the countries included in the benchmark sample present a different and non-constant macro-economic infrastructure.

enforcement is based on 1980s data; the CIFAR (1995) measure of disclosure quality is based on 1990's data).

Studies investigating the effects of IFRS adoption on capital market outcomes can be broadly classified in two categories: (1) research that examines properties of accounting numbers that are associated with market participants' resource allocation decisions; and (2) research that examines proxies for decision usefulness based on observable decision outcomes. Research in category (1) has focused on various properties of earnings such as earnings persistence, earnings predictability, earnings timeliness, and accrual quality. Ahmed, Neel and Wang (2009) suggest that IFRS adoption results in smoother earnings, larger absolute accruals and less timeliness of loss recognition, with more pronounced effects for firms in countries with a strong rule of law. Other studies, in contrast, find no effects on earnings properties around IFRS adoption. For example, Jeanjean and Stolowy (2008) suggest that earnings management in France, the UK and Australia did not change after IFRS adoption. As another example, Atwood, Drake, Myers and Myers (2010) document that earnings reported under IFRS are no more or less persistent and are no more or less associated with future cash flows than are earnings reported under local GAAP.

Research in category (2) has examined capital market effects associated with IFRS adoption, such as changes in market liquidity or estimated cost of capital. Researchers have also studied the effect of IFRS earnings numbers on the properties of other users'

decision outcomes, such as analyst forecasts and recommendations and institutional investment. Related to the effect of IFRS on market outcomes, Li (2010) argues that improvements in comparability contribute to her finding lower cost of capital for EU firms after IFRS adoption, with the effects depending on the strengths of the countries legal enforcement. Daske et al. (2008) find that firms that already switched to IFRS prior to the 2005 mandate experience significant liquidity, valuation, and cost of capital effects around IFRS adoption (i.e., 2005-2006). However, and in contrast to Li (2010), they do not conclude that these effects are attributable to an increase in comparability deriving from the increased number of firms reporting under IFRS following the mandate.

Turning to the effects of IFRS on users' decision outcomes, Horton, Serafeim and Serafeim (2008), Wang, Young, and Zhuan (2008), Bae et al. (2008) and Tan et al. (2011) suggest that both voluntary and mandatory IFRS adoption improves forecast accuracy, decreases forecast dispersion and volatility in forecast revisions. They conclude that this effect is associated with IFRS improving the information environment through more high quality and more comparable information. Cuijpers and Buijink (2005), in contrast, show higher dispersion among EU firms using IFRS.

Among the studies included in category (2), research on the effect of IFRS adoption on the usefulness of accounting information is sparse. LMT provide empirical evidence that the information content of earnings announcements increases in 16 countries that mandatorily adopted IFRS in 2005 relative to 11 countries that maintained

local GAAP during 2002 - 2007. Moreover, they suggest three mechanisms through which IFRS adoption increased the information content of earnings announcements: (1) a decrease in reporting lag; (2) an increase in analyst following; (3) an increase in foreign direct investments.

I also investigate the effect of IFRS adoption on the usefulness of earnings announcements. There are, however, two aspects that distinguish my study from LMT. First, while LMT speak to IFRS as the main factor affecting the usefulness of earnings announcements, I investigate whether the mechanisms that affect the relation between market reactions and earnings announcements have changed during the post-IFRS adoption period. As discussed in Section 2.2, while LMT hypothesize that the usefulness of IFRS earnings announcements is significantly different from the usefulness of local GAAP earnings announcements, I investigate three potential explanations for this trend: (1) the change in unexpected earnings (news content); (2) the change in the average investor response to unexpected earnings (the ERC); and (3) the change in the amount of concurrent detailed information released in the earnings announcement press releases.

Second, while LMT research design is based on a sample of IFRS and non-IFRS countries that experience cross-sectional and time-series variation in institutional and regulatory factors (Pope and McLeay 2011), I focus on a single stock market (Euronext) where all firms adopt IFRS, but where countries exhibit differences in accounting distance between local GAAP and IFRS before the IFRS mandate. This research setting

allows me to assess the effect of IFRS adoption on earnings usefulness by exploiting accounting distance as a mediating factor.

In summary, while LMT investigate the difference in the information content of IFRS earnings announcements versus non-IFRS earnings announcements (numbers), I examine whether and how IFRS affects the relation between unexpected earnings and unexpected returns, by exploiting a setting where jurisdictions differ in terms of accounting distance from local GAAP to IFRS prior to the IFRS mandate. In the next session, I use a framework similar to FSV to elaborate on my hypotheses about the effect of IFRS adoption on (1) the magnitude of unexpected earnings; (2) the market responses to unexpected earnings; (3) the over-time change in the amount of concurrent detailed information disclosed in earnings announcement press releases.

2.2.2 Hypothesis Development

FSV examine three competing explanations for the over-time increase in usefulness of earnings announcements in the United States (US): (1) changes in the magnitude of unexpected earnings; (2) changes in the earnings response coefficient (the ERC); (3) changes in the amount and the form of concurrent information reported in earnings announcement press releases. The authors find that the first two explanations (the change in the magnitude of unexpected earnings and the ERC) do not support their finding an increase in the information content of earnings announcement press releases: the magnitude of earnings surprises decrease and the market response to earnings

announcement press releases also decreases over time. They find that expanded concurrent disclosure, especially the inclusion of detailed income statements in tabular form, is a potential explanation for the over-time increased usefulness of earnings announcement. Because LMT find an over-time increase in the usefulness of annual earnings announcements after IFRS adoption, I focus my analysis on the three competing explanations proposed by FSV to develop my hypotheses for the effect of a change in market response to earnings announcements by a sample of Euronext firms pre- and post-IFRS adoption.

(1) Changes in the absolute amount of unexpected earnings

The first potential explanation for a change in earnings usefulness following IFRS adoption is based on early work (e.g., Lev 1989) finding that unexpected earnings is one of the measures of price sensitivity to earnings announcements and that the market reaction to earnings announcements increases with the magnitude of the earnings surprise (e.g., Beaver, Clarke and Wright 1979).

Prior empirical evidence on the effect of IFRS on earnings forecasts shows that to the extent that widespread IFRS adoption reduces accounting standard induced differences in financial reporting across countries, it may facilitate cross-border comparisons of financial data and make it easier for analysts to predict earnings. This effect would decrease the magnitude of unexpected earnings. For instance, Horton et al. (2008) and Byard, Li and Yu (2011) find that the analysts forecast error, equal to the

absolute earnings surprise deflated by the closing price of the previous year, decreases after mandatory IFRS adoption in the EU.

Based on these prior findings and on prior theory (e.g., Beaver et al. 1979, Lev 1989), I predict the following hypothesis, stated in the null form:

H1: The increased market response to earnings announcement press releases following IFRS adoption is associated with an over-time increase in the magnitude of unexpected earnings (UE).

(2) Changes in the market response to earnings announcements

As a second potential explanation for an increase in the information content of earnings announcements following IFRS adoption, I focus on the market reaction to unexpected earnings as measured by the earnings response coefficient (the ERC). Prior literature documents that the intensity of the ERC is associated with earnings attributes, such as persistence and risk (Easton and Zmijewski, 1989), and/or with a change in other economic factors that are unrelated to the financial reporting process, such as growth and interest rates (e.g., Collins and Kothari 1989). This literature also shows that the relation between market price responses and the magnitude of unexpected earnings is not linear (Freeman and Tse 1992; Basu 1997).

Prior empirical research, however, has not investigated whether the average investors' response to a unit of earnings surprise changed after IFRS adoption, nor if such a change (if it existed) was attributable to a change in earnings qualities, such as persistence and risk. Thus, whether an increased market reaction to earnings

announcements during the post-IFRS adoption period is associated with an intensified investors' average reaction to earnings news is an empirical question:

H2: The change in usefulness of earnings announcements following IFRS adoption is associated with the change in the earnings response coefficient (ERC).

(3) Change in concurrent disclosure in earnings announcement press releases following IFRS adoption

The third potential explanation for a change in earnings usefulness following IFRS adoption is based on Hoskins et al.'s (1986) and FSV findings that in the US capital market earnings announcements press releases convey incremental voluntary information (in addition to bottom-line earnings), thus explaining a significant portion of market reactions to earnings announcements. If IFRS caused an expansion of the disclosure of firms' earnings announcement press releases, I expect that the concurrent disclosure investigated in FSV is also a factor explaining the increased usefulness of earnings announcements following IFRS adoption. I describe next the mechanism through which IFRS adoption can affect the content of earnings announcement press releases.

The effect of IFRS adoption on the information content of earnings announcements

There are two arguments that explain a potential increase in concurrent detailed information disclosed in Euronext firms' earnings announcement press releases following IFRS adoption: (1) the distance between IFRS and local GAAP and (2) the presence of a regulatory mechanism that ensures (and/or encourages) that additional (voluntary) information stemming from IFRS adoption is included in earnings

announcement press releases. As for the first argument, because IFRS is more detailed relative to local GAAP in the four Euronext countries I examine (Ding et al. 2007, Bae et al. 2008, 2011, Siciliano 2011), I expect that when IFRS replaces local GAAP that is further from IFRS, it is more likely to observe an increase in IFRS-related disclosure. However, because the information disclosed in earnings announcement press releases is not regulated by accounting standards, the existence of distance between local GAAP and IFRS does not represent a necessary condition to observe an increase in IFRS-related disclosure in press releases.

As for the second argument, in October 2005 the Committee on European Securities Regulators (CESR) issued a recommendation containing several proposals to encourage European listed firms that voluntarily disclose non-GAAP financial measures (in their earnings announcement press releases) “to do so in a way that is appropriate and useful for investor’s decision making”.^{6,7} This CESR recommendation established the principle of “prominence of presentation of GAAP earnings versus alternative performance earnings” (par. 29), considering as GAAP earnings those that are prepared in accordance with IFRS. The CESR recommendation recognized that IFRS imposes the presentation of additional (to what was required by prior local GAAP) specific data, such as the statement of cash flows, that is important to enable users of financial

⁶ CESR, Recommendation on Alternative Performance Measures, October 2005.

⁷ Similarly, the usefulness principle was recognized in the US in an SEC cautionary advice regarding the use of non-GAAP financial measures (December 4, 2001).

statements to understand the entity's financial position and performance (par. 14).⁸

Based on these arguments, I expect an increase in the amount of IFRS-related information in Euronext earnings announcement press releases and, building on FSV, I predict that this trend is associated with the intensified market reactions documented in LMT. Thus, my H3 is as follow:

H3: Following IFRS adoption, increased disclosure in concurrent information in earnings announcement press releases explains larger abnormal market reactions to earnings announcements.

My last hypothesis (H4) is based on prior literature that seeks to establish whether changes in accounting or market outcomes are more likely to occur where the differences between local GAAP and IFRS are largest. Intuitively, if the local GAAP that IFRS replaces is close to IFRS, one may not expect major IFRS-related effects on outcome variables of interest. One way of designing the research to allow for GAAP differences is to allow estimated IFRS effects to vary with measures of GAAP difference or distance. Building on prior studies that measure the distance between local GAAP and IFRS (e.g, Bae et al. 2008, Ding et al. 2007; Siciliano 2011), I predict that increased informativeness of earnings announcements following IFRS adoption is more pronounced in Euronext countries where local GAAP was further from IFRS than in Euronext countries where

⁸ Even if the 2005 CESR recommendation does not explicitly recommend the presentation of statement of cash flows, it suggests to consider as defined measure all information included in audited IFRS financial statements in view of providing a true and fair view, either on the face of the balance sheet, income statement, statement of changes in equity, cash flow statements or in the notes.

local GAAP was closer.

H4: Following IFRS adoption intensified market reaction to increased concurrent information in earnings announcement press releases is larger in Euronext countries where local GAAP was further from IFRS (Belgium, France and Portugal) than in Euronext countries where local GAAP was closer to IFRS (Netherlands).

2.3 Sample, Data and Research Design

2.3.1 Sample Selection and Data

The sample includes firms listed on the Euronext Stock Exchange. Because Euronext was started in 2000, I collect accounting and market data over the 11-year period 2000 – 2010 using Thomson Worldscope and Datastream, respectively. The sampling criteria are as follows. First, as my analysis focuses on Euronext, I remove firms that are not included in the Euronext database during the sample period by matching Worldscope and the Euronext Fact Book file.⁹ Second, to be consistent with LMT, I remove small firms, using the classification criteria of Euronext. Specifically, I eliminate firms with a month-end market capitalization smaller than 150 million euro for 90 percent or more of month-ends during 2000 - 2010. Third, I exclude financial firms, such as banks and insurance companies (with two-digit industry code 43 in Worldscope), because these firms have unique operating characteristics and are governed by specific regulations. Fourth, I exclude Euronext firms that voluntarily

⁹ I have obtained the complete Euronext Fact Book file from the Investors' Center at Euronext Paris. This database provides the monthly list of all Euronext firms from September 2000.

adopt IFRS (or US GAAP) prior to 2005.¹⁰ This choice allows me to avoid potential confounding effects of incentives for firms to adopt IFRS voluntarily (Barth et al. 2008).

I retain firms with 11 consecutive years of accounting data (i.e., earnings, total assets and accounting standards followed), five years prior to the IFRS adoption (2000 - 2004) and six years after IFRS adoption (2005 - 2010). My Worldscope sample consists of 146 Euronext firms (1,606 firm/years) from France, Belgium, Portugal and the Netherlands with earnings and total assets available during 2000 - 2010. I match firms' accounting information with market returns from Thomson Datastream. As in LMT, I exclude firms that do not have sufficient trading activity during the event window. Specifically, I exclude firms with zero-returns for larger than 80 percent of the days in the total estimation window. Finally, I collect earnings announcement information from the I/B/E/S (International Detail File) database and match them with the Worldscope/Datastream combined sample. After winsorizing continuous variables at the 1st and 99th percentile, my final sample includes 1,430 earnings announcements for 140 unique Euronext firms for fiscal years 2000 - 2010. A summary of the sample selection criteria and the distribution of observations by country and year are reported in Table 11 and Table 12, respectively.

¹⁰ The field to identify the type of accounting standards adopted in Worldscope is "Accounting Standards Followed". I code firm-year observations as local if one of the following cases applies: 01 (local standards), 08 (local standards with EU and IASC guidelines), 10 (local standards with some EU guidelines), 17 (local standards with some OECD guidelines), 18 (local standards with some IASC guidelines), 19 (local standards with some IASC and OECD guidelines). I code firm-year observations as IFRS in the following case: 23 (IFRS).

Table 11: Sample description

Table 11 shows the criteria I use to arrive to the final sample.

	# of Obs.	# of Firms
Firms with end of the month market value of equity (90% of times) over 150 million Euros from Jan 1999 to June 2011 (covered in Datastream)	2,272	231
Non-financial firms	1,758	178
Mandatory IFRS adopters	1,648	154
Firms with available data in Worldscope during 2000-2010	1,606	146
Total number of firms/observations (with available data in Datastream, Worldscope and I/B/E/S)	1,430	140

Table 12: Sample composition of earnings announcements by country and by year

Year	Country				Total
	BEL	FRA	NDL	PRT	
2000	7	92	27	9	135
2001	7	90	26	9	132
2002	7	91	28	8	134
2003	6	85	27	8	126
2004	7	95	28	9	139
2005	7	89	27	7	130
2006	7	90	27	9	133
2007	7	89	27	8	131
2008	7	90	26	8	131
2009	7	89	27	8	131
2010	6	67	26	9	108
Total	75	967	296	92	1,430

Table 12 shows the number of observations in the sample for each Euronext sample country and year. The complete sample is composed of 1,430 earnings announcements from I/B/E/S from 2000 to 2010 with corresponding returns and volume data from Thomson Datastream.

2.3.2 Research Design

Following prior literature (e.g., Ball and Brown 1968; Beaver 1968, Lev 1989), I define earnings usefulness as the ability of accounting information to generate a change in the investors' probability distribution (beliefs) of future firm value. The change in investors' beliefs leads to a decision, which is reflected in a change in stock price or stock volume. If the investors' action can be attributed to specific accounting information, such information is considered useful. Following this logic, I consider larger revisions in stock price and volume following an earnings announcement as indicative of an increase in

earnings usefulness.

I assess the usefulness of earnings announcements using two measures. The first measure is the beta-adjusted abnormal return selecting the day with the largest (in absolute value) abnormal return in the three days [-1, 0, 1] surrounding the I/B/E/S earnings announcement date, deflated by the standard deviation of the firm's (absolute) abnormal returns on all trading days of year t . The second measure is the abnormal trading volume at earnings announcement dates. I calculate this measure as the average trading volume during the firm's earnings announcement window [-1, 0, 1], scaled by the average trading volume during the estimation period [-60, -10] and [+10, +60].

Specifically, for the first measure of earnings usefulness, I use the following equation to calculate abnormal returns:

$$AR_{jt} = R_{jt} - (\alpha_j + \beta_j R_{mt}) \quad (1)$$

where R_{jt} is firm j 's raw return on the earnings announcement day of year t , R_{mt} is the country value-weighted market return on that day, and α_i and β_i are firm's j market model parameters estimated during the estimation period [-60, -10 and +10, +60]. I select firm j 's residual abnormal returns on the earnings announcement date of year t (AR_{jt}), by choosing the day with the largest abnormal (in absolute value) return. To control for changes in the underlying volatility of the stock, I deflate this measure by the standard deviation of firm j 's absolute abnormal returns on all trading days in year t .

For the second measure of earnings usefulness (abnormal stock volume) I

compute the following expression:

$$AVOL_{it} = \frac{\overline{Vol}_{[-1,0,+1]}}{\overline{Vol}_{it[-60,-10];[+10,+60]}} \quad (2)$$

where Vol is the average number of shares (scaled by the number of shares outstanding of firm j) that are traded during the earnings announcement date $[-1, 0, +1]$ and Vol_{it} is the average number of shares daily traded (scaled by the number of shares outstanding of firm i) during the estimation period ($t - 60$ to $t - 10$ and $t + 10$ to $t + 60$) surrounding the earnings announcement date. Since $AVOL$ is highly skewed, I take the natural logarithm:

$$AVOL_{it} = \ln\left(\frac{\overline{Vol}_{[-1,0,+1]}}{\overline{Vol}_{it[-60,-10];[+10,+60]}}\right) \quad (3)$$

2.4 Empirical Results

2.4.1 Descriptive Statistics

Descriptive data on the two measures of earnings usefulness are reported in Table 13.

Table 13: Descriptive Statistics

Panel A (Pre-IFRS)								
Variables	N	Mean	Sdev	p1	p25	Median	p75	p99
MaxAAR (std)	672	7.756	4.587	1.879	5.186	7.391	10.548	23.323
AVOL	672	0.229	0.714	-1.552	-0.161	0.243	0.682	1.875
UE	672	0.021	0.043	0.000	0.002	0.007	0.020	0.261

Panel B (Pre-IFRS)								
Variables	N	Mean	Sdev	p1	p25	Median	p75	p99
MaxAAR (std)	758	10.392***	5.044	2.261	5.359	9.974***	11.412	27.024
AVOL	758	0.427***	0.512	-1.122	0.110	0.402***	0.690	1.640
UE	758	0.013***	0.028	0.000	0.002	0.004***	0.010	0.162

Table 13 shows the descriptive statistics for the sample. $MaxAAR(std)$ is the largest (absolute) abnormal return in the window around the I/B/E/S earnings announcement day $t = [-1, 0, +1]$, scaled by the standard deviation of (absolute) abnormal returns calculated during the estimation window $([-60, -10]$ and $[+10, +60])$. Abnormal volume is calculated as $AVOL_{it} = \bar{V}_{i,t} / V_j$, where $\bar{V}_{i,t}$ is the mean event-period volume for firm i and V_j is the mean volume calculated during the estimation window $([-60, -10]$ and $[+10, +60])$. Unexpected earnings, $|UE|$, is calculated as the actual annual earnings per shares minus the median analyst estimate of earnings, divided by the price at the beginning of the year. All continuous variables are winsorized at the 1st and 99th percentiles. To assess the statistical significance of the difference in the mean (median) before and after IFRS, I use paired t -tests (Wilcoxon-Mann-Whitney tests). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The results show the following: the mean (median) $MaxAAR(std)$ increases from 7.76 (7.39) before IFRS adoption to 10.39 (9.97) after IFRS adoption. This finding suggests that the largest abnormal return during the 3-day window around the earnings announcement date is larger than the normal idiosyncratic return volatility during the non-announcement period and that this effect is more pronounced during the post-IFRS period. These changes are significant at the 0.001 level. The mean (median) $AVOL$ increases from 0.23 (0.24) before IFRS adoption to 0.43 (0.40) after IFRS adoption. This

finding suggests that the daily trading volume during the 3-day window around the earnings announcement date is larger than the average trading volume during the estimation period and that this effect is larger after IFRS adoption.

I next examine the time trend of market response before and after IFRS adoption. I do so by regressing the two measures of market responses ($MaxAAR(std)_{jt}$ and $AVOL_{jt}$), on a trend variable, $TREND$, that is equal to $t - 2000$, and a dummy variable IFRS which takes the value one for the period 2005 – 2010.

$$MaxAAR(std)_{jt}, AVOL_{jt} = \beta_0 + \beta_1 TREND_t + \beta_2 IFRS + \varepsilon_{jt} \quad (4)$$

A positive and significant coefficient on $TREND_t$ (β_1), which controls for possible time patterns in market responses, indicates the existence of an over-time increase in earnings usefulness.

Table 14: Trend analysis in market responses

VARIABLES		MaxAAR(std)		AVOL
TREND	0.386*** [3.457]	0.046 [0.241]	0.030*** [6.311]	0.015* [1.889]
IFRS		2.495** [2.04]		0.110** [2.124]
CONSTANT	6.929*** [9.122]	8.609*** [10.36]	0.153*** [4.68]	0.183*** [5.884]
Industry fixed effects	YES	YES	YES	YES
Adjusted R-squared	0.000	0.001	0.001	0.020

Table 14 presents the result of the trend analysis from OLS regression of $MaxAAR(std)$ and $AVOL$, on a time trend variable $TREND$ defined as $(t - 2000)$. $IFRS$ is a dummy variable that takes the value one for the period 2005 – 2010. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ is based on a two-tailed t-test where the t-statistics are calculated using firm clustered standard errors. The sample consists of 1,430 firm/year observations and the period is 2000 – 2010.

The results of estimating Equation 4 (in Table 14) show that β_1 is positive and statistically significant (p -value < 1 percent) for the two measures of earnings usefulness (0.38 in the abnormal return regression, and 0.03 in the abnormal trading volume regression). However, β_1 becomes insignificant when I include *IFRS* as explanatory variable, whereas the coefficient on *IFRS* (β_2) is positive and significant (2.49, t-statistic 2.04 for *MaxAAR(std)* and 0.11, t-statistic 2.12 for *AVOL*). Overall, this finding suggests that *IFRS* adoption explains the increase in market return and volume effects during the post-adoption period (2005 – 2010).

In Table 15 I compare market reactions (*MaxAAR(std)* and *AVOL*) from Euronext countries where local GAAP was further from *IFRS* with market reactions from Euronext countries where local GAAP was closer to *IFRS*, pre- and post-*IFRS* adoption. The purpose of this analysis is to examine if market responses are different among countries that exhibit cross sectional variation in the distance between local GAAP and *IFRS* and how this difference changes during the post-*IFRS* adoption period. I use *DIS* as a dummy variable that is equal to one (zero) for firm/observations from Belgium, France and the Portugal (the Netherlands).

Table 15: Difference-in-difference analysis of the two measures of market response (MaxAAR(std) and AVOL) conditional on accounting distance and IFRS adoption period

MaxAAR(std)		DIS = 0	DIS = 1	Diff. (1 – 2)
		(1)	(2)	
Pre-IFRS adoption	(1)	9.12	6.32	31%***
Post-IFRS adoption	(2)	11.02	9.94	10%***
Diff.	(2 – 1)	21%***	57%***	

AVOL		DIS = 0	DIS = 1	Diff. (1 – 2)
		(1)	(2)	
Pre-IFRS adoption	(1)	0.287	0.192	33%***
Post-IFRS adoption	(2)	0.497	0.374	24%***
Diff.	(2 – 1)	71%***	95%***	

Table 15 presents the difference-in-difference analysis for each measure of market response at the earnings announcement date by conditioning Euronext countries on accounting distance (*DIS*) and IFRS adoption period (Pre-Post IFRS adoption). *DIS* is a dummy variable that is equal to one (zero) for firm/observations from Belgium, France and Portugal (the Netherlands). It is a proxy for the distance between local GAAP and IFRS before IFRS adoption. To assess the statistical significance of the differences I use paired *t*-tests. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Consistent with descriptive statistics presented in Table 13, I find that both *MaxAAR(std)* and *AVOL* increase following IFRS adoption (in the Netherlands from 9.12 to 11.02 and from 0.28 to 0.49 for *MaxAAR* and *AVOL*, respectively; in Belgium, France and Portugal from 6.32 to 9.94 and from 0.19 to 0.37 for *MaxAAR(std)* and *AVOL*, respectively). Also worthy of note is the decrease for both measures of market responses in the difference between (1) Netherlands and (2) Belgium, France and Portugal. In particular, *MaxAAR(std)* decreases from 31 percent to 10 percent and *AVOL* decreases from 33 percent to 24 percent).

Summarizing the descriptive analyses in Table 13-Table 15, I find that abnormal returns and abnormal trading volume during the earnings announcement window increases over time. Moreover, I find that these effects are more pronounced in countries where local GAAP was further from IFRS prior to 2005. Consequently, I conclude that the difference in market reactions to earnings announcements (returns and volume effects) between the two sets of Euronext countries decreases. Based on these results, I next conduct tests of competing explanations to investigate whether and why the intensified market reactions to earnings announcements are more pronounced after IFRS adoption, especially in countries that exhibited the largest distance between local GAAP and IFRS.

2.4.2 Competing Explanations for the Increased Usefulness of Earnings Announcements Following IFRS Adoption

Changes in the magnitude of unexpected earnings (H1)

In this subsection, I test H1 and examine the trend in the magnitude of unexpected earnings. I measure the magnitude of unexpected earnings, $|UE|$, as the absolute difference between the actual EPS of firm j at the announcement date and the mean (median) analyst forecasts of earnings for firm j , scaled by the price at the beginning of the year t , as reported by I/B/E/S (Walther, 1997). Panel A and B in Table 13 show that the mean (median) $|UE|$, calculated using the median of analysts' earnings estimate in I/B/E/S, decreases from 0.021 (0.007) before IFRS adoption to 0.013 (0.004) after IFRS adoption. This change (-38 percent for the mean and -42 percent for the

median) is significant at the 0.001 level.

To verify whether this trend is more pronounced after IFRS adoption, I perform a trend analysis, controlling for other control variables known to affect the magnitude of unexpected earnings (e.g., Amir et al. 2003). These variables include the number of analysts following the firm before the earnings announcement, the dispersion of analysts' forecasts before the earnings announcement and the logarithm of year-end market value of equity before the earnings announcement. Equation (5) shows the trend equation that includes these control variables:

$$|UE|_{jt} = \beta_0 + \beta_1 TREN D_t + \beta_2 IFRS + \beta_3 NUMEST_{jt} + \beta_4 DISP_{jt} + \beta_5 MVE_{jt} + \varepsilon_{jt} \quad (5)$$

Based on prior research, I expect *NUMEST* to be negatively associated with the magnitude of unexpected earnings because a larger number of analysts following the firm decreases the forecast error. I predict that *DISP* is positively associated with the magnitude of unexpected earnings because when analysts disagree on earnings forecasts, unexpected earnings tend to be larger. *MVE* is expected to be negatively associated with the magnitude of unexpected earnings because it is more difficult to forecast earnings of small firms given that they disseminate less information than large firms in the market. The results of estimating equation (5) are shown in Table 16.

Table 16: Trend analysis of unexpected earnings ($|UE|$)

Variables	(1)	(2)
TREND	0.001 [1.125]	0.000 [0.712]
IFRS	-0.007** [-2.198]	-0.004* [-1.744]
NUMEST		-0.000** [-2.167]
DISP		0.677*** [8.749]
MVE		0.000 [0.636]
CONSTANT	0.015*** [5.68]	0.005* [1.738]
Industry fixed effects	YES	YES
Observations	1430	1430
Adjusted R-squared	0.02	0.34

Table 16 shows the analysis of time trend in the absolute value of unexpected earnings ($|UE|$). $|UE|$, is calculated as the actual annual earnings per shares minus the median analyst estimate of earnings, divided by the price at the beginning of the year. The full sample consists of 1,430 observations during 2000 – 2010. *TREND* is equal to $t - 2000$, *IFRS* is a dummy variable that takes the value one for the period 2005 – 2010. *NUMEST* is the number of analysts following the firm before the earnings announcement, as reported by *I/B/E/S*. *DISP* is the standard deviation of analysts' earnings forecasts, scaled by the most recent share price. *MVE* is the year-end firm's market capitalization from Worldscope. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ is based on a two-tailed t-test where the t-statistics are calculated using firm clustered standard errors.

I present my results using $|UE|$ as the dependent variable estimated using the median analyst estimate of earnings before the earnings announcement. When I do not include my control variables (column 1), I find that the coefficient on *TREND* is insignificant, whereas the coefficient on *IFRS* is negative and significant (-0.019, t-

statistic -2.19. When I include my control variables (column 2), I find that the coefficient on *IFRS* remains negative (-0.004, t-statistic -1.74) and the coefficients on the control variables (except *MVE*) have the expected sign and are statistically significant. This result suggests that the decrease in $|UE|$ is more pronounced after IFRS adoption.

Following Freeman and Tse (1992) and FSV, I present additional evidence on the change in the distribution of $|UE|$. In Table 17 I report the number of $|UE|$ observations using the following six ranges of magnitude: $|UE| \leq 0.001$, $0.001 < |UE| \leq 0.005$, $0.005 < |UE| \leq 0.01$, $0.01 < |UE| \leq 0.05$, $0.05 < |UE| \leq 0.1$, $|UE| \geq 0.1$.

Table 17: Distribution of absolute unexpected earnings in earnings announcements

		Earnings Announcements by $ UE $ portfolio										
$ UE \leq 0.001$		0.001 $\leq UE \leq 0.005$		0.005 $< UE \leq 0.01$		0.01 $< UE \leq 0.05$		0.05 $< UE \leq 0.1$		0.1 $\leq UE $		
	Mean	#	Mean	#	Mean	#	Mean	#	Mean	#	Mean	#
Pre-IFRS	0.000	115	0.002	179	0.007	94	0.023	216	0.068	33	0.195	29
Post-IFRS	0.000	190	0.002	260	0.007	132	0.020*	149	0.068	20	0.174	14

Table 17 shows the distribution of Unexpected Earnings, $|UE|$, calculated as the actual annual earnings per shares minus the median analyst estimate of earnings, divided by the price at the beginning of the year. The six ranges of $|UE|$ are those examined by Freeman and Tse (1992) and FSV.

The findings indicate that the overall decrease in the mean $|UE|$ is the result of a shift of $|UE|$ observations from the most extreme ranges of the distribution ($0.01 < |UE| \leq 0.05$, $0.05 < |UE| \leq 0.1$, $|UE| \geq 0.1$) to three middle ranges of the distribution ($|UE| \leq 0.001$, $0.001 < |UE| \leq 0.005$, $0.005 < |UE| \leq 0.01$). In each range, the mean $|UE|$ has not significantly changed. The only range where the change in the mean $|UE|$ presents a

significant decrease is $0.01 < |UE| \leq 0.05$ (from 0.023 to 0.020, t-statistic is 1.76).

In summary, consistent with H1 and prior findings (e.g., Bae et al. 2008, 2011, Byard et al. 2011 and Horton et al. 2008), the results in Table 16 and Table 17 show that the magnitude of unexpected earnings decreased after IFRS adoption and that this change is associated with a shift toward greater frequencies of smaller $|UE|$ values around IFRS adoption. I conclude that the increased usefulness of earnings announcements is not associated with an increase in the magnitude of unexpected earnings.

Changes in the earnings response coefficient (the ERC) (H2)

In this subsection I test H2 by investigating whether increased usefulness of earnings announcements following IFRS adoption is associated with a change in the earnings response coefficient (the ERC). I calculate the coefficient estimates (the ERC) by linking the two measures of earnings usefulness (the signed $MaxAR(std)$ and $AVOL$) to UE in the following equation.

$$MaxAR(std)_{jt} = \beta_0 + \beta_1 TREND_t + \beta_2 IFRS + \beta_3 UE_{jt} + \beta_4 UE_{jt} * IFRS + \varepsilon_{jt} \quad (6)$$

$$AVOL_{jt} = \beta_0 + \beta_1 TREND_t + \beta_2 IFRS + \beta_3 |UE|_{jt} + \beta_4 |UE|_{jt} * IFRS + \varepsilon_{jt} \quad (7)$$

where the coefficient on $TREND$ (β_1) captures the over-time change in market responses, the coefficient on $IFRS$ (β_2) captures the average change in market responses after IFRS adoption. My coefficient of interest is β_4 , which measures whether the ERC has changed

following IFRS adoption. Specifically, evidence in support of an increase in market responses to unexpected earnings following IFRS adoption is indicated by a positive coefficient (β_4) on $UE * IFRS$ in eq. 6 (and on $|UE|_{jt} * IFRS$ in equation 7).

Table 18: Time and IFRS trend in market responses to earnings announcements

Variables	MaxAR(std) (1)	AVOL (2)
TREND	-0.035 [-0.986]	0.021 [1.467]
IFRS	0.131* [1.924]	0.008 [1.612]
UE	-1.034 [-0.568]	
UE*IFRS	-1.146 [-0.97]	
UE		0.079 [1.04]
UE * IFRS		-0.122 [-0.73]
CONSTANT	0.234* [1.941]	0.161*** [3.892]
Industry fixed effects	YES	YES
Observations	1430	1418
Adjusted R-squared	0.002	0.021

Table 18 shows the average coefficients from OLS regression of (signed) $MaxAR(std)$ and $AVOL$ on UE ($|UE|$), $TREND$, $IFRS$ and UE ($|UE|$) interacted with $IFRS$. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ is based on a two-tailed t-test where the t-statistics are calculated using firm clustered standard errors. The regressions include industry fixed effects (unreported).

The results in Table 18 show that the coefficient on $UE * IFRS$ is not statistically significant for either measure of abnormal market responses ($MaxAR(std)$ in column 1 and $AVOL$ in column 2), whereas the coefficient on the IFRS indicator (β_2), is positive

and statistically significant (0.131, t-statistic 1.92), when $MaxAR(std)$ is used as the dependent variable. Results (not reported) of estimating equation (6) for each of the six ranges of magnitude of absolute unexpected earnings confirm that the ERC has not increased after IFRS adoption.¹¹ These results suggest that the per-unit market responses to unexpected earnings have not increased over time even though the market's reaction are more intense following IFRS adoption.¹² I conclude that the increased usefulness of earnings announcements is not associated with an increase in the average investors' response to a unit of unexpected earnings.

Changes in the amount and the form of concurrent information reported in earnings announcement press releases (H3, H4)

In this subsection I investigate the third potential explanation for increased usefulness of earnings announcements following IFRS adoption. Building on FSV, I examine whether the more intense market reaction to earnings announcements

¹¹ Prior literature documents that the ERC is associated with a change in earnings qualities, such as persistence and risk (e.g., Easton and Zmijewski 1989). I compute earnings persistence as the coefficient estimate from an order one autoregressive model (AR1) for earnings scaled by average total assets in year t using OLS. My market-based proxy for risk is return volatility, measured as the standard deviation of the firm's daily return before and after IFRS adoption. In untabulated tests I find that persistence decreases after IFRS adoption (from 0.681 to 0.612) and that the change is statistically significant (t-statistic is 3.257). Turning to risk, I find that volatility after IFRS adoption increases (from 0.053 to 0.061, t-statistic 4.249). Both results are consistent with a non-increasing effect of IFRS on the ERC as reported in Table 18.

¹² Results in column (1) show that the coefficient on UE, β_3 , is not significantly different from zero. Although this finding is not unique to my study (e.g., LMT), I conduct an ERC study where I regress two-day [0,+1] cumulative abnormal return on unexpected earnings. Results (untabulated) indicate a positive and significant association between unexpected earnings and cumulative abnormal return (0.023, t-statistic 3.465).

following IFRS adoption is associated with expanded concurrent disclosure in earnings announcement press releases.

For my investigation of firms' earnings announcements I hand-collect the press-releases for all my Euronext sample firms. For collecting firms' press releases I use the firms' websites and Thomson One Banker. I collect the English version of firms' press-releases and, if I cannot find it, I collect the French and the Portuguese versions.¹³ To identify disclosing patterns in earnings announcement press releases over time, I first code a sample of 333 firms' press releases of 40 randomly selected firms over 2001 – 2011. I note that the percentage of firms disclosing detailed balance sheet, income statement, statement of cash flows and statement of changes in equity increases over time and especially following IFRS adoption. I extend my content analysis to all earnings announcement press releases of my Euronext sample. I collect 1,062 press releases for 140 firms with at least two observations before and after 2005. I read and code each press release to verify the presence (i.e., zero if absent, one if present) of each the following information considered by IFRS as the primary documents of financial report (IAS 1):

- (1) a detailed balance sheet (BS);
- (2) a detailed income statement (IS);

¹³ All earnings announcements used for this study from Dutch firms are in English. Whenever I find two versions of the same press release (i.e., one in English and one in original language), I first verify if the two versions are the same (and they are). Then, I use the English version for the analysis.

(3) a detailed statement of cash flows (SCF);

(4) a detailed statement of changes in equity (SE).¹⁴

Table 19, Panel A, reports the average number of pages and number of word per year for the 1,062 press releases. It also shows the average number of firms that report a detailed balance sheet, income statement, statement of cash flows and statement of change in equity information. Panel B and Panel C in Table 19 show descriptive information in the Netherlands (Panel B) and in Belgium, France and Portugal (Panel C).

**Table 19: Descriptive statistics for the content analysis
of 1,062 earnings announcement press releases**

Panel A						
Year	Average number of pages	Average number of words	Average presence BS (%)	Average presence IS (%)	Average presence SCF (%)	Average presence SE (%)
2000	5.04	1443	29	32	16	4
2001	6.68	2466	36	52	29	4
2002	7.22	2552	43	55	34	6
2003	8.11	2625	36	50	36	7
2004	8.92	2838	46	56	37	11
2005	9.82	2934	45	58	42	19
2006	8.77	2987	48	56	41	21
2007	9.73	3260	50	57	45	24
2008	10.65	3589	56	64	51	26
2009	11.48	3755	68	66	53	26
2010	12.99	4257	65	69	59	28

¹⁴ FSV code three additional concurrent disclosure variables: 1) non-recurring earnings components; 2) CEO qualitative comments; 3) current and forecast operating data. FSV find that these three variables are all insignificant in explaining increased usefulness of earnings announcements. Moreover, coding these three variables involves a high degree of subjectivity. Consequently, I do not include these three variables in my investigation.

Table 19: Descriptive statistics for the press release content analysis

Panel B: Netherlands (DIS = 0)						
Year	Average number of pages	Average number of words	Average presence BS (%)	Average presence IS (%)	Average presence SCF (%)	Average presence SE (%)
2000	9.60	2822	80	80	80	20
2001	10.44	4646	100	100	89	11
2002	11.71	3991	93	100	86	21
2003	16.14	5004	100	100	100	29
2004	16.33	5519	100	100	94	28
2005	15.95	6046	95	95	84	53
2006	18.44	6358	94	94	89	67
2007	18.95	7036	100	100	90	67
2008	18.74	6689	100	100	91	70
2009	19.65	6443	100	100	91	70
2010	19.48	6365	100	100	91	74

Table 19: Descriptive statistics for the press release content analysis:

Panel C: Belgium, France and Portugal (DIS = 1)						
Year	Average number of pages	Average number of words	Average presence BS (%)	Average presence IS (%)	Average presence SCF (%)	Average presence SE (%)
2000	3.90	1098	15	20	0	0
2001	5.71	1905	20	40	12	3
2002	5.80	2094	27	41	14	2
2003	6.14	2290	21	39	20	2
2004	7.01	2406	36	47	24	5
2005	6.87	2721	41	51	33	11
2006	6.60	2328	40	48	31	11
2007	7.49	2538	43	48	35	16
2008	8.62	2805	45	52	42	15
2009	9.45	3083	48	59	43	15
2010	11.08	3635	52	60	50	15

Table 19 shows descriptive statistics on the content analysis of 1,062 earnings announcement press releases for a sample of 140 Euronext firms for the following variables: number of pages, number of words, IS (dummy variable) that indicates the presence in the press release of a detailed income statement; BS (dummy variable) that indicates the presence in the press release of a detailed balance sheet; SCF (dummy variable) that indicates the presence in the press release of a detailed statement of cash flows; SE (dummy variable) that indicates the presence in the

press release of a detailed statement of changes in equity. Some earnings announcement press releases contain only several key line items (or a summary) of a balance sheet, income statement, statement of cash flows and statement of changes in equity, instead of a complete or detailed statement. I code these press releases as not containing a detailed financial statement. Panel A shows descriptive information for the four Euronext countries, Panel B for the Netherlands (where DIS = 0), Panel C for Belgium, France and Portugal (where DIS = 0). *DIS* is a dummy variable that is equal to one (zero) for firm/observations from Belgium, France and the Portugal (the Netherlands) and it is a proxy for the distance between local GAAP and IFRS before IFRS adoption.

I find that while almost all firms in the Netherlands reported a detailed balance sheet and income statement before IFRS adoption (97 percent and 98 percent, respectively); this compares to less than half of the firms in Belgium, France and Portugal over the same period (25 percent and 39 percent, respectively). My analysis also shows that almost 92 percent of the firms the Netherlands reported concurrent statement of cash flows information in earnings announcement press releases before IFRS adoption, whereas only 19 percent of firms in Belgium, France and Portugal did so over the same period. However, for both groups of countries I find that a few firms reported a detailed statement of changes in equity in their earnings announcement press releases before IFRS adoption (23 percent in the Netherlands and 4 percent in France, Belgium and Portugal) and that this percentage increases after IFRS adoption (65 percent in the Netherlands and 14 percent in Belgium, France and Portugal).

Taken together, these results confirm that concurrent detailed balance sheet, income statement, statement of cash flows and statement of change in equity information increased after IFRS adoption. This trend, however, was not limited only to

elements of financial statements that were not regulated under local GAAP (i.e., the statement of cash flows in Belgium, France and Portugal and the statement of change in equity in all Euronext countries). The trend also included accounting information that was already regulated under local GAAP (i.e., the presentation of the balance sheet and the income statement). These results suggest that the accounting distance and the 2005 CCSR recommendation on EU firms' disclosure in earnings announcement press releases were two complementary forces that influenced the expanded concurrent information in earnings announcement following IFRS adoption.

I report the results of tests of H3 in Table 20. This analysis expands the analysis presented in Table 18 by including as independent variables in regression (6) and (7) four disclosure variables as proxies for concurrently-released detailed balance sheet, income statement, statement of cash flows and statement of changes in equity. I also include the interaction between these four variables and the IFRS indicator. The purpose of this analysis is to test whether other concurrent detailed accounting information-releases contribute to explain the documented increase in market price responses to earnings announcements after IFRS adoption.

Table 20: IFRS trend in market responses to unexpected earnings and concurrently-released disclosure in earnings announcements

VARIABLES	(1) MaxAR(std)	(2) MaxAAR(std)	(2) AVOL
TREND	-0.034 [-0.729]	0.339 [1.253]	0.001 [0.273]
IFRS	0.013 [0.769]	-0.829 [-0.136]	0.012 [0.581]
UE	-1.689 [-0.372]		
UE*IFRS	-1.102 [-0.571]		
BS	-0.064 [-0.133]	2.941* [1.925]	0.218* [1.782]
IS	-0.259 [-0.897]	2.835** [1.987]	-0.277 [-1.501]
SCF	0.036 [0.471]	0.817 [1.562]	0.254** [2.136]
SE	0.962** [2.098]	2.033 [1.628]	-0.041 [-0.321]
BS*IFRS	0.129 [0.187]	2.985* [1.671]	0.304* [1.926]
IS*IFRS	0.291 [0.288]	1.483 [0.762]	0.241* [1.924]
SCF*IFRS	0.032** [1.983]	1.879** [2.081]	0.252* [1.756]
SE*IFRS	0.742 [1.403]	1.918* [1.719]	0.162 [1.172]
UE		0.172 [0.483]	0.071 [0.281]
UE *IFRS		-1.012* [-1.781]	0.48 [0.134]
CONSTANT	0.292** [2.134]	8.191*** [4.648]	0.121*** [4.524]
Industry fixed effects	YES	YES	YES
Observations	1062	1062	1062
Adjusted R-squared	0.022	0.041	0.034

Table 20 presents the results from OLS regression $MaxAR(std)$, $MaxAAR(std)$ and $AVOL$ on UE ($|UE|$), on a time trend variable ($TREND$), an $IFRS$ indicator, as described in Table 14, and a set of dummy variables (BS , IS , SCF and SE) as described in Table 19. The sample consists of 1,062

observations during 2000 – 2010. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ is based on a two-tailed t-test where the t-statistics are calculated using firm clustered standard errors. The regressions include industry fixed effects (unreported).

Table 20 shows that when $MaxAR(std)$ is used as the dependent variable (column 1), the coefficients on $TREND$, UE and $IFRS$ are insignificant. The coefficients on the concurrent disclosure variables (BS , IS , SCF , SE) are all insignificant except for SE (0.962, t-statistic 2.09), whereas the most significant disclosure, when interacted with $IFRS$, is the statement of cash flows (0.032; t-statistic 1.98). This result suggests that the intensified market reactions to the concurrent disclosure of detailed statement of cash flow following IFRS adoption explains the increased usefulness of earnings announcements.

Table 20 also shows that when $AVOL$ is used as the dependent variable (column 2), the coefficients on $TREND$, $|UE|$ and $IFRS$ are insignificant. The coefficients on the concurrent disclosure dummy variables (BS , IS , SCF , SE) are significant in the case of BS and SCF (0.218, t-statistic is 1.78 and 0.254, t-statistic is 2.13, respectively). In the analysis of the interactions between additional concurrent disclosures and $IFRS$, there is a positive and significant coefficient on SCF (0.252; t-statistic is 1.75), IS (0.241; t-statistic 1.92) and BS (0.304; t-statistic is 1.92). This result suggests that the intensified market reactions to the concurrent disclosure of detailed statement of cash flows, income statement and balance sheet following IFRS adoption explains the increased usefulness of earnings announcements.

Taken together, the results in Table 20 show that of all the concurrent disclosure information I investigate, concurrently-released detailed statements of cash flows are associated with the more pronounced returns and trading volume effects following IFRS adoption. They also show that concurrently-released detailed income statements and balance sheet are associated with increased trading volumes following IFRS adoption, although I do not find similar results explaining returns effects.

Tests of H4 are presented in Table 21. To investigate whether the expansion in disclosure in earnings announcements is more important in explaining more pronounced returns and volume effects following IFRS adoption in Euronext countries where local GAAP was further from IFRS than in Euronext countries where local GAAP was closer, I perform the same tests as those presented in Table 20, including an additional variable (*DIS*) in level and in interaction with each concurrently-released disclosure component, and with the IFRS indicator. Specifically, *DIS* is a dummy variable that is equal to one for firm/observations in Belgium, France and Portugal and zero for firms/observations in the Netherlands.

Table 21: IFRS, market responses to UE and concurrently-released disclosure

VARIABLES	MaxAR(std) (1)	MaxAAR(std) (2)	AVOL (3)
TREND	-0.039 [-0.884]	0.336* [1.749]	0.073 [1.295]
DIS	0.312 [0.555]	-1.398 [-1.27]	-0.136 [-1.145]
IFRS	0.008 [0.683]	-0.074 [-1.27]	0.009 [0.783]
UE	-1.358 [-0.379]		
BS	-0.058 [-0.127]	-3.271 [-1.426]	0.183 [1.422]
IS	-0.231 [-0.710]	2.841* [1.982]	-0.275 [-0.902]
SCF	0.195 [0.294]	0.391 [0.291]	0.313** [2.092]
SE	0.919* [1.939]	1.798 [1.215]	0.183 [0.492]
UE*IFRS	-0.962 [-0.210]		
BS*IFRS	0.045 [0.184]	2.283 [1.271]	0.178 [1.414]
IS*IFRS	0.319 [0.274]	2.901*** [2.951]	0.145 [0.539]
SCF*IFRS	0.028* [1.713]	1.901 [1.131]	0.269 [1.062]
SE*IFRS	-0.096 [-0.126]	1.923 [1.316]	0.333 [1.352]
BS*IFRS*DIS	0.368 [0.567]	2.918 [1.217]	-0.263 [-1.264]
IS*IFRS*DIS	0.469 [1.406]	3.901* [1.732]	0.259 [0.761]
SCF*IFRS*DIS	2.097** [2.100]	3.521*** [6.956]	0.232* [1.849]
SE*IFRS*DIS	1.026 [1.573]	2.191* [1.651]	0.121 [1.355]
UE		0.409 [0.069]	0.219 [0.129]
UE *IFRS		-1.29*** [-2.79]	0.112 [0.045]
CONSTANT	0.516 [0.624]	7.191*** [4.001]	0.195* [1.721]
Observations	1062	1062	1062
Adjusted R-squared	0.025	0.053	0.044

Table 21 presents the results from OLS regression $MaxAR(std)$, $MaxAAR(std)$ and $AVOL$ on UE ($\backslash UE|$), on a time trend variable ($TREND$), an $IFRS$ indicator, as described in Table 14, a set of dummy variables (BS , IS , SCF and SE), as described in Table 19 and DIS , as described in Table 15. The sample consists of 1,062 observations during 2000 – 2010. Significance at *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$ is based on a two-tailed t-test where the t-statistics are calculated using firm clustered standard errors. The regressions include industry fixed effects (unreported).

Table 21 shows that intensified market reactions to concurrently-released disclosure in earnings announcements following IFRS adoption is larger in Belgium, France and Portugal (than in the Netherlands) for the SCF : when $MaxAR(std)$ is used as the dependent variable, the coefficient on SCF (interacted with $IFRS$ and DIS) is 2.097 (t-statistic is 2.10) and when $AVOL$ is used as the dependent variable, the coefficient on SCF (interacted with $IFRS$ and DIS) is 0.232 (t-statistic is 1.84). None of the coefficients on the other concurrently-released disclosure dummies (interacted with $IFRS$ and DIS) is significant. This finding suggests that the inclusion of detailed statement of cash flows in earnings announcement press releases in Belgium, France and Portugal (where local GAAP was further from IFRS) is the dominant factor explaining intensified market reactions to earnings announcements.

2.4.3 Additional Tests

My results are robust to several analyses, which I summarize below.

Results in Table 20 and 21 suggest that concurrently-released statement of cash flows information in press releases is associated with more intense market reactions to earnings announcements, and that this association is more pronounced in Euronext

countries where local GAAP was further from IFRS before 2005. One potential concern with this analysis is that the characteristics of the statement of cash flows may not reflect the distance (*DIS*) between the local GAAP and IFRS in the four Euronext countries. To address this issue, similar to Siciliano (2011) I conduct a two-level investigation about the statement of cash flows regulation in the four Euronext countries. At the *de jure* level I examine the extent to which local GAAP differed from IFRS in terms of presentation of the statement of cash flows in consolidated financial statements. Specifically, I verify whether the local GAAP provided guidance on the preparation and presentation of statement of cash flows before IFRS adoption. At the *de facto* level, I randomly select the 2002-2004 consolidated financial statements of 70 Euronext firms in my sample: 50 from Belgium, France and Portugal and 20 from the Netherlands. I next examine the following three dimensions: (1) the presence of a statement of cash flows; (2) the prominence of the statement of cash flows (i.e., if it is presented as primary financial statement or it is disclosed in the notes); (3) the format of the statement of cash flows.

The *de jure* analysis suggests that while in Belgium, France and Portugal local GAAP did not require the preparation and the presentation of a statement of cash flows in consolidated financial statements, in the Netherlands the preparation of a statement of cash flows was required. In the *de facto* analysis I find that all of the 70 firms disclosed a statement of cash flows in their consolidated financial statements during 2002-2004. However, while all sample firms in the Netherlands included a statement of cash flows

as primary document of the consolidated financial statements (as prescribed by IAS 1), only 53 percent of the firms in Belgium, France and Portugal did so; the remaining 47 percent of firms in these countries disclosed the statement of cash flows in the notes. Finally, I find that while all firms in the Netherlands used a format of the statement of cash flows similar to that prescribed by IAS 7, only 34 percent of firms in Belgium, France and Portugal referred to IFRS for detailed implementation guidance on the preparation of statement of cash flows before 2005.

In summary, this analysis confirms that the prominence and the format of statement of cash flows in consolidated financial statements varied across the four Euronext countries before IFRS adoption and is one of the components of financial reporting that explains the distance between local GAAP and IFRS before IFRS adoption.

Table 19 shows that the mean number of words and pages of annual earnings announcement press releases increases over the sample period. One potential concern with my empirical analysis is that other information reported in press releases contributed to explain increased market reactions to earnings announcements. From a preliminary analysis of a subsample of 333 press releases I observe the following profile: the disclosure about risk and financial guidance in firms' press releases increases over time in the Euronext countries I examine. This trend may be attributable to the Transparency Directive (TD) promulgated in 2005, which recommends that EU listed firms disclose in their reports information about risks and future business

developments. I also note that segment reporting and pension accounting were two accounting items that were differently regulated under local GAAP and under IFRS (IAS 14 and IAS 19, respectively). Following the methodology reported in Appendix B, I extract from the earnings announcement press releases the total number of words related to risk, CEO's financial guidance, segment information and pension accounting. The trend analysis (similar to that presented in Table 14) shows a positive (and significant) trend only for risk disclosure (3 percent, t-statistic is 2.13), but the coefficient on *IFRS* is not significant. Finally, adding *RISK* (and its interaction with *IFRS* and *DIS*) in my specification presented in Table 20 and 21, I continue to observe a positive and significant association between market responses and concurrent statement of cash flows information, whereas the coefficient on *RISK* (and on its interactions with *IFRS* and *DIS*) is insignificant.

Following prior literature (e.g., DeFond et al. 2007), another potential concern is the choice of the I/B/E/S/ earnings announcement date, used for the calculation of my two dependent variables. Using the announcement date reported in the 1,062 hand-collected earnings press releases, I find that the average (median) difference between I/B/E/S and the actual firms' earnings announcement dates is two days (zero) before 2005 and zero (zero) after 2005. To address the concern that the trend in market responses may be influenced by the noise in the I/B/E/S/ database, I repeat my hypothesis tests considering the earnings announcement date reported in the 1,062 hand-collected press

releases. The results of this analysis are consistent with those reported in Table 14, Table 20 and Table 21.

I also test whether the increasing trend in market reactions to earnings announcement press releases after IFRS adoption in Euronext countries is associated with a more general worldwide economic trend that affects market responses to earnings announcements. Specifically, I calculate $MaxAAR(std)$ and $AVOL$ for a random sample of 140 US (control) firms listed on the NYSE during 2003 – 2010.¹⁵ The choice of an institutional setting (such as the US) where the financial reporting regime does not change during the sample period, allows me to alleviate the risk of an identification problem. The trend analysis (untabulated) shows that there is no increasing trend in market responses to earnings announcement press releases: for each of the two measures used as the dependent variables, the coefficient on $TREND$ and on an indicator variable, $POST$ (for firm-years in 2005-2010), is non-statistically different from zero.¹⁶ For a subset of 40 US firms (randomly selected from the 140 US firms), I also hand-collect and code 320 earnings announcement press releases.¹⁷ I find that there is no increase in the

¹⁵ I deliberately choose this period to avoid the effect of SEC Regulation G on the content of earnings announcement press releases. Regulation G applies to all firms disclosures in annual and quarterly reports filed with respect to a fiscal period ending after March 28, 2003. This regulation requires firms to reconcile non-GAAP financial measures to the most directly comparable GAAP financial measure and to present the most directly comparable financial measure calculated in accordance with GAAP. Excluding 2000 – 2002 allows me to hold the US institutional setting relatively constant.

¹⁶ I use $POST$ instead of $IFRS$ to indicate US firm/observations during 2005 – 2010.

¹⁷ Firms press releases are extracted from the 8-K filings in the Edgar database available on the

inclusion of detailed balance sheet, income statement, statement of cash flows over time in the earnings announcements, nor the coefficients on their interactions with *POST* are associated with the market responses.

I explore the concern that other market institutional changes entail higher market reactions in the post-IFRS adoption period than in the pre-IFRS period by examining abnormal return and volume reactions on randomly chosen 3-day windows that do not include an annual earnings announcement. Specifically, for each firm I choose a random date from the 10 weeks surrounding the annual earnings announcement date and I compare the mean and median abnormal return and volume reactions before and after IFRS adoption. I find that both the mean and the median abnormal return and volume reactions are not statistically different. This result suggests and confirms LMT findings that IFRS annual earnings announcements are more useful than local GAAP annual earnings announcement, reducing the concern that the higher reactions found during the post-IFRS adoption period are the result of a change in the underlying market microstructure.

Finally, I examine whether my results are sensitive to the choice of the dependent variable for market responses, to the choice of the window around the earnings announcement date and to the measure of unexpected earnings. Specifically, I use the

SEC website.

average abnormal return in the three days surrounding the earnings announcement window [-1; 0; +1] and my reported inferences remain essentially unchanged. I also examine a 6-day window, [-3, +3], around I/B/E/S earnings announcement date. The results from the 6-day window are qualitatively similar (and with similar statistical significance) to those reported for the 3-day window. I use the seasonal random-walk difference in earnings as a second measure of unexpected earnings, with qualitatively unchanged results.

2.5 Conclusions

I investigate the mechanisms through which IFRS affects increased market price responses to earnings announcements documented in prior research (e.g., LMT 2011). Using a sample of 140 firms listed on Euronext over 2000 – 2010, I confirm that, on average, absolute market price responses, measured as abnormal returns and abnormal trading volume increase after IFRS adoption. I also find that market reactions to earnings announcements are larger in Euronext countries whose local GAAP was further from IFRS before to the shift to IFRS.

I provide evidence that the larger market price response to earnings announcements after IFRS adoption is not attributable to larger absolute unexpected earnings nor to larger investor responses to unexpected earnings. Instead, my content analysis of 1,062 hand-collected Euronext firms' earnings announcement press releases shows that there is an increase in the inclusion of concurrently-released disclosure of

balance sheet, income statement, statement of cash flows and statement of changes in equity following IFRS adoption. Specifically, my results indicate that the inclusion of detailed statements of cash flows information contributes to explain increases in abnormal market reactions to earnings announcements following IFRS adoption and this effect is more pronounced in Euronext countries where local GAAP was further from IFRS prior to IFRS adoption.

While I recognize the caveat of a small sample of long-surviving firms in my study, I regard the results in the prior literature with some caution. Specifically, while LMT assume that the increase in the market response to earnings announcements following IFRS adoption is attributable to the properties of earnings as a single-number summary of firms' performance, I document that this trend is due to the increase in concurrently-released disclosure (specifically statement of cash flows) in firms' earnings announcements as a consequence of the 2005 CESR recommendation on the disclosure of firms' non-GAAP earnings. In particular, the result of an increased association between market responses and the inclusion of statement of cash flows in firms' earnings announcements may be a joint outcome of IFRS adoption and concurrent institutional environment, leading to the disclosure of more standardized and comparable financial reporting information. In sum, this study further indicates the need to expand our understanding of the effect of institutional settings and accounting standards on financial reporting and capital market outcomes.

3. IFRS, Accounting Comparability and Earnings Information Transfer

3.1 Introduction

In this study I investigate the comparability effect of adopting International Financial Reporting Standards (IFRS) in the European Union (EU). I view accounting numbers as comparable when similar economic events are being accounted for similarly and dissimilar economic events being accounted for dissimilarly (IASB, Conceptual Framework). Regulators, standard setters and academics generally agree that an improvement in comparability is desirable because it increases the usefulness of accounting data by reducing the costs for investors of following firms (Barth 2008).¹ To the extent, however, that country-specific factors result in different implementations of a shared set of accounting standards, firms' reporting practices and reporting quality may still vary across countries and, as a result, the usefulness of accounting data may not increase (e.g., Hung 2001; Ball et al. 2000, 2003).

I consider the effect of IFRS on comparability through two distinct but related concepts: accounting uniformity and reporting quality.² Recent literature suggests that

¹ There are, however, also academics who have expressed some skepticism about the use of shared accounting standards (see, for example, Dye and Sunder 2001, Sunder 2002, and Ball 2006).

² I define accounting uniformity and reporting quality in detail in Section 2. Briefly, by accounting uniformity I mean the adoption of the same rules of accounting measurement, recognition and disclosure among firms in different countries. By reporting quality I mean the ability of earnings to summarize information about the firm's economic phenomena as reflected in price so that the larger the association between price and earnings, the larger the reporting quality.

the adoption of IFRS increases uniformity in the accounting measurement process among firms in different countries (e.g., Wang 2011; DeFond et al. 2011, Siciliano 2011). I expect that increased uniformity should reduce analysis costs for investors following firms from different countries and potentially facilitate cross-border comparisons of accounting information (Bae et al. 2008; Tan et al. 2009). The improvement in comparability, however, is likely to vary across countries. Specifically, I expect uniformity to improve comparability only in countries that experienced a non-trivial increase in reporting quality following IFRS adoption; that is, an increase in the ability of the earnings signal to carry value relevant information about the firm's underlying economics (Liu, 2009). I further expect the increase in reporting quality to be more pronounced in countries with both strong enforcement regimes and large accounting distance (i.e., domestic accounting standards that differ substantially from IFRS). In these countries, IFRS adoption requires substantial accounting changes and strong enforcement forces firms to comply with these changes.³

In summary, I predict that in countries with large accounting distance and strong enforcement, the increase in reporting quality is larger than in countries with small (large) accounting distance and strong (weak) enforcement. As a result, I expect that in

³ A maintained assumption throughout my study is that IFRS, when appropriately adopted, is a reasonably high quality set of accounting standards. This assumption is consistent with prior research finding that IFRS adoption tends to enhance reporting quality (e.g., Covrig et al. 2007; Barth et al. 2008).

the former group of countries the complementary effect between reporting quality and accounting uniformity is more pronounced than in the latter group of countries, and so is the comparability effect of IFRS.

Results partially support the hypotheses. I first document that comparability (as proxied by earnings information transfer) is higher for firms reporting under the same accounting standards rather than different accounting standards. Second, I find that the positive effect of IFRS on reporting quality is more pronounced in countries with strong enforcement and large accounting distance prior to IFRS adoption. I observe, however, that the increase in comparability in countries that experienced a positive change in reporting quality is not reliably different from the change in comparability in countries that did not exhibit an increase in reporting quality around IFRS adoption.

From a policy perspective, investigating comparability changes in response to IFRS adoption in the EU is important because the objective of the 2000 EU financial reporting strategy was to provide a set of accounting standards that increased the comparability of financial statements (COM 2000, 359).⁴ More generally, while constraining the sample (and possibly the generalizability), restricting the study to EU firms also offers research design advantages. First, confining the analysis to a set of countries with strong economic links increases the probability that earnings information

⁴ The IASC's Constitution states that the objectives of the IASC Foundation include "... to develop accounting standards that require high quality, transparent and comparable information".

released by firms in one country is relevant for predicting the value of firms in other countries because it is more likely that the information event of interest (here, the earnings announcement) carries relevant state-of-the-world information (Schipper 1990; Firth 1996). Second, sampling within the EU still yields a broad cross-section of legal enforcement and accounting environments, which permits an investigation of cross-border IFRS effects (Burgstahler et al. 2006).

Differences in enforcement and accounting distance across countries are important because they have an effect on reporting quality (one of two comparability dimensions in this study). For example, DeFond et al. (2011) argue that when IFRS is correctly implemented in the presence of strong enforcement, earnings is more likely to faithfully capture the underlying economic phenomena summarized in stock price. As a result, reporting quality improves. Siciliano (2012) analyzes the information content of annual earnings announcements in four EU countries before and after IFRS adoption. He finds an increase in standardized concurrently-released financial reporting information and he observes that this pattern is associated with larger market reactions, especially in countries with large accounting distance.

I measure comparability using earnings information transfer (EIT).⁵ EIT

⁵ EIT occurs when an earnings announcement made by one firm contemporaneously provides information about the performance and value of one or more non-announcing firms (Schipper 1990). Throughout the study I use announcing and non-announcing firms to refer to the first earnings announcer and to the later earnings announcers in the same industry-year, respectively.

measures a firm's price reaction to a comparable firm's earnings announcement. I predict that EIT is significantly higher for firms reporting under the same rather than different accounting standards. The intuition is that when comparable firms use the same accounting standards, similar economic events are accounted for similarly (accounting uniformity effect). As a result, investors can better extract value-relevant information embedded in a comparable firm's earnings signal.⁶ However, if IFRS improves not only uniformity, but also the ability of the earnings signal to carry value relevant information about the firm's underlying economics (i.e., reporting quality), it is more likely to observe an increase in cross-border comparisons of accounting information.

I proceed in three steps. First, I investigate whether EIT has increased within the EU after IFRS adoption, as a result of an increase in accounting uniformity. Second, I investigate the IFRS effect on reporting quality. Based on prior research suggesting that the IFRS effect on reporting quality is a function of country-specific factors, I partition EU countries along two dimensions: accounting distance and enforcement. I identify three country-partitions that are characterized by: (1) small accounting distance and strong enforcement, (2) large accounting distance and strong enforcement, and (3) large

⁶ I acknowledge that there are alternative ways to investigate the effect of IFRS on comparability. For example, Li (2010) argues that improvements in comparability contribute to her finding of a lower cost of equity for EU firms after IFRS adoption. Wu and Zhang (2010) investigate the usage of relative performance evaluation (RPE), and document a post-IFRS-adoption increase in the use of accounting-based RPE relative to foreign peers, consistent with improved cross-country accounting comparability.

accounting distance and weak enforcement.⁷ I predict a larger increase in reporting quality in countries with large accounting distance and strong enforcement because in these countries IFRS adoption requires substantial accounting changes and strong enforcement makes firms comply with these changes. Third, I examine whether the uniformity effect of IFRS on comparability was different in the three country-partitions that exhibited a different change in reporting quality after IFRS adoption. Based on Liu's (2009) findings that announcing firms with higher reporting quality have higher EIT in the US, I hypothesize that this effect is higher in countries that exhibited a larger increase in reporting quality.⁸

My study is based on a sample of 6,555 annual earnings announcements from 1,278 EU firms over the period 2001 – 2010. The pre-IFRS adoption period is 2001 – 2004 and the post-IFRS adoption period is 2005 – 2010. I define EIT as the information transfer earnings response coefficient (ERC). This measure captures the relation between cumulative absolute abnormal returns of non-announcing firms (measured over the three days surrounding the earnings announcement date of the announcing firm) and the unexpected portion of announcing firms' earnings.

⁷ There is no EU country with weak enforcement and small accounting distance (Byard et al. 2011).

⁸ In Section 3.2, I develop my hypothesis on the complementary effect of accounting uniformity and reporting quality on comparability in more detail.

I find that the change in information transfer ERC after IFRS adoption, on average, is positive (0.051) and significant at the 10 percent level. I further document that firms domiciled in the large accounting distance and strong enforcement country-partition experienced the largest increase in reporting quality upon IFRS adoption (the empirical measure of reporting quality is value relevance, the explanatory power of earnings and book values in price regressions), with an increase in value relevance following IFRS adoption of 19 percent, while it is negative in the other two partitions (-16 percent and -9 percent). I do not find, however, significant differences in comparability across groupings: i.e., I observe that the increase in comparability in countries that experienced a positive change in reporting quality is not distinguishable from the change in comparability occurred in countries that did not exhibit an increase in reporting quality around IFRS adoption.

This study contributes to the literature in two ways. First, it provides insights into the relation between IFRS adoption and reporting quality by investigating the factors that drive the change in value relevance. Prior studies indicate that high-quality accounting standards alone do not necessarily result in high-quality financial reporting (e.g., Ball et al. 2003). Consistent with this view, I find that reporting quality improves only in countries with strong enforcement and large accounting distance. This result shows that there is substantial variation in outcome convergence across jurisdictions, and it highlights the significance of institutional environments in achieving financial

reporting convergence. Second, in her commentary on information transfer research, Schipper (1990) calls for more attention to explain how information transfers operate. My study follows this suggestion and adds to prior studies on the effect of IFRS adoption on EIT. These studies (e.g., Wang 2011) consider an increase in EIT as the direct effect of an increase in accounting comparability. I identify two distinct but complementary factors as determinants of EIT: accounting uniformity and reporting quality. I note, however, that the fact that in this study I do not find reliable differences in comparability across reporting quality partitions (see section 3.5.4), does not necessarily imply that no reporting quality effect on comparability exists; as with any other empirical study finding a null result, it is possible that my tests suffer from power concerns that I can address in future research by using, for example, additional reporting quality metrics and a larger sample.

The rest of this study is organized as follows. The next section discusses the extant research on accounting comparability in an earnings information transfer context. Section 3.3 develops the hypotheses and the empirical design. In Section 3.4, I describe the data and sample. Section 3.5 summarizes the results of the three analyses of EIT and reports robustness checks. Section 3.6 provides concluding remarks.

3.2 IFRS and Information Transfer

In this section I summarize research on EIT, with special emphasis on studies that deploy EIT as a measure of comparability in an international setting. I point out

differences in research design choices between such studies and my study, as these differences are important for understanding how I develop hypotheses.

Prior research has investigated whether investors use financial information of other firms in the same industry to assess the value of a given firm's shares (see, for example, the overview and discussion in Schipper 1990). To name but a few examples, Firth (1976) tests whether earnings announcements affect stock prices of reporting firms' non-announcing industry peers using a sample of UK firms. Foster (1981), Freeman and Tse (1992), and Joh and Lee (1992) explore intra-industry information transfers for US firms. The general conclusion from this literature is that earnings-related news events are associated with significant transfers of information from announcing to non-announcing firms.

Prior research is almost exclusively confined to within-country EIT effects, and tests of EIT in a cross-border setting are rare, especially concerning the effects of IFRS adoption. Two recent studies, however, do investigate EIT before and after IFRS adoption. Wang (2011) suggests that IFRS adoption increases comparability because of an increase in accounting uniformity. Specifically, she analyzes abnormal price and volume reactions for a global sample of firms and finds that a firm yet to announce earnings reacts more strongly to the earnings announcement of a foreign firm when both report under the same set of accounting standards. This suggests that the use of a uniform set of accounting standards enhances comparability, and investors are more

likely to use information from an industry peer's financial reporting after IFRS adoption. As a result, EIT increases. Kim and Li (2012) also find that a firm's investors react more strongly to earnings releases of foreign firms in the same industry-year after IFRS adoption. However, because they focus on the aggregate effects of IFRS adoption on EIT, they do not disentangle the effect of uniformity from the effect of reporting quality. Similar to the studies described above, I investigate the effect of IFRS adoption on comparability. Unlike Wang (2011) and Kim and Li (2012), however, I view (and test for) uniformity and reporting quality as two complementary determinants of comparability. This distinction has several consequences for research design choices, which are different in my study from those in prior literature.

Similar to prior research, I expect IFRS to lead to an increase in accounting *uniformity*. By uniformity I mean an increase in the number of firm-pairs in the same industry-year using the same rules for measurement, recognition and disclosure of accounting earnings (DeFond et al., 2011).⁹ ¹⁰ I expect that an increase in uniformity following IFRS adoption leads to an increase in EIT because the cost for investors to acquire and process accounting information decreases (Bae et al. 2008; Horton et al.

⁹ Throughout the study I use "firm-pair" to indicate an announcing firm and a group of two or more non-announcing comparable firms.

¹⁰ An alternative measure of uniformity is explored by Siciliano (2011). He measures uniformity as the probability of two firms in two different countries using the same accounting choice for the measurement, recognition and disclosure of 27 accounting items. I do not use the direct approach in Siciliano (2011) to assess accounting uniformity. Consistent with prior studies (e.g., Li 2010; Lang et al. 2010; DeFond et al. 2011), in my analysis I use an indirect approach that suggests (or infers) that mandatory IFRS adoption is associated with an increase in accounting uniformity.

2012).¹¹

My second argument, which is distinct from prior research, is that the comparability effect of accounting uniformity is associated with a positive change in reporting quality, which also affects comparability. By reporting quality I mean the ability of summary accounting variables (earnings and book values) to convey information about the firm's economic situation as reflected in stock price; that is, the higher the association between price and earnings / book values, the better the reporting quality. Based on Liu (2009), who shows that announcing firms with higher reporting quality have higher EIT in the US, I expect the positive EIT effect of accounting uniformity to be higher in countries that exhibited a larger increase in reporting quality after IFRS adoption.

In summary, prior literature that examines EIT effects around IFRS adoption hypothesizes a direct link between IFRS adoption and comparability without considering a separate (but related) effect on reporting quality. In this study, I explore the comparability effect through two intermediate and complementary effects: accounting uniformity and reporting quality.

¹¹ Investment professionals often argue that a major obstacle to cross-border investment is the time-consuming reconciliation of differences in accounting standards across countries (Morgan Stanley Dean Witter 1998).

3.3 Hypotheses and Research Design

3.3.1 Hypotheses

I expect that the adoption of the same financial reporting regime (IFRS) entails accounting uniformity because similar economic events are accounted for similarly and dissimilar events are accounted for dissimilarly. Consequently, the correlation of the financial reporting processes among firms across borders increases (Lang et al. 2010; Wang 2011). This increased correlation reduces investors' analysis costs of following firms from different countries, and potentially facilitates comparisons of financial data among comparable firms (e.g., Bae et al. 2008; Tan et al. 2009). Hence, I predict that after IFRS adoption the earnings signal from one firm to another (within the same industry-year) is more decision useful and, as a result, EIT increases:

H1: The EIT increases after mandatory IFRS adoption in the EU.

In my next tests I investigate whether the IFRS uniformity effect on comparability is more pronounced in countries that exhibited a larger increase in reporting quality after IFRS adoption; that is, an increase in the ability of the earnings signal to carry value relevant information about the firm's underlying economics (Liu, 2009).¹²

I proceed in two steps. First, I examine whether after IFRS adoption EU countries predictably experienced different changes in reporting quality. Second, I investigate

¹² I defer my discussions of the reporting quality proxy to section 3.2, where I also describe my research design.

whether the effect of IFRS on comparability was more pronounced in countries that experienced a larger increase in reporting quality. For the first analysis (the change in reporting quality after IFRS adoption) I refer to prior findings suggesting that reporting quality changes are associated with country-specific accounting practices and enforcement. Siciliano (2012) analyzes the information content of annual earnings announcements in four EU countries before and after IFRS adoption. He finds an increase in standardized concurrently-released financial reporting information and he observes that this pattern is associated with larger market reactions, especially in countries exhibiting more *ex ante* differences between local GAAP and IFRS. Hung (2001), Leuz et al. (2003), and DeFond et al. (2007) predict and find that enforcement is positively associated with reporting quality, because the extent to which accounting rules influence the quality of reported earnings depends on how well these rules are enforced.¹³

I expect that the increase in reporting quality after IFRS adoption was more pronounced in countries with both strong enforcement regimes and large accounting distance (i.e., domestic accounting standards that differ substantially from IFRS); in

¹³ Because my results are predicated on the assumption that the country-specific enforcement is constant over time, while only accounting distance varies following IFRS adoption, it is important that enforcement has not changed over time. Using the data in Kaufmann et al. (2009), the *t*-test for difference in means suggests that the level of enforcement within and across countries has not significantly changed during the sample period. This result (not reported) is consistent with country-level enforcement being relatively stable over time in the three country-partitions.

these countries, IFRS adoption requires substantial accounting changes and strong enforcement forces firms to comply with these changes (Ding et al. 2007). My second hypothesis is the following:

H2: In countries with both strong enforcement and large accounting distance the increase in reporting quality was larger than (1) in countries with strong legal enforcement and small accounting distance and (2) in countries with both weak legal enforcement and large accounting distance.

In my second analysis, I examine whether the change in EIT due to the IFRS uniformity effect is more pronounced for IFRS adopters domiciled in countries that experienced a larger increase in reporting quality. If IFRS improves the ability of earnings signal to carry value relevant information about the firm's underlying economics, it is more likely to observe an increase in cross-border comparisons of accounting information. Thus, my third hypothesis is:

H3: The accounting uniformity effect of IFRS on EIT is more pronounced in EU countries that exhibited the largest change in reporting quality.¹⁴

3.3.2 Research Design

Several prior studies have used unexpected earnings (UE) as proxy of the unexpected component in the announcing firm's information system to test EIT (Han and Wild 1990; Pownall and Waymire 1990; Freeman and Tse 1992). These studies employ versions of the following specification:

¹⁴ Appendix C shows the organizational structure of the three hypotheses.

$$|CAR_{(NA)}| = \beta_0 + \beta_1 |UE_{(A)}| + \varepsilon_{(NA)} \quad (1)$$

where β_1 captures the information transfer earnings response coefficient (ERC), that is, the non-announcing firm's investor reaction to a unit of announcing firm's earnings surprise.¹⁵ To test my prediction that IFRS has a positive effect on EIT (H1), I use the following specification (using OLS with industry fixed effects):

$$|CAR_{(NA)}| = \beta_0 + \beta_1 |UE_{(A)}| + \beta_2 POST + \beta_3 |UE_{(A)}| * POST + \sum \beta_k Controls_k + \varepsilon_{NA} \quad (2)$$

where $|CAR_{(NA)}|$ is the three-day [-1, 0, +1] cumulative absolute abnormal return for non-announcing firms (NA) calculated around the earnings announcement date of announcing firm (A). I use the absolute value of $CAR_{(NA)}$ because, as outlined by Foster (1981), there are scenarios where a favorable release by the announcing firm can convey both favorable and unfavorable information for the non-announcing firm. Therefore, the ability to empirically detect an information transfer is increased by using a non-directional test. I estimate abnormal returns using the market model over the period -120 to -21 days before the earnings announcement date using country-specific market returns (*LI* in Datastream).

$|UE_{(A)}|$ is a measure of the magnitude of unexpected earnings of announcing firms, calculated as the absolute value of the difference between the actual earnings and

¹⁵ Throughout the study, I use the subscripts (A) and (NA) when I refer to announcing and non-announcing firms, respectively.

the mean analyst earnings forecasts, scaled by the price at the beginning of the year t , as reported by I/B/E/S.¹⁶ $POST$ is an indicator variable that is equal to one for firm-years following IFRS adoption, 2005–2010. The coefficient on $|UE_{(A)}| * POST$, β_3 , measures the change in EIT after IFRS adoption.

My first hypothesis predicts β_3 in eq. (2) to be positive. Following prior literature, I include several firm-level variables in eq. (2) to control for factors that influence the magnitude of market reactions of non-announcing firms. Han and Wild (2000) suggest that information transfer effects are inversely related to firm size. I control for the size of the announcing firm, $SIZE_{(A)}$, measured as the natural logarithm of the market value of equity at the end of fiscal year and I predict the size coefficient to be negative. Hayn (1995) suggests smaller information content for negative earnings than for positive earnings. I include $LOSS_{(A)}$, an indicator variable that is equal to one if the actual earnings is negative, and zero otherwise. I expect the coefficient on $LOSS_{(A)}$ to be negative. I also include the reporting lag, $REPLAG_{(A)}$, computed as the number of days from the announcing firm fiscal year end to the earnings announcement date reported by I/B/E/S. Based on findings in DeFond et al. (2007), I predict the coefficient on $REPLAG_{(A)}$ to be negative, because a longer reporting lag increases the likelihood that

¹⁶ I only consider firm-years for which I/B/E/S provides forecasting information for at least three analysts. I calculate the mean analysts' forecast using, for each analyst, the last available forecast before the earnings announcement date. In an untabulated test, I use the median analysts forecasts with substantially similar results.

investors are able to obtain earnings-related information prior to the earnings announcement date. I also control for non-announcing firms' characteristics. Specifically, I include four variables: (1) $SIZE_{(NA)}$ (calculated as for $SIZE_{(A)}$); (2) $NUMEST_{(NA)}$, a measure of the information environment, calculated as the number of analysts forecasts before the earnings announcement; (3) $LEV_{(NA)}$, a measure of the debt level, calculated as the ratio between total debt and total assets; (4) $BTM_{(NA)}$, a measure of growth, calculated as the ratio between book value of equity and market value of equity at the fiscal year end.¹⁷

To test for the change in reporting quality after IFRS adoption (H2), I exploit cross-country accounting and institutional differences to identify countries where I predict reporting quality to be greater after IFRS adoption. I use the country-classification criteria in Byard et al. (2011). I partition EU countries on two country-specific dimensions: accounting distance and enforcement. The accounting distance variable is based on the "*Gaapdiff1*" measure from Bae et al. (2008). This variable measures the number of inconsistencies between local GAAP and IFRS and is based on the GAAP 2001 survey among partners in large accountancy firms from more than 60 countries who benchmark their local country accounting standards against IFRS. A large value of this variable indicates large accounting distance.¹⁸

¹⁷ Appendix C includes all variable definitions.

¹⁸ Prior studies that use the GAAP 2001 survey to measure the difference between local GAAP

The enforcement variable is based on the “*Rule of Law*” index from Kaufmann et al. (2009). I use this index as a measure of country-specific regulatory quality that captures a country’s ability to implement regulation and government policies (Landsman et al. 2011; Christensen et al. 2012). I partition the sample based on the median values of enforcement and accounting distance. I identify three country-partitions. These partitions include:

- (1) firms domiciled in EU countries with small accounting distance and strong enforcement ($Gaapdiff1 \leq 11$ and $Rule\ of\ Law \geq 1.6$);
- (2) firms domiciled in EU countries with large accounting distance and strong enforcement ($Gaapdiff1 > 11$ and $Rule\ of\ Law \geq 1.6$);
- (3) firms domiciled in EU countries with large accounting distance and weak enforcement ($Gaapdiff1 > 11$ and $Rule\ of\ Law < 1.6$).¹⁹

I examine the change in reporting quality in the three country-partitions after IFRS adoption. Since I investigate the effect of IFRS on cross-firm market reactions, my measure of reporting quality is based on the perspectives of market participants. Francis et al. (2004) examine the association between the cost of equity and seven earnings measures: four accounting-based measures (accrual quality, persistence, predictability

and IFRS include Ding et al. (2007), Bae et al. (2008), Li (2010), and Wang (2011).

¹⁹ I identify three country-partitions because no EU country is characterized by a weak enforcement regime and small accounting distance (Byard et al. 2011).

and smoothness) and three market-based measures (value relevance, timeliness, and conservatism). Among the market-based earnings attributes, Francis et al. suggest that only value relevance is consistently associated with cost of equity estimates. Liu (2009) investigates the association between earnings quality and information transfer in the US using alternative measures of earnings quality. Her results suggest that the positive incremental effect of earnings quality on the magnitude of information transfers takes place when value relevance is used as a measure of reporting quality. Based on Francis et al., (2004) and Liu (2009), I examine the change in value relevance after IFRS adoption as a measure of the change in reporting quality in each country-partition.

Following prior literature (e.g., Barth et al. 2001, Barth et al. 2008), I measure value relevance as the explanatory power from regressions of stock price per share (P in Datastream) on earnings per share before extraordinary items (EPS in Datastream) and book value of equity per-share (BVE in Datastream). To ensure accounting information is in the public domain, P is stock price six months after fiscal year-end (Lang et al. 2003; Lang et al. 2006; Barth et al. 2008). Because the typical per-share levels of stock price, earnings, and book value of equity may vary substantially, I deflate all variables by stock prices six months after prior-year fiscal year end (P_{t-1}) as in Lang et al. (2003) and

Lang et al. (2006). Specifically, my value relevance metric is the adjusted R^2 from the following equation:²⁰

$$\frac{P_t}{P_{t-1}} = \beta_0 + \beta_1 \frac{EPS_t}{P_{t-1}} + \beta_2 \frac{BVEPS_t}{P_{t-1}} + \varepsilon_t . \quad (3)$$

Finally, to test the prediction that the change in reporting quality affects the relation between uniformity and comparability (H3), I estimate the following specification (using OLS with industry fixed effects, without intercept):

$$\begin{aligned} |CAR_{(NA)}| = & \beta_1 PART_1 + \beta_2 PART_2 + \beta_3 PART_3 + \beta_4 POST + \beta_5 |UE_{(A)}| * PART_1 + \beta_6 |UE_{(A)}| * PART_2 + \\ & + \beta_7 |UE_{(A)}| * PART_3 + \beta_8 |UE_{(A)}| * PART_1 * POST + \beta_9 |UE_{(A)}| * PART_2 * POST + \\ & + \beta_{10} |UE_{(A)}| * PART_3 * POST + \sum \beta_k Controls_k + \varepsilon_{NA} \end{aligned} \quad (4)$$

To estimate eq. (4) I use industry-year firm-pairs domiciled in different EU countries, conditional on announcing firms being located in the three country-partitions that predictably exhibited different changes in reporting quality after IFRS adoption (H2). $PART$ is a country-partition dummy, which equals one if the announcing firm is domiciled in one of the three country-partitions, and 0 otherwise. Specifically, $PART_1$ refers to announcing firms domiciled in the country-partition with large accounting

²⁰ Brown, Kin and Lys (1999) suggest that there are severe problems associated with the between-sample comparisons of R^2 , so that these comparisons may be invalid. Specifically, scale effects present in price regressions increase R^2 , and this effect increases in the scale factor's coefficient of variation. Thus, differences in R^2 , for instance, from samples drawn in different time periods may in part be driven by differences in the scale factor's coefficient of variation. Brown et al. (1999) control for the scale effect by running deflated regressions. They acknowledge that several scale proxies could have been chosen, but they argue that price at time $t-1$ is the preferred choice.

distance and strong enforcement (where I predict the reporting quality change after IFRS adoption was more pronounced); $PART_2$ ($PART_3$) refer to announcing firms domiciled in the country-partition with large (small) accounting distance and weak (strong) enforcement (where I predict the reporting quality change after IFRS adoption was less pronounced). The three coefficients of interest from eq. (4), are β_8 , β_9 and β_{10} . These coefficients capture the average incremental change in information transfer ERC for EAs disclosed in three country-partitions that predictably exhibited a different change in reporting quality after IFRS adoption. For my third hypothesis, I test whether β_8 is positive and larger than β_9 and β_{10} . This effect would indicate a larger increase in information transfer ERC in the country-partition where the increase in reporting quality after IFRS adoption was predictably more pronounced (as per H2).

3.4 Data and Sample

My study is based on annual earnings announcements of EU listed firms between January 2001 and December 2010.²¹ The sample selection criteria are described in Table 22.

²¹ Because half-year and quarter earnings announcements are sparsely covered in I/B/E/S, I use only annual earnings announcements.

Table 22: Sample Selection

Criteria	# Observations	# Firms	# EU Countries
Worldscope (all EU countries) during 2001 – 2010	46,023	4,277	27
Worldscope (mandatory IFRS adoption in 2005)	21,054	1,879	25*
Worldscope (mandatory IFRS adoption in 2005) + Datastream + I/B/E/S	11,311	1,654	25
Announcing and non-announcing firms-years with sufficient data in Datastream, Worldscope and I/B/E/S to construct all variables defined in Appendix C	6,555	1,278	17

Table 22 shows the criteria of the sample selection process.

* Two European countries, Romania and Bulgaria, joined the EU during the post-IFRS adoption period (Jan 1, 2007). Although IFRS was mandatorily adopted also in these two countries as of 2005, I exclude them because I cannot assume a regulatory and economic homogeneity of these two countries with the rest of the EU throughout the entire sample period (2001 – 2010).

I start by identifying all EU-listed firms included in Worldscope (for financial and industry data) and in Datastream (for returns data). I obtain firms' annual earnings announcement dates and earnings surprises from I/B/E/S.²² The resulting sample contains 1,654 unique firms from 25 EU countries. To identify comparable firms, I use the Global Industry Classification Standard (GICS) sub-industry code in Worldscope, which has 154 sub-industry codes. I use this relatively detailed industry classification to maximize the probability that firms are similar. The disadvantage is that the number of firm-pairs within the same industry cluster is limited.

Similar to prior studies (e.g., Han and Wild 1990), I pair announcing and non-

²² Consistent with prior literature (Landsman et al. 2011), I use I/B/E/S earnings to calculate earnings surprises.

announcing firms if they have the same GICS sub-sector code and same fiscal year end. I filter remaining observations to remove non-announcing firms with insufficient market data around the earnings announcement date of the announcing firms and non-announcing firms that release earnings within two days after the earnings announcement date of the announcing firm in the same industry-year. When forming firm-pairs, I use the first earnings announcement in each industry-year because prior studies suggest that information contained in early earnings announcements is particularly important in updating earnings expectations of other firms in the industry (e.g., Freeman and Tse 1992; Ramnath 2002). The final sample consists of 973 non-announcing firms from 16 EU countries and 305 announcing firms from 17 EU countries.²³

Panel A and Panel B of Table 23 show the distribution of 971 announcing firms' and 5,584 non-announcing firms' earnings announcements by year and country.

²³ Two countries, Poland and Czech Republic, joined the EU in 2004 (the last year of the pre-adoption period). Untabulated tests indicate that excluding firm-years from these two countries does not affect my inferences.

Table 23: Announcing firms' annual earnings announcements

Panel A: Announcing firms' annual earnings announcements (Obs/Firms) by country/year																
Country	01	02	03	04	05	06	07	08	09	10	Total # EAs	%	# Unique Ann.ing Firms	%	Firm/Year Pairs	%
AUT	0	0	1	0	0	0	0	0	0	1	2	0.1	1	0.3	11	0.2
BEL	0	2	3	5	2	2	2	4	3	2	25	2.7	9	3.0	76	1.4
CZE	0	0	1	0	0	0	0	1	0	2	3	0.3	1	0.3	8	0.1
DEU	1	3	1	1	1	1	1	2	1	3	15	1.5	6	2.0	48	0.9
DNK	3	2	3	1	2	2	2	2	3	4	24	2.5	9	3.0	91	1.6
ESP	5	5	8	7	8	11	8	11	9	10	82	8.4	28	9.2	630	11.3
FIN	17	8	13	15	13	16	19	20	15	16	152	15.7	37	12.1	1,101	19.7
FRA	7	13	14	14	17	13	13	12	15	12	130	13.4	44	14.4	614	11.0
GBR	23	13	17	17	12	16	14	16	15	14	157	16.2	53	17.4	708	12.7
GRC	1	0	2	2	4	3	2	1	2	1	18	1.9	11	3.6	26	0.5
IRL	2	1	2	1	1	0	2	0	1	0	10	1.0	5	1.6	45	0.8
ITA	0	0	3	5	9	8	9	4	4	4	46	4.7	24	7.9	203	3.6
LUX	0	0	1	1	1	0	1	0	0	0	4	0.4	1	0.3	16	0.3
NLD	4	10	8	5	12	10	8	11	10	8	86	8.9	19	6.2	322	5.8
POL	0	0	0	0	0	0	0	1	1	1	3	0.3	1	0.3	14	0.3
PRT	1	2	0	0	2	1	0	0	1	1	8	0.8	5	1.6	36	0.6
SWE	10	19	24	20	20	19	22	20	26	25	206	21.2	51	16.7	1,635	29.6
Total	74	78	101	94	104	102	103	105	106	104	971		305		5,584	

Table 23: Announcing firms' annual earnings announcements

Panel B: Non-announcing firms' earnings announcements (Obs/Firms) by country/year														
Country	01	02	03	04	05	06	07	08	09	10	Total # EAs	%	# Unique non-announcing firms	%
BEL	5	14	14	14	19	18	23	17	17	18	159	2.8	32	3.3
CZE	0	1	0	0	0	0	1	1	2	1	6	0.1	2	0.2
DEU	15	11	17	14	12	33	20	46	33	38	239	4.3	48	4.7
DNK	12	10	19	20	24	25	27	23	18	19	197	3.5	35	3.6
ESP	32	43	44	49	50	51	62	59	53	60	503	9.0	78	8.0
FIN	25	40	29	34	39	38	40	36	38	41	360	6.5	68	7.0
FRA	41	80	96	76	122	133	135	142	120	124	1,069	19.2	178	18.3
GBR	76	80	94	91	116	123	132	127	120	133	1,092	19.6	174	17.9
GRC	11	6	13	14	28	35	34	34	26	24	225	4.0	51	5.3
IRL	7	10	8	11	11	10	12	13	13	14	109	2.0	16	1.6
ITA	0	0	62	61	76	82	85	91	87	90	634	11.4	115	11.8
LUX	0	1	1	0	0	1	0	1	2	2	8	0.1	2	0.2
NLD	28	31	36	26	35	34	39	36	26	36	327	5.9	51	5.3
POL	0	0	1	0	0	3	5	8	9	8	34	0.6	11	1.1
PRT	9	6	12	14	15	13	15	15	12	14	125	2.2	22	2.3
SWE	50	44	44	41	48	51	54	53	55	57	497	8.9	90	9.3
Total	311	377	490	465	595	650	684	702	631	679	5,584		973	

Table 23 shows the sample distribution of firm-years by year and by country. Panel A reports the distribution of 971 firm-year observations of 305 announcing firms. Panel B reports the distribution of 5,584 firm-years of 973 non-announcing firms. Firm-pairs (in the column Firm/Year Pairs in Panel A) are formed using the first announcing firm's earnings release in each industry-year and the Global Industry Classification Standard (GICS) sub-industry code in Worldscope.

Panel A of Table 23 shows that the sample of announcing firms is dominated by Swedish, Finnish, British and French firms (66.5 percent in total). Panel B of Table 23 shows that the largest number of non-announcing firms' earnings announcements are from France, Spain, Italy and the UK (60 percent in total), whereas the smallest number

of non-announcing firms' earnings announcements are from Poland, Czech Republic and Luxemburg (0.8 percent in total).²⁴

Panel A and Panel B of Table 24 presents the sample distribution of announcing and non-announcing firms for each country-partition. Because prior studies have suggested that national investors tend to be already familiar with local accounting practices both when local GAAP and IFRS are used (Covrig et al. 2007), I expect that the benefits of larger accounting uniformity following IFRS adoption are smaller for national investors than for international investors. Based on this prior evidence, and to increase my ability to empirically detect an increase in information transfer ERC after IFRS adoption, in my tests I adopt international firm-pairs. These pairs are based on announcing and non-announcing firms being domiciled in different countries.²⁵ Panel C of Table 24 reports the distribution of the firm-pairs.

²⁴ The limited number of observations from Poland, Czech Republic and Luxembourg is due to the small size of capital markets in these countries and to the sparse coverage of firms in I/B/E/S (Landsman et al. 2011).

²⁵ Specifically, in my design non-announcing firms can be domiciled in different countries of the same partition or in different countries of different partitions where announcing firms are domiciled.

Table 24: Announcing and non-announcing firms' earnings announcements by country-partitions based on accounting distance and legal enforcement

Panel A: announcing firms' earnings announcements by country-partitions			
Accounting Distance/ Enforcement	Weak Enforcement	Strong Enforcement	Total
Large Accounting Distance	BEL, CZE, ESP, FRA, GRC, ITA, POL, PRT 315	AUT, DEU, DNK, FIN, LUX 197	512
Small Accounting Distance	0	IRL, GBR, NLD, SWE 459	459
Total	315	656	971

Panel B: non-announcing firms' earnings announcements by country-partitions			
Accounting Distance/ Enforcement	Weak Enforcement	Strong Enforcement	Total
Large Accounting Distance	BEL, CZE, ESP, FRA, GRC, ITA, POL, PRT 2,755	DEU, DNK, FIN, LUX 804	3,559
Small Accounting Distance	0	IRL, GBR, NLD, SWE 2,025	2,025
Total	2,755	2,829	5,584

Table 24: Announcing and non-announcing firms' earnings announcements by country-partitions based on accounting distance and legal enforcement

Panel C: (A) Number of announcing firms' earnings announcements by country-partition and
(B) number of firm-years conditional on non-announcing and announcing firms
being domiciled in different countries

Accounting Distance/ Enforcement	Weak Enforcement	Strong Enforcement	Total
Large Accounting Distance	BEL, CZE, ESP, FRA, GRC, ITA, POL, PRT	AUT, DEU, DNK, FIN, LUX	
	(A) 315 (B) 1,406	(A) 197 (B) 728	(A) 512 (B) 2,134
Small Accounting Distance	0	IRL, GBR, NLD, SWE	
		(A) 459 (B) 1,675	(A) 459 (B) 1,675
Total	(A) 315 (B) 1,406	(A) 656 (B) 2,403	(A) 971 (B) 3,809

Table 24 shows the partition of announcing and non-announcing firm-years based on country-specific enforcement and accounting distance. Enforcement is a measure of the quality of a country's enforcement environment from Kaufmann et al. (2009). Higher values of enforcement indicate stronger legal and enforcement systems. Accounting distance is the GAAP difference measure from Bae et al. (2008, Table 1). Accounting distance measures differences between countries' local GAAPs and IFRS along 21 key accounting items. The range is (0 – 21), with higher values of accounting distance indicating greater differences between local GAAP and IFRS. Countries are clustered on the median values of accounting distance (11, in Bae et al. 2008) and enforcement (1.6, in Kaufmann et al. 2009). This partitioning scheme results in three country-partitions: (1) the Strong Enforcement – Small Accounting Distance group; (2) the Strong Enforcement – Large Accounting Distance group; and (3) the Weak Enforcement – Large Accounting Distance group. No country presents below-median values of both enforcement and accounting distance. Panel A shows the number of announcing firms' earnings announcements. Panel B shows Number of non-announcing firms' earnings announcements by country-partitions based on accounting distance and legal enforcement. Panel C shows two numbers: (A) the number of announcing firms' earnings announcements and (B) the number of firm-years, conditional on non-announcing and announcing firms being domiciled in different countries.

Panel A and Panel B of Table 24 presents the sample distribution of announcing and non-announcing firms for each country-partition. Because prior studies have suggested that national investors tend to be already familiar with local accounting practices both when local GAAP and IFRS are used (Covrig et al. 2007), I expect that the benefits of larger accounting uniformity following IFRS adoption are smaller for national investors than for international investors. Based on this prior evidence, and to increase my ability to empirically detect an increase in information transfer ERC after IFRS adoption, in my tests I adopt international firm-pairs. These pairs are based on announcing and non-announcing firms being domiciled in different countries.²⁶ Panel C of Table 24 reports the distribution of the firm-pairs.

Overall, Panel A of Table 24 shows that the strong enforcement – small distance country-partition has the largest number of announcing firm-years (47 percent). Panel B shows that the weak enforcement – large distance country-partition has the largest number of non-announcing firm-years (49 percent). Panel C shows that the total number of firm-pairs is 3,809. It also shows that the strong enforcement – large distance and the weak enforcement – small distance country-partitions have the largest number of firm-

²⁶ Specifically, in my design non-announcing firms can be domiciled in different countries of the same partition or in different countries of different partitions where announcing firms are domiciled.

pairs (37 percent and 44 percent, respectively). The strong enforcement-large accounting distance partition has the lowest number of firm-pairs (20 percent).²⁷

3.5 Empirical Evidence

3.5.1 Descriptive Statistics

Table 25 presents descriptive information for the pre- and post-IFRS adoption firm-years for $|CAR_{(NA)}|$ and $|UE_{(A)}|$ as well as for the firm-level control variables used to estimate eq. (2) and eq. (4). To reduce the effect of data errors and outliers and to be consistent with prior literature, I winzorise all continuous variables at 1 percent and 99 percent.

Table 25: Descriptive Statistics

	Before IFRS				After IFRS			
	N	Mean	Median	SD	N	Mean	Median	SD
$ CAR_{(NA)} $	1,125	0.039	0.029	0.015	2,684	0.042**	0.033**	0.022
$ UE_{(A)} $	347	0.029	0.013	0.012	624	0.013***	0.005***	0.009
$SIZE_{(A)}$	347	7.211	7.128	1.011	624	8.598*	8.822*	1.001
$REPLAG_{(A)}$	347	41.362	42	13.376	624	36.772	37	12.108
$LOSS_{(A)}$	347	0.162	0	0.357	624	0.073*	0	0.161
$SIZE_{(NA)}$	1,125	6.195	6.125	1.875	2,684	7.512**	7.285**	1.236
$NUMEST_{(NA)}$	1,125	14.894	12	11.145	2,684	13.481*	10*	9.745
$LEV_{(NA)}$	1,125	0.609	0.621	0.254	2,684	0.619	0.625	0.245
$BTM_{(NA)}$	1,125	0.642	0.519	0.504	2,684	0.629	0.499	0.521

Table 25 shows descriptive statistics for the firm-pairs used to estimate eq. (2) and eq. (4). The subscripts (A) and (NA) refer to announcing and non-announcing firms, respectively. $|CAR_{(NA)}|$ and $|UE_{(A)}|$ are the primary variables of interest. Descriptive statistics of $|CAR_{(NA)}|$ is based on

²⁷ The low frequency of firm-years in the strong enforcement-large accounting distance partition is attributable to the smaller number of countries included in this partition and to the limited size of their capital markets (e.g., Denmark, Luxemburg).

the 3,809 paired non-announcing firm-observations in Panel C of Table 24. Descriptive statistics of $|UE_{(A)}|$ is based on the 971 unique announcing firm-observations in Panel A of Table 24. *SIZE*, *REPLAG*, *LOSS*, *NUMEST*, *LEV*, and *BTM* are used as control variables (variables are defined in Appendix C). All continuous variables are winzORIZED at the 1st and 99th percentiles. I assess the statistical significance of change in mean and median using the unpaired *t*-test and the Wilcoxon rank sum test. ***, **, and * indicate significance at the 1 percent, 5 percent, and 10 percent levels, respectively.

The mean and median for $|CAR_{(NA)}|$ are significantly larger in the post-IFRS adoption period (0.042 and 0.033, respectively) than in the pre-IFRS adoption period (0.039 and 0.029; *p*-values < 0.05).²⁸ Also, the mean and median $|UE_{(A)}|$ are significantly smaller in the post-IFRS adoption period (0.013 and 0.005, respectively) than in the pre-IFRS adoption period (0.029 and 0.013, respectively; *p*-values < 0.01). Overall, these descriptive results are consistent with evidence in prior literature indicating an increase in the information content of earnings announcements and a decrease in earnings surprise after IFRS adoption (e.g., Bae et al. 2008; Landsman et al. 2011; Siciliano 2012). Changes in control variables, although statistically significant in a couple of cases, are generally limited in magnitude.

²⁸I assess the statistical significance of change in mean using the unpaired *t*-test. I use the unpaired *t*-test because in my study it is not always the case that the same non-announcing firm is included both in the pre- and in the post-IFRS adoption period.

Table 26: Pearson Correlations

	$ CAR_{(NA)} $	$ UE_{(A)} $	$SIZE_{(A)}$	$REPLAG_{(A)}$	$LOSS_{(A)}$	$SIZE_{(NA)}$	$NUMEST_{(NA)}$	$LEV_{(NA)}$	$BTM_{(NA)}$
$ CAR_{(NA)} $	1								
$ UE_{(A)} $	0.019 0.091	1							
$SIZE_{(A)}$	0.004 0.710	-0.271 0.000	1						
$REPLAG_{(A)}$	-0.007 0.501	-0.011 0.212	-0.069 0.000	1					
$LOSS_{(A)}$	0.071 0.000	0.445 0.000	-0.199 0.000	0.013 0.372	1				
$SIZE_{(NA)}$	-0.107 0.000	-0.084 0.000	0.242 0.000	-0.178 0.000	-0.112 0.000	1			
$NUMEST_{(NA)}$	-0.112 0.000	-0.059 0.000	0.141 0.000	-0.121 0.000	-0.087 0.000	0.711 0.000	1		
$LEV_{(NA)}$	-0.060 0.000	-0.035 0.003	0.110 0.000	-0.071 0.000	-0.112 0.000	0.271 0.000	0.232 0.000	1	
$BTM_{(NA)}$	-0.012 0.282	0.110 0.000	0.001 0.922	0.051 0.000	0.013 0.243	-0.311 0.000	-0.101 0.000	-0.031 0.016	1

Table 26 reports the Pearson correlations with two-tailed p -values in parenthesis. See Appendix C for variable definitions.

Table 26 reports the Pearson correlations between $|CAR_{(NA)}|$, $|UE_{(A)}|$ and the variables included in Table 25. The results in Table 26 indicate that $|CAR_{(NA)}|$ and $|UE_{(A)}|$ are weakly correlated (+0.019, p -value < 10 percent) and that $|CAR_{(NA)}|$ is correlated with most of the other variables. These correlations illustrate the importance of including the control variables when estimating EIT in eq. (2) and eq. (4).

To assess the sensitivity of the results in Table 25 and Table 26 to sample differences in the pre- and post-IFRS period (which may be an issue in an unbalanced

design), I repeat the descriptive analyses using a balanced design. I exclude firm-pairs if non-announcing firms have less than two observations in each period. After their exclusion, I have 2,247 firm-pairs for 402 non-announcing firms with at least two observations in each period. Descriptive results for this balanced design (untabulated) show statistically similar findings as those found using the unbalanced design.²⁹

3.5.2 The Effect of IFRS on EIT (H1)

Table 27 reports results of estimating eq. (2), which regresses the cumulative absolute abnormal returns of non-announcing firms, $|CAR_{(NA)}|$, on the announcing firms' absolute earnings surprise ($|UE_{(A)}|$), on the period indicator, $POST$, and on the two-way interaction, $|UE_{(A)}| * POST$, and control variables.

²⁹ For this balanced design, I assess the statistical significance of change in mean using the paired t -test to account for the presence of the same non-announcing firm during the pre- and post IFRS adoption period.

Table 27: Test of the effect of IFRS on EIT (H1): eq. (2)

	Unbalanced Sample		Balanced Sample	
	(1)	(2)	(3)	(4)
	CAR _(NA)	CAR _(NA)	CAR _(NA)	CAR _(NA)
UE _(A)	0.061 [1.458]	0.058 [1.294]	0.043 [1.135]	0.040 [1.164]
POST	0.002 [1.587]	0.002* [1.728]	0.001* [1.681]	0.002* [1.734]
UE _(A) * POST	0.051* [1.792]	0.054* [1.755]	0.044* [1.695]	0.047* [1.724]
REPLAG _(A)		0.000 [0.894]		0.000 [0.835]
LOSS _(A)		0.003** [2.131]		0.003* [1.927]
SIZE _(A)		0.001*** [5.953]		0.001*** [5.254]
NUMEST _(NA)		-0.000** [-2.124]		-0.000** [-2.098]
LEV _(NA)		0.005** [2.147]		0.005* [1.798]
BTM _(NA)		0.000 [-0.523]		0.001 [0.965]
SIZE _(NA)		-0.000 [-1.593]		-0.000 [-0.512]
Industry Effects	YES	YES	YES	YES
Constant	0.031*** [32.842]	0.029*** [6.191]	0.035*** [37.546]	0.027*** [7.672]
# Firm-pairs	3,809	3,809	2,247	2,247
Adjusted-R ²	3.87%	5.01%	3.11%	4.23%

$$|CAR_{(NA)}| = \beta_0 + \beta_1 |UE_{(A)}| + \beta_2 POST + \beta_3 |UE_{(A)}| * POST + \sum \beta_k Controls_k + \varepsilon_{NA}$$

Table 27 shows the results of estimating eq. (2). The subscripts (A) and (NA) indicate announcing and non-announcing firms, respectively. Column (1) reports the results of regressing $|CAR_{(NA)}|$ on $|UE_{(A)}|$, $POST$ and the two-way interaction $|UE_{(A)}| \times POST$. Column (2) reports the results of regressing $|CAR_{(NA)}|$ on $|UE_{(A)}|$, $POST$, the two-way interaction $|UE_{(A)}| \times POST$ and firm-level controls as defined in Appendix C. Column (3) and Column (4) report the results of estimating eq. (2) using a balanced sample. This sample includes only non-announcing firms with at least two observations both in the pre- and post-IFRS adoption period. All variables are winzorized at the 1st and 99th percentile. ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels (two-tailed). *T*-statistics are reported below the coefficient estimates.

Column 1 in Table 27 presents the results from estimating eq. (2) including only $|UE_{(A)}|$, $POST$ and the two-way interaction, $|UE_{(A)}| * POST$. Column 2 shows the results including the control variables described in Section 3.3. Column 3 and column 4 report additional results of estimating eq. (2) using the balanced design described in Section 3.5.1. The findings in column 1 confirm prior research findings that there is a positive change in EIT during the post-IFRS adoption period. Specifically, the coefficient on the interaction $|UE_{(A)}| * POST$ is 0.051 (p -value < 0.10), consistent with larger information transfer ERC after IFRS adoption. The findings in column 2 for $|CAR_{(NA)}|$ estimations with other control variables show the same inference for the $|CAR_{(NA)}|$ estimations presented in column 1: the coefficient on the interaction $|UE_{(A)}| * POST$ is positive (0.054, p -value < 0.10). In addition, I find that the mean effect of IFRS on EIT is positive (the coefficient on $POST$ is positive 0.002, p -value < 0.10). Results for the balanced design are similar. In column 3 and in column 4 the coefficient on the interaction $|UE_{(A)}| * POST$ is positive (0.044 and 0.047, respectively; p -value < 0.10). Overall, these results indicate that the EIT increased in the EU after IFRS adoption, as predicted in H1.

3.5.3 The Effect of IFRS on Reporting Quality (H2)

H2 investigates the effect of IFRS on reporting quality (the second component of comparability). Specifically, my test of H2 examines whether the effect of IFRS on reporting quality is larger in the large accounting distance – strong enforcement country-partition. Evidence in support of H2 would be indicated by a larger increase in the adjusted- R^2 of eq. (3) in the large accounting distance – strong enforcement partition than in the other two partitions.

I estimate eq. (3) in the pre-adoption and in the post-adoption period in the three country-partitions separately. For this analysis I use announcing firm-years domiciled in the three country-partitions, as reported in Panel C of Table 24. I compute two-tailed p -values to test for a significant difference in adjusted- R^2 based on the methodology in Cramer (1987).

Table 28: Test of the change in value relevance following IFRS adoption in the three EU country-partitions clustered on accounting distance and enforcement: eq. 3 (H2)

	Adjusted R^2 pre-IFRS adoption (1)	Adjusted R^2 post-IFRS adoption (2)	Difference (%) (2) – (1)
Large accounting distance – Strong enforcement	0.059	0.070	+ 19 **
Large accounting distance – Weak enforcement	0.069	0.058	- 16 *
Small accounting distance – Strong enforcement	0.075	0.068	- 9 *

$$\frac{P_t}{P_{t-1}} = \beta_0 + \beta_1 \frac{EPS_t}{P_{t-1}} + \beta_2 \frac{BVEPS_t}{P_{t-1}} + \varepsilon_t$$

Table 28 reports the change in value relevance (my proxy of reporting quality) in the three country-partitions based on accounting distance and enforcement as described in Table 24. Value relevance is the adjusted R^2 from regressing stock price (P in Datastream) on earnings per share before extraordinary items (EPS in Datastream) and book value of equity per share (BVE in Datastream). I deflate all variables by stock prices six months after prior-year fiscal year end (P_{t-1}). I compute two-tailed p -values to test for a significant difference in adjusted- R^2 based on the methodology in Cramer (1987).

Table 28 reports the results of this analysis. I find that the adjusted- R^2 increases by 19 percent in the large accounting distance – strong enforcement partition and this difference is statistically significant at 5 percent level. In contrast, I observe that in the large accounting distance – weak enforcement partition and in the small accounting distance – strong enforcement partition the adjusted- R^2 decreases by 16 percent and 9 percent, respectively and these differences are statistically significant at 10 percent. Results in Table 28 indicate, consistent with my prediction, that reporting quality

increased only in EU countries with large accounting distance and strong enforcement after IFRS adoption.

3.5.4 The Effect of IFRS on EIT Conditional on Reporting Quality (H3)

Table 29 shows results of the tests of H3. This table reports the findings of estimating eq. (4) conditional on announcing firms being domiciled in the three country-partitions (small accounting distance–strong enforcement, large accounting distance–strong enforcement, large accounting distance–weak enforcement) and on non-announcing and announcing firms being domiciled in different countries.

Table 29: Test of IFRS effect on EIT conditional on reporting quality (H3): eq. (4)

	Unbalanced Sample (1)	Unbalanced Sample (2)	Balanced Sample (3)	Balanced Sample (4)
PART ₁	0.001* [1.725]	0.002* [1.895]	0.001* [1.736]	0.001 [1.586]
PART ₂	0.001 [1.165]	0.001 [1.312]	0.001 [1.352]	0.000 [1.125]
PART ₃	-0.000 [-0.852]	-0.000 [-0.458]	-0.000 [-0.865]	-0.000 [-0.352]
POST	0.002 [1.585]	0.002 [1.125]	0.001 [1.624]	0.001 [1.265]
UE _(A) * PART ₁	0.014 [1.355]	0.018 [1.415]	0.016 [1.542]	0.015 [1.152]
UE _(A) * PART ₂	0.021 [1.551]	0.024* [1.679]	0.022 [1.425]	0.023* [1.652]
UE _(A) * PART ₃	0.006 [1.178]	0.008 [1.362]	0.004 [1.524]	0.005 [1.611]
UE _(A) * PART ₁ * POST	0.003* [1.731]	0.004* [1.819]	0.003* [1.791]	0.003* [1.685]
UE _(A) * PART ₂ * POST	0.001 [1.413]	0.002 [1.224]	0.001 [1.493]	0.002 [1.414]
UE _(A) * PART ₃ * POST	0.001 [1.226]	0.002 [1.482]	0.001 [1.426]	0.001 [1.312]
REPLAG _(A)		0.000*** [4.265]		0.000*** [3.958]
LOSS _(A)		0.005* [1.692]		0.005 [1.465]
SIZE _(A)		0.008*** [5.859]		0.007*** [5.451]
NUMEST _(NA)		-0.000* [-1.826]		-0.000* [-1.685]
LEV _(NA)		-0.000 [-0.356]		-0.001 [-0.256]
BTM _(NA)		0.004*** [2.825]		0.005*** [2.124]
SIZE _(NA)		-0.001 [-1.621]		-0.001 [-1.215]
Industry Effects	YES	YES	YES	YES
# Firm-pairs	3,809	3,809	2,247	2,247
Adjusted R ²	4.84%	8.22%	5.16%	7.85%

$$|CAR_{(NA)}| = \beta_1 PART_1 + \beta_2 PART_2 + \beta_3 PART_3 + \beta_4 POST + \beta_5 |UE_{(A)}| * PART_1 + \beta_6 |UE_{(A)}| * PART_2 + \\ + \beta_7 |UE_{(A)}| * PART_3 + \beta_8 |UE_{(A)}| * PART_1 * POST + \beta_9 |UE_{(A)}| * PART_2 * POST + \\ + \beta_{10} |UE_{(A)}| * PART_3 * POST + \sum \beta_k Controls_k + \varepsilon_{NA}$$

Table 29 reports the results of estimating eq. (4) with dummies partitions ($PART_1$, $PART_2$, $PART_3$) to proxy for changes in reporting quality after IFRS adoption in the three country-partitions, as described in Table 24. Specifically, $PART_1$ refers to announcing firms domiciled in the country-partition with large accounting distance and strong enforcement (where I predict the reporting quality change after IFRS adoption was more pronounced); $PART_2$ ($PART_3$) refer to announcing firms domiciled in the country-partition with large (small) accounting distance and weak (strong) enforcement (where I predict the reporting quality change after IFRS adoption was less pronounced). Column (1) reports the results of regressing $|CAR_{(NA)}|$ on the three dummy partitions ($PART_1$, $PART_2$, $PART_3$), $POST$, the two-way interaction $|UE_{(A)}| \times PART_{(i)}$ and on the three-way interactions $|UE_{(A)}| \times PART_{(i)} \times POST$. Column (2) reports the results of estimating eq. (4) including firm-level controls as defined in Appendix C. Column (3) and Column (4) report the results of estimating eq. (4), without and with firm-level controls, using the balanced sample. All variables are winzorized at the 1st and 99th percentile. ***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels (two-tailed). T -statistics are reported below the coefficient estimates.

Results in Table 29 show that the effect of IFRS on EIT is positive and significant in the country-partition that exhibited the largest increase in reporting quality (i.e., the large accounting distance – strong enforcement partition). The coefficient on $|UE_{(A)}| * PART_1 * POST$ in column 1 is positive (0.003, p -value < 0.10). When I include firm-level control variables, the coefficient on $|UE_{(A)}| * PART_1 * POST$ in column 2 remains positive (0.004, p -value < 0.10). I find, however, that this effect is positive also in the country-partitions that exhibited a negative change in reporting quality ($PART_2$ and $PART_3$). The coefficient on $|UE_{(A)}| * PART_2 * POST$ and on $|UE_{(A)}| * PART_3 * POST$ in column 2 are both equal to 0.002. The t -statistics are, however, in the range 1.20 – 1.50.

To further measure the effect of IFRS adoption on information transfers, I conduct a F -test to assess whether the coefficient on $|UE_{(A)}| * PART_{(i)} * POST$ is

statistically different across the three partitions. I find that neither of the differences is statistically significant. This test (not tabulated) shows that although the coefficient on $|UE_{(A)}| * PART_1 * POST$ is larger in magnitude than the coefficients on $|UE_{(A)}| * PART_{2(3)} * POST$, the difference is not statistically significant.

In column 3 and 4 I present results of estimating eq. (4) using the balanced sample. Findings are similar to those reported in column 1 and in column 2. The coefficient on $|UE_{(A)}| * PART_1 * POST$ is positive (0.003, both in column 3 and in column 4) and larger than the coefficients on $|UE_{(A)}| * PART_2 * POST$ and on $|UE_{(A)}| * PART_3 * POST$ (in the range 0.001 – 0.002 with *t*-statistics in the range 1.31 – 1.49). An *F*-test (untabulated) indicates that the differences among the coefficients β_8 , β_9 and β_{10} across the three country-partitions are not statistically significant at conventional levels. This result confirms that I am unable to provide statistical evidence supporting the notion of reporting quality effects on comparability.³⁰

3.5.5 Robustness Checks

In this section I report results from several robustness checks. As I discussed in Section 3.3, the ability to empirically detect an information transfer is increased by using a non-directional test (Foster, 1981). Wang's (2011) analysis of IFRS effects on EIT is

³⁰ One reason and concern for this weak evidence is that my sample has low statistical power given the limited sample size of announcing firms in each country partition (especially in the country partition where the change in reporting quality after IFRS adoption was the largest, see Table 24).

based, however, on a directional variant of the abnormal return-earnings surprises relation. Her design is based on the assumption that positive (negative) earnings news by an announcing firm have a positive (negative) effect on the security prices of comparable non-announcing firms. I re-estimate the specifications for Table 27 and Table 29 using signed cumulative abnormal returns, $CAR_{(NA)}$, and signed unexpected earnings, $UE_{(A)}$. I find that the coefficients on the interactions, $UE_{(A)} * POST$ (in Table 27) and on $UE_{(A)} * PART_{(i)} * POST$ (in Table 29) are not statistically significant.

To alleviate the concern that this non-significant result is not attributable to a contagion effect and to an industry-competition effect as suggested in Ferris et al. (1997), I partition the sample into positive and negative subsamples. The positive (negative) subsample includes observations where the unexpected earnings of announcing firms and the cumulative abnormal returns of non-announcing firms have the same (different) sign. The results for the positive subsample (not tabulated) show that the coefficients on the interaction terms $UE_{(A)} * POST$ are of smaller magnitude, but statistically similar to those in Table 27. The results, both for the positive and for the negative subsamples show, however, that the three coefficients (β_8 , β_9 and β_{10}) on the three-way interaction ($UE_{(A)} * PART_{(i)} * POST$) are not statistically different from each other, as in Section 3.5.3. Overall, this test confirms the existence of a positive sign return-earnings

relation, as shown in prior research. It corroborates, however, that there is insufficient evidence to support my H3.³¹

Within the information transfer literature, research also uses the relation between the unsystematic stock return of announcing and non-announcing firms at earnings release dates to measure EIT (e.g., Foster 1981; Clinch and Sinclair 1987). For instance, Wang (2011) uses the announcing firm's unsystematic stock return, $CAR_{(A)}$ as additional control variable to explain non-announcing firms abnormal returns. I re-estimate eq. (2) and (4) using the announcing firm's cumulative abnormal return, $CAR_{(A)}$. In both my magnitude and signed tests I find that the coefficients on the interactions $|UE_{(A)}| * POST$ (in Table 27) and on $|UE_{(A)}| * PART_{(i)} * POST$ (in Table 29) are not statistically significant.

As final robustness checks, additional correlations (not tabulated) between announcing firms' UE and non-announcing firms' $CARs$ for variations in the research design, including the stock return cumulation period $[-2, +2]$, the exclusion of simultaneous-release firms, and the use of less refined industry-classification codes in Datastream, are consistent with those reported.

³¹ In additional (unreported) test, I also separate announcing firms into ten mutually exclusive portfolios on the magnitude and sign of their UE . The first (tenth) portfolio is composed of the 10 percent of firms with the most negative (positive) UE . I assign non-announcing firms' $CARs$ to the ten portfolios corresponding to the assignments of their announcing firms. I find a positive and significant correlation between signed UE_A and CAR_{NA} in the first, second, eighth, ninth, and tenth decile.

3.6 Conclusions and Future Research

I investigate the effect of IFRS on comparability (as proxied by earnings information transfer - EIT) in the EU. Using a sample of 3,809 firm-pairs over 2001 – 2010, I first confirm results in prior studies that IFRS adoption increased EIT (Wang 2011; Kim and Li 2012). Second, I investigate whether this result varied across three settings that exhibited a different change in reporting quality after IFRS adoption. My study shows three results: (1) overall, there is a positive change in EIT after IFRS adoption; (2) the effect of IFRS on reporting quality is more pronounced in countries with both strong enforcement regimes and large accounting distance (i.e., domestic accounting standards that differ substantially from IFRS); (3) there is, however, no sufficient statistical support to view reporting quality as a potential source for the increase in comparability. This last result can be attributable either to the fact that the link between reporting quality and comparability (my H3) is not that strong in the first place, or to my present design that does not allow sufficient statistical power to detect this link.

I regard these preliminary results with some caution. For instance, in my first test I provide evidence concerning the effect of IFRS on cross-country comparability. Although my design attempts to mitigate identification issues attributable to simultaneous changes in compliance and regulatory environments to isolate increased comparability effect arising from IFRS adoption, it is possible, however, that the

introduction of IFRS coincided with other economic, regulatory or institutional changes that have facilitated information externalities (Christensen et al. 2012). The clustered nature of IFRS adoption around the world makes it difficult to disentangle IFRS effects from other concurrent institutional changes or economic shocks. Among the ones geared at securities markets in EU were the Market Abuse Directive on insider trading and market manipulation, the Transparency Directive, which addressed general reporting and disclosure requirements, and several stock market merger events, which may have favored larger transnational intra-industry market reactions. One possible direction for future research is to examine concurrent explanations for an increase in EIT around major stock market regulation events.

A second research direction would be to identify an alternative (and more direct) method for selecting comparable firms. For instance, comparable firms could be grouped on the basis of shared analysts under the assumption that analysts better incorporate the information from earlier IFRS earnings announcements in the industry when revising their earnings expectations for firms that are yet to report their earnings announcement for the period. Exploring these alternative institutional mechanisms and research designs as yet other information channels of increasing comparability in the context of transnational information transfers would be a fruitful avenue for future research.

Appendix A

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
PPE	- Acquisition cost - Fair value	- Acquisition cost - Revaluation of tangible fixed assets from 1984	- Acquisition cost - Revaluation of tangible fixed assets	- Acquisition cost - Replacement value (fair value) method - Revaluation	- Acquisition cost - Fair value - Current value
		1	1	1	
PPE Depr.	- The units of production method - The diminishing balance method - The straight-line method	- The increasing balance method - The diminishing balance method - The straight-line method - In annual accounts fiscal rules are followed (eliminated in consolidated accounts)	No specific method	- The increasing balance method - The diminishing balance method - The straight-line method - Linear method suggested and no effect of fiscal rules on annual accounts	- Linear - Decreasing - Increasing - Combinations of linear-decreasing- increasing
		1	1	1	
Res. costs	- Charged to income	- Charged to income - Applied research costs can be capitalized and amortized in 5 years	- Capitalized and amortized over 5 years - Charged to income	- Charged to income	- Capitalized - Charged to income
		1	1	0	
Dev. costs	- Charged to income - Capitalized, if certain conditions for capitalization are met	- Charged to income - Capitalized if certain conditions for capitalization are met	- Charged to income - Development costs can be capitalized. No criteria in local GAAP	- Generally charged to income - Capitalized, if certain conditions for capitalization are met	- Capitalized - Charged to income
		0	1	0	

***De jure* accounting treatments under IFRS and local GAAP (2002)**

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Goodwill on acquisition	- Capitalized as intangible asset	- Capitalized as intangible asset - Write-off against reserves	- Capitalized as intangible asset - Write-off against income	- Capitalized as intangible asset - Write-off against income - Write-off against reserves (Accounting standards suggest capitalization only, law bills propose to eliminate the possibility to write- off against income/reserves)	- Capitalized - Write-off against reserves - Write-off against income
		1	1	1	

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Goodwill treatment (if capitalized)	- Amortized on a systematic basis over its useful life, which is presumed not to exceed 20 years (2002 version)	- Amortized in 5 years - Possible to amortize in more than 5 years - Legally protected goodwill is impaired	- Amortized in 5 years - Possible to amortize in more than 5 years - Only impaired if justifiable	- Accounting standards are similar to IAS. Amortized on a systematic basis over its useful life, which is presumed not to exceed 20 years	- Amortized in 5 years - Amortized in more than 5 and less than 20 years - Amortized in more than 20 years - Impaired
		1	1	0	
Statement of change in equity (SCE) - position	- Presented as separate component of the financial statement	- Required in the notes	- Required in the notes	- Required in the notes	- Primary document - Disclosed in the Notes
		1	1	1	
SCE – recognition of non-controlling interests	- Disclose the minority interests	- Accounting standards recommend to disclose a statement of minority interests	- Accounting standards do not require or suggest to disclose a statement of minority interests	- Accounting standards recommend to disclose a statement of minority interests	- Disclosed - Not disclosed
		0	1	0	
Inventory costing flow	- FIFO - Weighted average cost	- FIFO - Weighted average cost	- FIFO - Weighted average cost - LIFO	- FIFO - Weighted average cost - LIFO - Similar methods	- FIFO - LIFO - Weighted average cost - Similar methods - Combinations of FIFO-LIFO-WAC-Similar methods
		1	0	1	

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Segment reporting	- Primary segment and Secondary segment - The definition of segment based on the source and nature of risks facing the entity	- Breakdown of turnover, assets (or fixed assets) and profits/losses by business and geographic areas or monetary zone - The definition of segment based on homogeneity of products, services, trades, countries	- Breakdown of turnover by business and geographic areas - The definition of segment based on homogeneity of products, services, trades, countries	- Similar to IAS 14 (translated in RJ 350)	- Minimum disclosure in the notes (not in conformity to the IAS 14 disclosure) - In conformity to IAS 14
		1	1	0	
Statement of Cash Flow (classification)	- Direct - Indirect	- Direct - Indirect	- Direct - Indirect	- Direct - Indirect	- Direct - Indirect
		0	0	0	

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Statement of Cash Flow (position)	- Primary statement	- Notes	- Not mentioned in local GAAP	- Notes	- Primary - Notes
		1	1	1	
Statement of Cash Flow (tax exp.)	- Classified as Operating - If specifically identifiable, classified as investing or financing	Not regulated	Not regulated	Similar to IAS 7	- Operating - Investing - Financing
		1	1	0	
Statement of Cash Flow (interests exp.)	- Classified as operating - Alternatively, classified as investing or financing	Not regulated	Not regulated	Similar to IAS 7	- Operating - Investing Financing
		1	1	0	
Cost classification in the IS	- Nature - Function	- Nature - Function	- Nature - Function	- Nature - Function	- Nature - Function
		0	0	0	
Minority interest in group equity	Disclose in the balance sheet	Similar to IAS	Similar to IAS	Similar to IAS	- Disclosed - Not disclosed
		0	0	0	

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Treasury shares	- Deducted from equity	- Deducted from equity - Recognized as asset with a corresponding reserve in equity	- Recognized as asset with a corresponding reserve in equity until sold	Similar to IAS	- Recognized as asset - Deducted from equity
		1	1	0	
Earnings per shares (EPS)	- Recognized in the income statement	- Recognized in the income statement	Not regulated	- Recognized in the income statement	- Disclosed - Not disclosed
		0	1	0	
Financial Leasing	- Recognized an asset	- Local GAAP suggests recognition and disclosure similar to IAS	- Local GAAP suggests recognition and disclosure similar to IAS	Similar to IAS	- Recognized as asset - Payments recognized in income
		0	0	0	

De jure accounting treatments under IFRS and local GAAP (2002)

Items	IFRS 2002	France 2002	Belgium 2002	The Netherlands 2002	Accounting methods
Impairment on fixed assets	- Disclose detailed information about the estimates used to measure recoverable amounts of cash generating units containing goodwill or intangible assets with indefinite useful lives.	- Similar to IAS, but French GAAP does not have detailed guidance on the procedures to be performed for impairment reviews.	- Similar to IAS but Belgian GAAP does not have detailed guidance on the procedures to be performed for impairment reviews.	Similar to IAS. - Disclose impairment procedures.	- Disclosed procedures on impairment test on fixed assets - Not disclosed
		1	1	0	
List of subsidiaries consolidated	- Not regulated	- List of investments in group subsidiaries, associates, joint ventures	- List of investments in group subsidiaries, associates, joint ventures	- List of investments in group subsidiaries, associates, joint ventures - No disclosure if prejudicial	- Disclosed - Not disclosed
		1	1	1	
Details for each group entity	- Not regulated	- For each group entity, disclose consolidation method, shareholding perc., name, domiciles.	- For each group entity, disclose consolidation method, shareholding perc., name, domiciles.	- For each group entity, disclose consolidation method, shareholding perc., name, domiciles.	- Details disclosed - Details not disclosed
		1	1	1	
Investments in associates	- Equity method	- Equity method	- Equity method	- Equity method	- Equity method
		0	0	0	
Investments in joint ventures	- Equity method - Proportionate method	- Proportionate method	- Proportionate method - Equity method, but in cases other than those in IAS 31	- Proportionate method - Equity method, but in cases other than those in IAS 31	- Equity method - Proportionate method
		1	1	1	
Post employment benefits (provision recognition)	- Required for defined benefit plans	Not regulated	Not regulated	Similar to IAS	- Recognized - Only disclosed - Neither recognized nor disclosed
		1	1	0	
Determination of the DBO	- Projected Unit Credit Method	Not regulated	Not regulated	Similar to IAS	- Disclosed - Not disclosed
		1	1	0	

My GAAP difference measure

Category	France	Belgium	The Netherlands
Absence	6	8	0
Divergence	13	13	9
Similarity	8	6	18
Total	27	27	27

**Comparison between my GAAP difference measure
and Bae et al. [2008] GAAP difference measure**

Country	My GAAP difference measure		Bae et al. GAAP difference measure	
	Total number of differences (absence + divergence)	% total items investigated (27)	Total number of differences	% total items investigated (21)
France	19	70	12	57
Belgium	21	78	13	62
The Netherlands	9	33	4	19

**Comparison between my GAAP difference measure
and Ding et al. [2007] GAAP difference measure**

My GAAP difference measure	Local GAAP items that differ with IFRS	% of the local GAAP items that differ (absent + divergent) with IFRS
<i>Absence</i>		
France	6	32
Belgium	8	38
The Netherlands	0	0
<i>Divergence</i>		
France	13	68
Belgium	13	62
The Netherlands	9	100

Ding et al. GAAP difference measure	Local GAAP items that differ with IFRS	% of the local GAAP items that differ (absent + divergent) with IFRS
<i>Absence</i>		
France	21	38
Belgium	22	41
The Netherlands	10	29
<i>Divergence</i>		
France	34	62
Belgium	32	59
The Netherlands	25	71

Appendix B

For each of my 1,062 earnings announcement press release I collect the following information:

IS = indicator variable that is equal to 1 if the press release for year t and firm j contains a detailed income statement.

BS = indicator variable that is equal to 1 if the press release for year t and firm j contains a detailed balance sheet.

SCF = indicator variable that is equal to 1 if the press release for year t and firm j contains a statement of cash flows.

SE = indicator variable that is equal to 1 if the press release for year t and firm j contains a statement of changes in equity.³²

Segment = the number of words related to segment using for the search the following strings: "segment(s)", "sector(s)", "division*", "geographic*", "line", "cluster", "by country", "per country", "by zone", "by market", "zones géographiques", "secteur d'activité" "information sectorielles", "segmento*"

Guidance = the number of words related to firms' forecast about future perspectives using for the search the following strings: "perspectives", "prognose*", "outlook", "guidance", "will", "perspectivas"

Risk = the number of words related to business strategies using for the search the following strings: "Risk*", "Uncertain*", "risco", "risque".

Pension accounting = the number of words related to business strategies using for the search the following strings: "pension*", "retirement benefit*" "post-employment", "actuarial gain", "actuarial loss", "pension scheme", "avantages postérieurs à l'emploi".

³² Some earnings announcement press releases contain only several key line items (or a summary) of a balance sheet, income statement, statement of cash flows and statement of changes in equity, instead of a complete or detailed statement. I code these press releases as not containing a detailed financial statement.

Appendix C

List of country abbreviations

Country abbreviations	EU Countries
AUT	Austria
BEL	Belgium
CZE	Czech Republic
DEU	Germany
DNK	Denmark
ESP	Spain
FIN	Finland
FRA	France
GBR	Great Britain
GRC	Greece
IRL	Ireland
ITA	Italy
LUX	Luxemburg
NLD	The Netherlands
POL	Poland
PRT	Portugal
SWE	Sweden

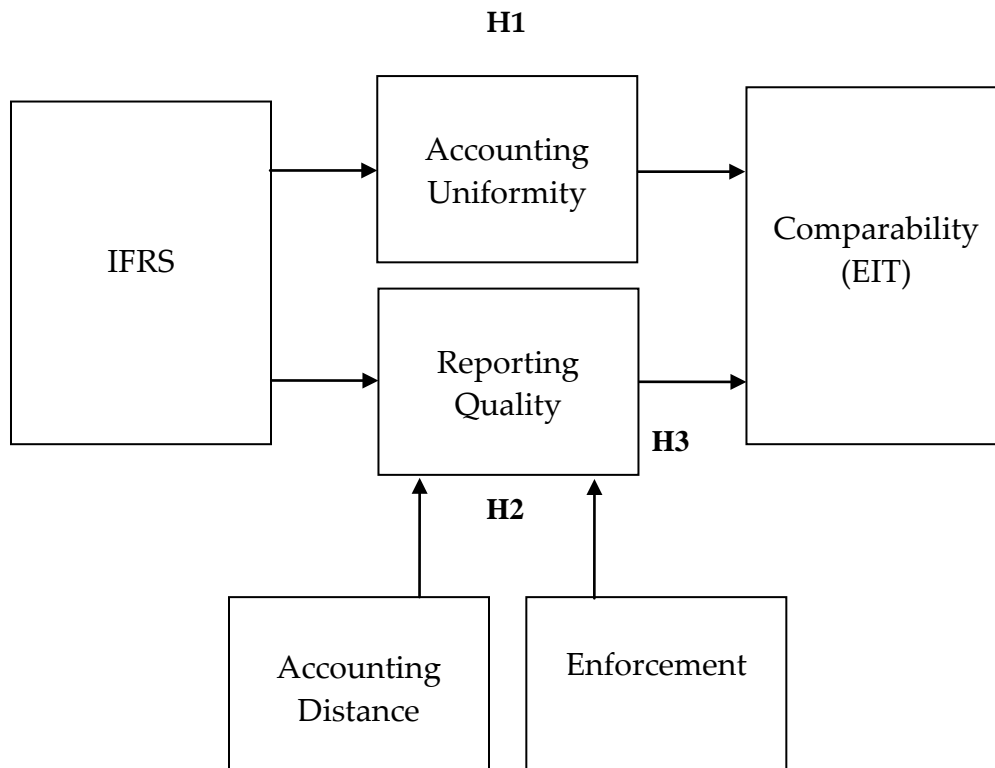
This table shows the list of country abbreviations used in my study. The first column reports the Abbreviations, the second column reports the corresponding country where announcing/non-Announcing firms are domiciled.

Variable definition

Variables	Definition
$ CAR_{(NA)} $	Absolute cumulative three-day [-1, 0, +1] abnormal return estimated using the price (P in Datastream) of late announcer and calculated around the earnings announcement date of first-announcer. Abnormal returns are estimated using the market model over the period -120 to -21 days before the announcement using country-specific market returns (LI in Datastream).
$ UE_A $	Absolute value of actual annual earnings minus the mean forecasted annual earnings, scaled by the closing price at the beginning of the fiscal year. All data are from I/B/E/S.
SIZE	Natural logarithm of the market value of equity in millions of Euros at the end of the year, where market value (MV) is from Datastream.
REPLAG	The number of days from the fiscal year-end to the earnings announcement date, as reported by I/B/E/S.
LOSS	A dummy variable equal to one if the I/B/E/S-reported actual earnings are less than zero.
NUMEST	The number of firms' earnings forecasts: the number of the I/B/E/S-reported annual earnings forecasts prior to the annual earnings announcement date.
LEV	Total liabilities scaled by total assets, both of which are from Worldscope.
BTM	The ratio between book value of equity and market value of equity, both of which are from Datastream.

This table reports the definition of the variables I use in my study.

The relation between IFRS and Comparability (EIT)



This figure shows a schematic representation of the relation between IFRS and accounting comparability. I report separately the three hypotheses that I use to investigate this relation. H1 examines the direct relation between IFRS and comparability, as measured by EIT (earnings information transfer). H2 analyzes the effect of accounting distance and enforcement on the change in reporting quality after IFRS adoption. H3 provides an indirect explanation for the relation between IFRS and comparability (EIT). This explanation is based on the argument that IFRS affects both reporting quality and accounting uniformity. Specifically, the intensity of the accounting uniformity effect of IFRS on comparability is a positive function of the reporting quality effect of IFRS.

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