INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AND THE INSTITUTIONAL ENVIRONMENT: THEIR JOINT IMPACT ON ACCOUNTING COMPARABILITY

A Dissertation

by

MICHAEL J. NEEL

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2011

Major Subject: Accounting

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Approved by:

Chair of Committee,	Anwer Ahmed
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	Senyo Tse
	Neal Galpin
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ABSTRACT

International Financial Reporting Standards (IFRS) and the Institutional Environment: Their Joint Impact on Accounting Comparability. (August 2011)

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Comparability is a desirable qualitative characteristic of financial information and critical for financial statement users' ability to identify and understand similarities and differences in financial results among reporting entities. Yet, little research explicitly considers either the determinants or benefits of comparability because of difficulty in identifying and measuring the theoretical construct of comparability. Further, the widespread global adoption of IFRS, a relatively homogenous set of accounting standards, is expected to increase comparability among companies that operate in different national jurisdictions. However, prior studies that examine the *average* impact of mandatory IFRS adoption on comparability find mixed results.

I hypothesized that the impact of mandatory IFRS adoption on comparability varies with managers' reporting incentives and differences between countries' domestic standards and IFRS. Using listed firms from 34 countries, I documented that comparability under non-IFRS domestic standards is higher in countries that provide strong reporting incentives (i.e. countries with strict enforcement regimes or high earnings transparency). Additionally, I found an increase in comparability following IFRS adoption (relative to a control sample of non-adopters) in countries that provide strong reporting incentives or with large domestic GAAP-IFRS differences. In contrast, I found evidence of a decrease following IFRS adoption (relative to a control sample of non-adopters) in countries with weak reporting incentives or with small domestic GAAP-IFRS differences. Finally, I showed that changes in comparability surrounding

adoption are positively associated with changes in the quality of firms' information environments.

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1. INTRODUCTION

This study tests the joint impact of mandatory International Financial Reporting Standards (IFRS) adoption and countries' institutional characteristics on accounting comparability and it associated information benefits. Defining 'comparability' as similarity in how firms incorporate economic income into accounting income (see for example, Barth et al. [2011]; De Franco et al. [2011]; Lang et al. [2010]), I find that IFRS adopters exhibit an increase in comparability, relative to a sample of non-adopters, but only in countries that provide managers with strong reporting incentives or in countries with a large number of pre-adoption discrepancies between domestic GAAP and IFRS. In contrast, the comparability of IFRS adopters decreased, relative to non-adopters, in countries with weak reporting incentives or small domestic GAAP-IFRS differences. My results suggest IFRS, alone, do not appear sufficient to achieve the increase in comparability desired by standard setters, regulators and investors. Rather, like all accounting standards, IFRS require the support of institutions that encourage credible implementation.

Comparability is a desirable qualitative characteristic of financial information and critical for financial statement users' ability to identify and understand similarities and differences in financial results among reporting entities (FASB [2010]). Yet, little research explicitly considers either the determinants or benefits of comparability because of difficulty in identifying and measuring the theoretical construct of comparability. Recently, De Franco, Kothari and Verdi [2011] propose a measure of comparability based on the notion that two firms have comparable accounting if they generate similar financial statements for a *given set of economic events*. A primary strength of the De Franco et al. [2011] approach is that it effectively differentiates between comparability and 'mimicking', which could result from firms herding around some income target regardless of their underlying economics (Lang et al. [2010]).

This dissertation follows the style of *Journal of Accounting Research*.

Building on the De Franco et al. [2011] time-series measure, I develop two novel measures of comparability: cross-country comparability among industry peers and cross-industry comparability among country peers. In order to measure accounting comparability, I examine the earnings-return relation and employ a cross-sectional approach to estimate the accounting function that firms use to incorporate economic income (proxied by returns) into accounting income. I use this function as an approximation of how accounting captures, or reflects, economic events and measure comparability based on the similarity in firms' functions.

I first assess the informational benefits of comparability with respect to analyst forecast properties and find that analyst forecast errors, dispersion and optimism are negatively associated with both cross-country and cross-industry comparability. This suggests a positive effect of comparability on the quality of information available to investors and extends De Franco et al. [2011] by showing that their results generalize to both cross-country and cross-industry comparability in an international setting.

I next examine comparability across different institutional environments *prior to* IFRS adoption. Examining the prior period is important because an extant literature finds that managers' incentives, stemming from the quality of countries' legal institutions and shareholder protections, influence the properties and usefulness of financial reports. However, we know very little about how reporting incentives specifically influence comparability. I identify firms as having stronger reporting incentives when they are in countries with stronger legal enforcement or historically more transparent earnings. I provide evidence that under non-IFRS domestic standards, both cross-country and cross-industry comparability are higher among firms in countries with strong legal enforcement and historically more transparent earnings, consistent with institutional differences across countries having a first order effect on comparability.

In my primary analysis, I test the joint impact of mandatory IFRS adoption and countries' institutional characteristics on comparability. I find that IFRS adopters exhibit an increase in comparability, relative to a sample of non-adopters, but only in countries that provide managers with stronger reporting incentives or in countries with a

large number of pre-adoption discrepancies between domestic GAAP and IFRS. In contrast, I provide evidence that the comparability of IFRS adopters decreased, relative to the control sample, in countries with weaker reporting incentives or small domestic GAAP-IFRS differences. These findings are consistent with comparability being shaped by both standards and managers' reporting incentives and provide evidence that the anticipated comparability benefits to IFRS are heterogeneous across countries. Finally, I test for changes in the information environment following IFRS adoption and show that information quality increased (i.e., a decrease in analyst forecast errors, dispersion and optimism) among adopters. Further, I document that improvements in the information environment are positively associated with improvements in comparability following the introduction of IFRS.

My study makes several contributions. First, I show that under a diverse set of non-IFRS domestic standards, the same country-level institutions that prior research finds are associated with more transparent financial reporting are also associated with more comparable reporting. This is consistent with the FASB's view that representational faithfulness and comparability are complements and should be positively associated in the cross-section. Second, my study exploits variation in institutional characteristics across countries and demonstrates that mandatory IFRS adoption can have either a positive, or negative, impact on comparability depending on those institutions. My approach extends prior research that finds mixed results when testing for an *average* impact of mandatory IFRS adoption on explicit measures of comparability (e.g., Beuselinck et al. [2007], Cascino and Gassen [2010], Lang et al. [2010]). Third, my results complement research that finds that positive economic consequences of mandatory IFRS adoption are restricted to countries with institutional environments that provide managers with strong reporting incentives and stronger in countries with larger domestic GAAP-IFRS differences (Daske et al [2008], Li [2010]).

Fourth, to my knowledge, this study is the first to link improvements in firms' information environments following mandatory IFRS adoption to realized improvements in comparability. In doing so, I provide context for Byard, Ying and Yu [2010] who find

that mandatory IFRS adopters exhibit a decrease in analyst forecast errors and dispersion, relative to a control sample, only in countries with strong legal enforcement and large domestic GAAP-IFRS differences. My findings suggest that a positive effect of IFRS on comparability that is restricted to those countries is one source of the information environment effects they document. Finally, my study demonstrates and validates a cross-sectional adaption of the De Franco et al. [2011] comparability measure that overcomes the data constraints common in an international setting.

The following section develops my hypotheses and presents related literature. Section 3 describes my research design and variable measurement. Section 4 presents my sample selection process and composition, descriptive statistics and correlations for variables used in my analyses, validation tests, primary test results and sensitivity analysis. Section 5 concludes.

2. LITERATURE REVIEW AND HYPOTHESES

Standard-setters, regulators and practitioners expect the widespread adoption of a single set of accounting standards to yield more comparable cross-country financial reporting. The IASB Framework for the Preparation and Presentation of Financial Statements describes comparability as the qualitative characteristic that enables users to evaluate the relative financial position and performance of different entities and lists comparability as one of three financial statement characteristics to be required under IFRS (IASCF [2001]). Further, the FASB asserts that investors, lenders and other creditors should benefit from the increased comparability that would result from internationally converged accounting standards (FASB [2008]). Additionally, the SEC has promoted a single set of high-quality globally accepted accounting standards, which would reduce country-by-country disparities in financial reporting, according to current Chairman Mary L. Shapiro.[1] Finally, a pre-IFRS practitioner survey of national accounting rules concluded that requiring EU companies to prepare their financial statement in accordance with IFRS, as well as adoption and general convergence in other countries, would lead to a "significant improvement in financial reporting transparency and comparability" (GAAP 2001 [2001]).[2]

Recent research provides evidence that is consistent with anticipated and actual comparability benefits to the widespread introduction of IFRS in 2005. Armstrong et al. [2010] examine price reactions surrounding events that increased the probability of eventual IFRS adoption in Europe and document price appreciation among EU firms that already have high quality information. The authors attribute this appreciation to anticipated comparability effects. Using a similar approach, Drake et al. [2010] document an increase in liquidity following actual mandatory IFRS adoption that the

[1] SEC press release 2010-27 (Feb. 24, 2010) Available at http://www.sec.gov/news/press/2010/2010-27.htm

[2] The accounting firms preparing the report include Andersen, BDO, Deloitte Touche Tohmatsu, Ernst & Young, Grant Thornton, KPMG and PricewaterhouseCoopers.

authors attribute to comparability benefits. Brochet et al. [2011] find that abnormal returns to insider information decline in the U.K. following mandatory IFRS adoption and attribute this to an increase in comparability among the U.K. firms and non-U.K. firms. Additionally, U.S. mutual funds altered their investment portfolios based on reductions in the cross-country heterogeneity of accounting standards (DeFond et al. [2011]).

As highlighted by the above papers, research has tended to infer a positive impact of IFRS adoption on comparability based on observed changes in investor behavior that are plausibly associated with unobserved changes in comparability. However, research that examines observed changes in comparability among mandatory IFRS adopters fails to provide similar evidence. Jointly, recent and current research finds that IFRS adopters do not exhibit an increase in comparability relative to benchmark samples of non-adopters (Beuselinck et al. [2007], Cascino and Gassen [2010], Lang et al. [2010]).[3] However, these studies test for an average impact of IFRS adoption on comparability and do not permit countries' institutional environments to play the moderating role that is predicted by prior research. This study addresses that omission.

IFRS adoption also has the potential to impact cross-industry comparability within individual countries. The principles-based nature of IFRS results in a set of standards that provides relatively little detail. According to current IASB chairman Sir David Tweedie, "one of the things we are trying to do is to get rid of industry-specific guidance…boil it down to a series of principles…and sweep away all of the detail." [4] For example, IFRS contain only two primary revenue recognition standards that generally apply without industry-specific guidance (Hail et al. [2009]). Further, DeFond et al. [2011] find that the median number of different accounting standards used within

[3] In a related study, Barth et al. [2010] do find an increase in the comparability among IFRS adopters and U.S. firms.

[4] Paraphrased and taken from the Deloitte IFRS Summit held in New York (October 6, 2009). Available at http://www.deloitte.com/view/en_US/us/Services/audit-enterprise-risk-services/Financial-Accounting-Reporting/IFRS/IFRS-Summit/b84d626ca4ff7210VgnVCM200000bb42f00aRCRD.htm

any given industry in the EU decreased by 32% following the adoption of IFRS. The reduction in the amount of industry-specific guidance and the number of different standards applied within all industries, on average, will result in managers having greater flexibility in how they account for economic events. However, greater flexibility should result in greater consistency in accounting policies among industries if managers' accounting choices are shaped more by the political, economic and legal environments common to firms in the same country and less by differing industry-specific guidance. Accordingly, I expect these commonalities to result in more comparable accounting among industries within a given country following the introduction of IFRS. Alternatively, greater flexibility need not necessarily lead to greater comparability if managers' have weak reporting incentives because of those underlying institutional environments. I address this possibility next.

Even if IFRS adoption results in a convergence of standards capable of increasing comparability under ideal implementation conditions, managers' reporting incentives still have the potential to moderate this effect. The reporting incentives view suggests that uniform improvements in comparability are unlikely to follow from a unified set of standards (e.g., Ball [2006], Hail et al. [2009]) due to variation in political, economic and legal institutions (e.g., Kaufmann et al. [2007], La Porta et al. [1998]). This argument is motivated by prior research consistent with shareholder protections (which encompass legal enforcement, efficient courts, outsider investor rights, etc) providing managers with incentives to faithfully report economic events in the financial statements.

In particular, earnings management is less prevalent in countries with strict legal enforcement and strong shareholder protections (e.g., Leuz et al. [2003], Burgstahler et al [2006], Fonseca and Gonzalez [2008]), earnings are more conservative in countries with efficient judicial systems and strong shareholder protections (Bushman and Piotroski [2006]), earnings announcements are more informative in countries with strong investor protections (DeFond et al. [2007]) and weak reporting incentives can dominate high-quality (i.e. Common-Law derived) accounting standards and lead to less

asymmetric timeliness of loss recognition (Ball et al. [2003]) In a related study, Hung [2001] finds that non-IFRS domestic standards which should permit a better matching of revenues and expenses through the increased use of accruals actually reduce the value relevance of financial statements when managers have weak reporting incentives. Hung [2001] quantifies countries' use of accrual accounting (versus cash accounting) as the frequency of accrual-related accounting standards and finds that the use of accrual accounting negatively affects the value relevance of financial statements when managers have weaker reporting incentives (i.e., weak shareholder protections) but not when they have stronger reporting incentives.

Recent research that looks at anticipated benefits of mandatory IFRS adoption also points to the importance of firms' reporting incentives. Using pre-2005 data, Christensen et al. [2007] examine U.K. firms that *would be required* to adopt IFRS once it becomes mandatory in the EU. In a novel approach, Christensen et al. [2007] use a U.K. firm's similarity to German firms that had previously adopted IFRS *voluntarily* as a proxy for the U.K. firms' willingness to adopt IFRS once it becomes mandatory. Using this proxy, Christensen et al. [2007] find a positive (negative) association between a firm's willingness to adopt and its stock-price reaction surrounding events that increased (decreased) the likelihood of eventual IFRS adoption in the EU.

Further support for the reporting incentives view comes from research that documents heterogeneity in the economic benefits that accrue to IFRS adopters. Initial mandatory IFRS adoption is associated with an increase in market liquidity and equity valuations (Daske et al. [2008]) and a decrease in firms' implied cost of equity capital (Daske et al. [2008]; Li [2010]) but only in countries that provide strong reporting incentives (e.g., countries with strong legal enforcement). Countries that provide weak reporting incentives experienced no such economic benefits. Further, the heterogeneity in economic benefits to IFRS adoption appears to have come, in part, from heterogeneity in the response by mutual funds that anticipated comparability benefits to adoption. DeFond et al. [2011] find that a large reduction in cross-country heterogeneity in accounting standards within industries, due to the introduction of IFRS, is associated

with an increase in U.S. mutual fund ownership only in countries that provide strong reporting incentives. The authors suggest that institutional investment increases only when IFRS implementation is likely to be more credible; however, the increased monitoring by institutional investors may, itself, lead to more credible implementation. Given the above, I expect the comparability benefits of IFRS to be more pronounced among firms that are in countries that provide stronger reporting incentives.

H1: The effect of mandatory IFRS adoption on comparability is more positive in countries with strong legal enforcement and historically greater earnings transparency.

Research also suggests that comparability benefits from IFRS adoption vary with the pre-adoption disparity between countries' domestic standards and IFRS. Economic benefits (Daske et al. [2008]) and improvements in analysts' information environments (Byard et al. [2011]) following IFRS adoption are more pronounced in countries with a larger difference between domestic standards and IFRS. I expect that changes in comparability following IFRS adoption also vary with the extent of pre-adoption differences between countries' domestic accounting standards and IFRS and posit that comparability benefits to IFRS should be more pronounced among those countries with a greater number of discrepancies between their domestic standards and IFRS. A larger difference between domestic standards and IFRS, all else equal, implies a larger potential for improvements if IFRS leads to greater comparability.

H2: The effect of mandatory IFRS adoption on comparability is more positive in countries with a larger difference between domestic GAAP and IFRS.

In a U.S. setting De Franco et al. [2011] find that information quality (measured using properties of analyst forecasts) is increasing in comparability. If comparability increases following the mandatory introduction of IFRS and the positive association between comparability and information quality generalizes to an international context, I also expect to observe an improvement in the information environment following the

introduction of IFRS. Further, I expect that this improvement in the information environment is positively associated with improvements in comparability which are likely to vary with countries' institutional environments and pre-IFRS domestic standards.

H3: Improvements in comparability following mandatory IFRS adoption are positively associated with improvements in the information environment.

3. RESEARCH DESIGN

In this section I describe my research design. First, I detail my estimation of firms' accounting functions. Second, I describe how I construct my two firm-year measures of accounting comparability and additional control variables. Third, I describe the validation tests I use for my comparability measures. Fourth, I describe how I partition the sample based on country-level institutional characteristics. Finally, I describe the primary tests that I perform.

3.1 ESTIMATING FIRMS' ACCOUNTING FUNCTIONS

In order to estimate accounting comparability, I model and estimate the accounting function that a firm uses to incorporate economic income into accounting income. I use this function as an approximation of how accounting captures, or reflects, economic events. De Franco et al. [2011] follow Ball et al. [2000a] and maintain that share returns measure economic income and use a time-series of 16 quarterly earnings-return observations to estimate a firm-specific accounting function over that 16 quarter period. Because of data constraints unique to an international setting, I use annual data to estimate a cross-sectional version of the De Franco et al. [2011] measure.[5] This approach yields an annual country-industry specific estimate of the average firm accounting function.[6] I use this annual country-industry specific estimate as an approximation of the annual accounting function for each firm in the country-industry group. A weakness of this approach is that I assume that firms within a given country-industry share the same accounting function; however, the average country-industry

[5] De Franco et al. [2011] estimate comparability among U.S. firms with readily available quarterly data. This data are generally unavailable for non-U.S. firms.

[6] Barth et al. [2010] use a similar cross-sectional approach when testing for changes in comparability between IFRS adopters and U.S. firms surrounding adoption. Specifically, they assume a single accounting function for all IFRS adopters and a single function for all US firms that vary between the pre and post-adoption periods. In additional tests they permit the functions to vary between institutional groups (e.g., legal orientation). My approach is less restrictive because I permit the function to vary among countries, industries and years.

function should measure the firm-specific function with noise. Further, I permit asymmetry in how firms incorporate positive and negative economic income into accounting earnings.[7] I approximate firms' accounting functions by estimating the following equation annually using each firm *i* in country-industry *j* during year *t*: [8]

$$NI\_P_{ijt} = \alpha_{jt} + \beta_{1jt}*DRET_{ijt} + \beta_{2jt}*RET_{ijt} + \beta_{3jt}*DRET_{ijt}*RET_{ijt} + \varepsilon_{ijt} \quad (1)$$

RET is the buy-and-hold percentage return from nine months prior to the fiscal year-end to three months after the fiscal year-end. *DRET* is an indicator variable that equals 1 if $RET < 0$ and equals 0 otherwise. *NI_P* is earnings before extraordinary items per share, deflated by price nine months prior to the fiscal year-end. I use all available observations with non-missing data for *NI_P* and *RET* and estimate equation (1) annually for each country-industry *j*, subject to the following restrictions. I require at least eight observations for the country-industry-year and require sufficient data to reliably estimate all four coefficients. (See the Appendix for details of my sample selection process). I winsorize the top and bottom 1% of the distributions of *NI_P* and *RET* by country to reduce the influence of outliers. The coefficients from equation (1) estimate firms' average accounting functions for each *j* country-industry in year *t* and serve as my estimate of the *i t* accounting function for each firm *i* in country-industry *j* during year *t*.

[7] An extant literature applies the Basu [1997] measure of asymmetry in economic gain and loss recognition in earnings to an international setting (e.g. Ball et al. [2000a]; Ball et al. [2000b]; Ball et al. [2003]; Ball et al. [2008]; Basu et al. [2005]; Brown et al. [2006]; Bushman and Piotroski [2006]; Gassen et al. [2006]; Giner and Rees [2001] and Pope and Walker [1999]). Additionally, recent research finds evidence that accounting income becomes less conservative following mandatory IFRS adoption within a large group of countries (e.g. Ahmed et al. [2010]).

[8] This estimation approach also finds support in Ball et al. [2011], which emphasizes "that when the research objective is to understand or estimate a property of accounting income…..then accounting income is the appropriate dependent (i.e., explained) variable, and the fact that stock returns are in part caused by accounting income simply is irrelevant. This is because we are interested in how the information about economic gains and losses is incorporated (or reflected) in accounting income, *regardless of whether the source of new information is accounting income itself*".

3.2 ESTIMATING ACCOUNTING COMPARABILITY

De Franco et al. [2011] estimate accounting comparability among industry peers within a single country (i.e. the U.S.). I extend their approach to an international setting and estimate two measures of comparability: cross-country comparability among industry peers and cross-industry comparability among country peers.

I use the following steps to construct my estimates of comparability. For a given firm *i* in year *t*, I first estimate $NI\_P_{it}^{Pred}$, firm *i*'s predicted income in year *t*, as:

$$NI\_P_{it}^{Pred} = \alpha_{it} + \beta_{1it}*DRET_{it} + \beta_{2it}*RET_{it} + \beta_{3it}*DRET_{it}*RET_{it} \quad (2)$$

where α_{it}, β_{1it}, β_{2it} and β_{3it} are the coefficients from firm *i*'s own country-industry estimation of equation (1) in year *t*. Second, I estimate a vector of $NI\_P_{ijt}^{Other}$ for firm *i* year *t* using firm *i*'s returns but other sets of α_{jt}, β_{1jt}, β_{2jt} and β_{3jt} obtained by estimating equation (1) that are relevant for the specific comparability measure. For example, in order to estimate cross-country comparability among industry peers (*COMP_IND*), I estimate a vector of $NI\_P_{ijt}^{Other}$ for firm *i* year *t* using all *j* sets of α_{jt}, β_{1jt}, β_{2jt} and β_{3jt} where the comparison year *equals* firm *i*'s year *t*, the comparison industry *equals* firm *i*'s industry and the comparison country *does not equal* firm *i*'s country. Further, I require that firm *i* and comparison group *j* be either both from countries that require IFRS adoption in 2005 or both from countries that do not require IFRS adoption in 2005. This step allows me to create a benchmark sample to control for any trend in comparability that is independent of mandatory IFRS adoption. This approach yields a vector of predicted accounting incomes for firm *i* year *t* using firm *i*'s economic income (i.e. returns) and the *j* comparison groups' accounting functions.

Third, I measure the absolute difference between $NI\_P_{it}^{Pred}$ and each $NI\_P_{ijt}^{Other}$.[9] This absolute difference should be smaller when the jth comparison group's average

[9] An alternative approach would be to simply compare the coefficients I obtain from estimating equation (1) rather than comparing the predicted incomes I obtain using those coefficients. I use the predicted incomes because they are an efficient way to compare the joint effect of multiple coefficients simultaneously.

accounting function is more similar to firm *i*'s own accounting function. Fourth, I estimate *COMP_IND* for firm *i* year *t* as the negative average of the *j* absolute differences between $NI\_P_{it}^{Pred}$ and all $NI\_P_{ijt}^{Other}$:

$$COMP\_IND_{it} = -1 * (1/j) \quad {}^{j}_{j=1} |NI\_P_{it}^{Pred} - NI\_P_{ijt}^{Other}| \tag{3}$$

I repeat the above for each firm-year observation and consider larger (i.e. less negative) values for $COMP\_IND_{it}$ as indicating greater cross-country comparability among industry peers.[10]

I follow a similar procedure to estimate cross-industry comparability among country peers (*COMP_CON*). In this case, however, I estimate a vector of $NI\_P_{ijt}^{Other}$ for firm *i* year *t* using all sets of α_{jt}, β_{1jt}, β_{2jt} and β_{3jt}, where the comparison year *equals* firm *i*'s year, the comparison industry *does not equal* firm *i*'s industry and the comparison country *equals* firm *i*'s country. As above, I estimate *COMP_CON* for firm *i* year t as the negative average of the *j* absolute differences between $NI\_P_{it}^{Pred}$ and all $NI\_P_{ijt}^{Other}$:

$$COMP\_CON_{it} = -1 * (1/j) \quad {}^{j}_{j=1} |NI\_P_{it}^{Pred} - NI\_P_{ijt}^{Other}| \tag{4}$$

3.3 CONTROL VARIABLES

I have little guidance from prior literature on empirical determinants of comparability that I need to consider when testing for an effect of mandatory IFRS adoption. However, I control for the possibility that annual country-industry accounting functions will differ systematically due to differences in the characteristics of firms that comprise each group. I include market value, leverage, book-market ratio and *R&D* as proxies for firms' growth opportunities, and asset tangibility. I also control for systematic differences in how firms incorporate economic income into accounting

[10] It is possible that the returns generation process differs across countries. In untabulated results I estimate *COMP_IND* using returns and net income that I first mean correct within country and obtain similar results.

income, conditional on two potential sources of economic income: revisions in firms' cash flow expectations and revisions in firms' discount rates. I approximate revisions in firms' cash flow expectations using annual changes in cash flows and revisions in firm's discount rates using annual changes in inflation rates.

I estimate these seven control variables using firm-specific data that I aggregate over each country-industry year. Specifically, I first estimate the annual country-industry mean for each variable. Second, for firm *i* year *t*, I estimate a vector of absolute differences between firm *i*'s own country-industry average and the average for each of the *j* country-industry comparison groups. For controls related to *COMP_IND* (*COMP_CON*), I use the same comparison groups that I use to construct *COMP_IND* (*COMP_CON*). Finally, I estimate the firm *i* year *t* value of each control as the average over the vector of absolute differences. Larger values reflect a larger difference in the particular characteristic between comparison groups.

For example, *BTM Diff* is the average absolute difference in *BTM* (book value of equity / market value of equity) between the firm's country-industry group and its comparison country-industry groups and *SIZE Diff* is the average absolute difference in *SIZE* (natural log of market value of equity in $U.S.) between the firm's country-industry group and its comparison country-industry groups. *R&D Diff* measures differences in *R&D* (research and development expense scaled by total revenue). *LEV Diff* measures differences in financial leverage (total long-term debt scaled by total assets). *TANGIBILITY Diff* measures differences in asset tangibility (net PPE scaled by total assets). *ΔINFLATION Diff* measures differences in the annual change in inflation rates. I estimate firm-specific changes in inflation rates over each firms' fiscal year. *ΔCF_P Diff* measures differences in the annual change in cash flows (the annual change in cash flows scaled by price).

3.4 ACCOUNTING COMPARABILITY AND PROPERTIES OF ANALYST FORECASTS

Within the U.S., De Franco et al. [2011] find that analyst coverage is increasing in comparability, while analyst forecast errors, optimism and dispersion are decreasing in comparability. My measures differ from theirs in the following ways. I estimate comparability in an international setting, use a cross-sectional design and estimate both cross-country and cross-industry comparability measures. Accordingly, I test whether the associations between comparability and analyst forecast properties documented in De Franco et al. [2011] hold for my sample and research design. Specifically, I estimate the following equation:

$$\textit{Analyst Forecast Property}_{it} = \alpha + \beta_1 * COMP_{it} + \sum_{j=1}^{j} \beta_{(j+1)} * Control_{ijt} + \varepsilon_{it} \qquad (5)$$

Analyst Forecast Property is *COVERAGE*, *ERROR*, *OPTIMISM* or *DISPERSION*. I obtain analyst forecast data from I/B/E/S and estimate each property using the last mean estimate available prior to the earnings announcement date listed in I/B/E/S.[11] All variable definitions are provided in the Appendix. *COMP* is either *COMP_IND* or *COMP_CON* as defined in section 3.2. I also include a vector of control variables that prior research has shown are associated with properties of analyst forecasts. The control variables include *SIZE*, *BTM*, *VOLUME* which measures the annual trading volume, *R&D*, *DEPRECIATION*, *LOSS* which captures whether the firm has negative net income, *ISSUE* which captures whether the firm issued debt or equity in the current or prior year, *EARN VOL* which measures the volatility of net income, *EARN PRED* which measures the predictability of net income, and *DAYS* which measures the lag time between the forecast date and earnings announcement date. (See the Appendix for a detailed description of variable construction). I also include year and industry

[11] I use the last mean forecast available prior to the earnings announcement date in order to maximize the richness of the information set available to analysts. Alternatively, I repeat all analyses using the first mean forecast available up to nine months prior to the earnings announcement date. The magnitudes of all effects are very similar and my inferences are identical under both specifications.

(aggregated as in Campbell [1996]) indicator variables. I winsorize all continuous variables at 1% and 99% of their distributions in this test, and all following tests, to reduce the influence of outliers.

3.5 ACCOUNTING COMPARABILITY AND REPORTING INCENTIVES

I also examine variation in comparability across different institutional environments during the *pre-IFRS* adoption period (2001-2004), focusing specifically on the strength of legal enforcement and historic levels of earnings transparency. Taking this first step serves two purposes. First, in discussing how other qualitative characteristics relate to comparability in SFAC No. 8, the FASB states that the "faithful representation of a relevant economic phenomenon should naturally possess some degree of comparability with a faithful representation of a similar relevant economic phenomenon by another reporting entity". Second, prior research finds less earnings management and greater earnings transparency (i.e., more faithfully represented economic phenomenon) in countries with stronger enforcement mechanisms. By testing for higher levels of comparability among those countries with stronger enforcement and more transparent earnings, I am simultaneously testing the FASB's assertion that representational faithfulness and comparability are complements (i.e. positively associated in the cross section) and the internal validity of my measure of comparability.

I measure the strength of legal enforcement using countries' Rule of Law score from Kaufmann et al. [2007] for the year 2005. The Rule of Law score is a single measure that captures "perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence" (Kaufmann et al. [2007]). I measure historic earnings transparency using the country-level earnings management (EM) scores from Leuz et al. [2003], where less earnings management corresponds to more transparent earnings. I identify a country as having strong (weak) legal enforcement and more (less) transparent earnings if it has a Rule of Law score above (below) the country level median and EM score below (above)

the median and consider countries with strong enforcement or more transparent earnings as providing stronger reporting incentives.

I impound the effect of each institutional characteristic individually. For example, to impound the effect of legal enforcement in my measure of cross-country comparability among industry peers, *COMP_IND*, I calculate the variable for firm *i* year *t* using only those sets of α_{jt}, β_{1jt}, β_{2jt} and β_{3jt} obtained from equation (1) corresponding to comparison groups whose strength of legal enforcement ranking (i.e. strong/weak) equals firm *i*'s ranking. This matching procedure results in each firm being compared only to those groups with similar enforcement regimes. I repeat this approach for historic earnings transparency.

Because I estimate my measure of cross-industry comparability among country peers, $COMP\_CON_{it}$, for firm i year *t* using only those comparison groups domiciled in firm *i*'s country, I do not calculate this measure for each partition. I test for an association between each institutional characteristic and comparability by estimating the following equation.

$$\begin{aligned} COMP_{it} = \alpha &+ \beta_1 Conditional\ Var_{it} + \beta_2 BTM\ Diff_{it} + \beta_3 SIZE\ Diff_{it} + \beta_4 R\&D\ Diff_t + \\ &\beta_5 LEV\ Diff_{it} + \beta_6 \Delta\text{INFLATION Diff}_{it} + \beta_7 \Delta\text{CF\_P Diff}_{it} + \\ &\beta_8 TANGIBILITY\ Diff_{it} + \beta_9 SIZE_{it} + \beta_{10} BTM_{it} + \beta_{11} RET_{it} + \beta_{12} DRET_{it} + \\ &\beta_{13}\text{DRET}*RET_{it} + \varepsilon_{ij} \end{aligned} \tag{6}$$

I examine each institutional characteristic separately through multiple estimations of equation (6) using observation from the pre-IFRS adoption period (2001 to 2004). [12] *COMP* is either *COMP_IND* or *COMP_CON* estimated within institutional characteristic groups being examined, as defined above. *Conditional Var* is an indicator variable that equals 1 if firm *i* is domiciled in a country with strong legal enforcement or more transparent earning, and that equals 0 otherwise. I include conditional versions of

[12] I only use observations from 2001 to 2004 to remove any potentially confounding effect of IFRS adoption. However, I draw similar inferences if I include the entire sample (i.e. 2001 to 2008).

the seven aggregate control variables, as described in section 3.3, that I also estimate within institutional characteristic groups being examined. I include firm-year measures of *SIZE* and *BTM* as general controls for differences in firm characteristics. I include firm-year measures of *RET*, *DRET* and their interaction to control for any systematic pattern over my sample period related to asymmetry in the sensitivity of accounting income to positive and negative economic income. I also include year and industry (aggregated as in Campbell [1996]) indicator variables.

3.6 MANDATORY IFRS ADOPTION AND ACCOUNTING COMPARABILITY

I test hypotheses H1 and H2 that the association between the mandatory introduction of IFRS and accounting comparability is more positive for firms in countries with strong legal enforcement, historically greater earnings transparency, and a larger difference between domestic GAAP and IFRS, by estimating the following equation:

$$\begin{aligned} COMP_{it} = \alpha &+ \beta_1 IFRS\_POST_{it} + \beta_2 IFRS\_POST_{it} * Conditional\ Var_{it} + \beta_3 BTM\ Diff_{it} + \\ &\beta_4 SIZE\ Diff_{it} + \beta_5 R\&D\ Diff_t + \beta_6 LEV\ Diff_{it} + \beta_7 \Delta \text{INFLATION Diff}_{it} + \\ &\beta_8 \Delta \text{CF\_P Diff}_{it} + \beta_9 TANGIBILITY\ Diff_{it} + \beta_{10} SIZE_{it} + \beta_{11} BTM_{it} + \\ &\beta_{12} RET_{it} + \beta_{13} DRET_{it} + \beta_{14} \text{DRET} * RET_{it} + \varepsilon_i \end{aligned} \quad (7)$$

I examine each institutional characteristic separately through multiple estimations of equation (7) using observation from the full sample period (2001 to 2008). *COMP* is either *COMP_IND* or *COMP_CON* estimated within institutional characteristic groups being examined, as defined above. *IFRS_POST* is a binary indicator variable that equals 1 if firm *i* is in a country that requires IFRS adoption in 2005 *and* year *t* is in 2005-2008, and equals 0 otherwise. *Conditional Var* is an indicator variable that equals 1 if firm *i* is domiciled in a country with strong legal enforcement, more transparent earning or a large domestic GAAP-IFRS difference, and that equals 0 otherwise. I measure the domestic GAAP-IFRS difference using data available from

Bae et al. (2008). They identify whether countries' domestic GAAP have specific standards that apply to 21 separate issues addressed in IFRS. I use the sum of the omissions from each country (0 to 21) as my summary proxy for the difference between a country's standards and IFRS. I identify a country as having more (fewer) domestic GAAP-IFRS differences if it has a value above (below) the median for this summary score. All other variables are as defined in equation (6) above.

I include an interaction of *IFRS_POST* and *Conditional Var*, firm indicator variables to control for time-invariant firm characteristics and conditional-year indicator variables to control for separate time trends for each conditional partition. If my model is specified correctly, the coefficient on *IFRS_POST* should isolate the effect of IFRS adoption in countries with weak enforcement, low earnings transparency or small domestic GAAP-IFRS differences. The coefficient on *IFRS_POST*Conditional Var* should isolate any incremental effect of IFRS adoption related to strong enforcement, higher earnings transparency, or large domestic GAAP-IFRS differences. Further, the sum of the coefficients on *IFRS_POST* and *IFRS_POST*Conditional Var* should reflect the overall effect of IFRS adoption in countries with strong enforcement, higher earnings transparency, or large domestic GAAP-IFRS differences.

3.7 CHANGES IN COMPARABILITY AND THE INFORMATION ENVIRONMENT

If information quality is increasing in comparability, I should observe a negative association between changes in comparability and changes in analyst forecast properties surrounding the mandatory adoption of IFRS. To test H3 I estimate a cross-sectional changes specification of equation (5). Specifically, I estimate the following equation:

$$\Delta Analyst\ Property_{it} = \alpha + \beta_1 \Delta COMP_{it} + \ {}_{j=1}^{j} \beta_{(j+1)} \Delta Control_{ijt} + \varepsilon_{it} \qquad (8)$$

I estimate equation (8) using firms domiciled in countries that require IFRS beginning in 2005. Δ*Analyst Property* is the firm-level change in average *ERROR*, *OPTIMISM* or *DISPERSION* between the pre-adoption period (i.e. 2001 to 2004) and the post-adoption period (i.e. 2005-2008). Similarly, Δ*COMP* is the firm-level change in

average comparability (*COMP_IND* and *COMP_CON*) between the pre-adoption period (i.e. 2001 to 2004) and the post-adoption period (i.e. 2005-2008). I also include a vector of control variables calculated using the same changes specification and country and industry indicator variables.

Table 1

Sample Selection

	N
Initial Sample of firms with non-missing total assets that do not voluntarily adopt IFRS	194,388
Delete firms that first report using IFRS following the mandatory introduction in 2005	(9,852) 184,536
Delete firms in mandatory countries that Compustat identifies as using using domestic standards following 2005	(18,696) 165,840
Delete non-US firms that Compustat identifies as using US GAAP	(1,636) 164,204
Delete observation with missing industry affiliation	(4,956) 159,248
Delete observations with missing Ret or NI_P	(46,576) 112,672
Delete firms from country-industry years with less than 8 observations or insufficient data to reliably estimate all 4 coefficients in equation (1)	(11,345)
Sample I use to estimate equation (1)	**101,327**
Delete observations with missing SIZE and BTM	(513) 100,814
Retain up to 200 firms randomly selected from each non-IFRS country	(75,381) 25,946
Retain Country-Industry-Year groups with sufficient data to estimate the aggregate control variables associated with either cross-country or cross-industry accounting comparability	(184)
Primary Sample	**25,762**

4. DESCRIPTIVE STATISTICS AND VALIDATION TESTS

In this section, I provide descriptive data about my sample and present results of validation tests.

4.1 SAMPLE COMPOSITION AND DESCRIPTIVE STATISTICS

I provide information on my sample selection in Table 1 and detailed information in Appendix B. I report the sample composition by country and industry in Table 2. The primary treatment sample includes 11,416 observations for 2,595 firms from 17 countries that require the adoption of IFRS in 2005, with the United Kingdom and France providing the largest proportions. The benchmark sample includes 14,346 observations for 2,585 firms from 17 non-adopting countries, with no single country providing more than 8% of the sample. I also include countries' Rule of Law score from Kaufmann et al. [2007], aggregate earnings management score from Leuz et al. [2003] and difference between local GAAP and IFRS from Bae et al. [2008]. I convert each continuous score into a binary indicator variable with a value of 1 for countries with strong legal enforcement, a Common-Law tradition, more transparent earnings (i.e. lower earnings management scores) and more discrepancies between domestic GAAP and IFRS.

Table 2

Sample Composition by Country and Industry

Panel A: Countries Requiring IFRS Adoption in 2005

	N	Percent	Unique Firms	Percent	Rule of Law		Aggregate Earnings Management		Difference Between Local GAAP and IFRS	
Australia	167	1.46%	74	2.85%	1.73	(1)	4.8	(1)	4	(0)
Belgium	37	0.32%	19	0.73%	1.43	(1)	19.5	(0)	13	(1)
Denmark	76	0.67%	37	1.43%	1.94	(1)	16.0	(1)	11	(1)
Finland	286	2.51%	64	2.47%	1.90	(1)	12.0	(1)	15	(1)
France	2,596	22.74%	477	18.38%	1.33	(1)	13.5	(1)	12	(1)
Germany	757	6.63%	194	7.48%	1.73	(1)	21.5	(0)	11	(1)
Greece	236	2.07%	71	2.74%	0.65	(0)	28.3	(0)	17	(1)
Italy	855	7.49%	187	7.21%	0.52	(0)	24.8	(0)	12	(1)
Netherlands	250	2.19%	93	3.58%	1.72	(1)	16.5	(1)	4	(0)
Norway	334	2.93%	113	4.35%	1.94	(1)	5.8	(1)	7	(0)
Poland	70	0.61%	36	1.39%	0.33	(0)	n/a	n/a	12	(1)
Portugal	16	0.14%	8	0.31%	1.08	(1)	25.1	(0)	13	(1)
South Africa	301	2.64%	70	2.70%	0.18	(0)	5.6	(1)	0	(0)
Spain	118	1.03%	57	2.20%	1.10	(1)	18.6	(0)	16	(1)
Sweden	1,104	9.67%	223	8.59%	1.79	(1)	6.8	(1)	10	(1)
Switzerland	16	0.14%	10	0.39%	1.97	(1)	22.0	(0)	12	(1)
United Kingdom	4,197	36.76%	862	33.22%	1.63	(1)	7.0	(1)	1	(0)
Total	11,416	100.00%	2,595	100.00%						

Industry Composition	N	Percent		N	Percent
Basic Industries	1,603	14.0%	Other	551	4.8%
Capital Goods	1,302	11.4%	Petroleum	232	2.0%
Consumer Durables	1,959	17.2%	Service	2,449	21.5%
Construction	577	5.1%	Textiles / Trade	726	6.4%
Finance / Real Estate	48	0.4%	Transportation	256	2.2%
Food / Tobacco	575	5.0%	Utilities	580	5.1%
Leisure	558	4.9%	Total	11,416	100%

Table 2 (Continued)

Panel B: Benchmark Countries

	N	Percent	Unique Firms	Percent	Rule of Law		Aggregate Earnings Management		Difference Between Local GAAP and IFRS	
Argentina	146	1.02%	42	1.62%	-0.55	(0)	n/a	n/a	14	(1)
Brazil	821	5.72%	200	7.74%	-0.45	(0)	n/a	n/a	11	(1)
Canada	811	5.65%	200	7.74%	1.75	(1)	5.3	(1)	5	(0)
Chile	347	2.42%	83	3.21%	1.16	(1)	n/a	n/a	13	(1)
China	1,085	7.56%	200	7.74%	-0.42	(0)	n/a	n/a	9	(1)
India	1,206	8.41%	200	7.74%	0.13	(0)	19.1	(0)	8	(0)
Indonesia	1,002	6.98%	199	7.70%	-0.86	(0)	18.3	(0)	4	(0)
Japan	1,518	10.58%	200	7.74%	0.73	(1)	20.5	(0)	9	(1)
Korea Rep.	1,185	8.26%	200	7.74%	0.78	(0)	26.8	(0)	6	(0)
Malaysia	1,513	10.55%	200	7.74%	0.56	(0)	14.8	(1)	8	(0)
Mexico	206	1.44%	65	2.51%	-0.51	(0)	n/a	n/a	1	(0)
New Zealand	194	1.35%	61	2.36%	1.90	(1)	n/a	n/a	3	(0)
Pakistan	356	2.48%	122	4.72%	-0.87	(0)	17.8	(1)	4	(0)
Taiwan	1,099	7.66%	200	7.74%	0.85	(0)	22.5	(0)	6	(0)
Thailand	1,208	8.42%	200	7.74%	0.10	(0)	18.3	(0)	4	(0)
Turkey	49	0.34%	13	0.50%	0.08	(0)	n/a	n/a	14	(1)
United States	1,600	11.15%	200	7.74%	1.52	(1)	2	(1)	4	(0)
Total	14,346	100.00%	2,585	100.00%						

Industry Composition	N	Percent		N	Percent
Basic Industries	2,285	20.0%	Other	718	6.3%
Capital Goods	1,159	10.2%	Petroleum	451	4.0%
Consumer Durables	1,637	14.3%	Service	969	8.5%
Construction	1,155	10.1%	Textiles / Trade	1,382	12.1%
Finance / Real Estate	247	2.2%	Transportation	849	7.4%
Food / Tobacco	1,425	12.5%	Utilities	1,309	11.5%
Leisure	760	6.7%	Total	14,346	126%

This table reports the sample composition partitioned into countries that require IFRS adoption in 2005 (Panel A) and benchmark countries that do not require IFRS adoption during the sample period (Panel B). The complete sample comprises 25,762 firm-year observations from 34 countries between 2001 and 2008. I randomly select up to 200 firms from each benchmark country and require sufficient data to estimate the least restrictive specification of my primary tests of an effect of IFRS adoption on accounting comparability using either cross-country comparability among industry peers (COMP_IND) or cross-industry comparability among country peers (COMP_CON). The Rule of Law scores are for the year 2005 from Kaufmann et al. (2007). Higher values represent countries with stronger legal enforcement. The aggregate earnings management scores are from Leuz et al. (2003). Smaller values represent countries with more transparent earnings. The difference between local GAAP and IFRS scores are from Bae et al. (2008). Larger scores represent a greater number of discrepancies between local domestic accounting standards and IFRS. I convert all continuous variables into binary indicator variables and assign firms a value of 1 when domiciled in countries with stronger legal enforcement, a common law legal origin, more transparent earnings and a larger difference between local domestic standards and IFRS. Industry composition is based on the classifications from Campbell (1996).

I report Pearson correlations for variables used in all regressions in Table 3. In Panel D, I show that *DISPERSION*, *ERROR* and *OPTIMISM* (*COVERAGE*) are negatively (positively) correlated with both *COMP_IND* and *COMP_CON*, providing initial evidence of information benefits to both cross-country and cross-industry comparability. Further, I show a positive correlation between *IFRS_POST* and *COMP_IND* in Panel E, and a positive correlation between *IFRS_POST* and *COMP_CON* in panel F. Together, these are consistent with IFRS adoption increasing both cross-country and cross-industry comparability among firms.

Table 3

Descriptive Statistics and Correlations for Variables Used in Regression Analyses

Panel A: Firm-Specific Variables

Variable	N	Mean	Std. Dev.	1%	25%	50%	75%	99%
BTM	25,762	0.984	1.125	-1.101	0.361	0.664	1.220	6.768
COVERAGE	11,590	1.621	0.789	0.693	0.693	1.609	2.303	3.332
DAYS	11,589	4.160	0.467	3.045	3.871	4.143	4.443	5.489
DEPRECIATION	25,339	0.067	0.085	0.002	0.023	0.042	0.075	0.558
DISPERSION (%)	11,537	1.827	4.252	0.000	0.214	0.550	1.411	30.367
DRET	25,762	0.481	0.500	0.000	0.000	0.000	1.000	1.000
EARN PRED	22,249	0.287	0.291	0.000	0.038	0.176	0.480	0.975
EARN VOL	23,584	0.064	0.107	0.002	0.014	0.029	0.066	0.730
ERROR (%)	11,537	3.939	11.940	0.000	0.206	0.654	2.212	89.377
ISSUE	25,272	0.813	0.390	0.000	1.000	1.000	1.000	1.000
LOSS	25,762	0.251	0.433	0.000	0.000	0.000	1.000	1.000
OPTIMISM (%)	11,537	2.001	10.601	-15.000	-0.517	0.000	0.873	75.200
R&D	25,733	0.020	0.086	0.000	0.000	0.000	0.000	0.698
RET	25,762	0.116	0.602	-0.999	-0.245	0.018	0.333	6.068
SIZE	25,762	18.893	2.168	14.373	17.349	18.733	20.230	25.210
VOLUME	25,730	17.013	2.925	9.113	15.105	17.185	19.089	23.170

Table 3 (Continued)

Panel B: Aggregate Variables Estimated Cross-Country Among Industry Peers

Variable	N	Mean	Std. Dev.	1%	25%	50%	75%	99%
COMP_IND	25,564	-0.185	0.219	-1.492	-0.213	-0.115	-0.070	-0.015
BTM Diff	25,564	0.773	1.046	0.071	0.270	0.457	0.792	6.716
INFLATION Diff	25,564	0.095	0.077	0.017	0.056	0.073	0.102	0.493
LEV Diff	25,564	0.441	1.252	0.000	0.002	0.029	0.125	8.127
R&D Diff	25,564	1.126	0.604	0.367	0.709	1.036	1.379	4.408
SIZE Diff	25,564	0.090	0.049	0.025	0.058	0.078	0.108	0.281
Tangibility Diff	25,564	0.363	0.529	0.013	0.125	0.213	0.372	3.643
ΔCF_P Diff	25,564	0.014	0.012	0.002	0.007	0.010	0.017	0.077

Panel C: Aggregate Variables Estimated Cross-Industry Among Country Peers

Variable	N	Mean	Std. Dev.	1%	25%	50%	75%	99%
COMP_CON	25,384	-0.143	0.177	-1.132	-0.162	-0.083	-0.048	-0.012
BTM Diff	25,384	0.804	1.058	0.049	0.208	0.372	0.886	5.800
INFLATION Diff	25,384	0.099	0.129	0.022	0.049	0.068	0.100	0.980
LEV Diff	25,384	0.452	1.328	0.000	0.002	0.017	0.192	8.625
R&D Diff	25,384	0.833	0.450	0.192	0.547	0.737	0.974	2.770
SIZE Diff	25,384	0.139	0.067	0.041	0.092	0.128	0.173	0.411
Tangibility Diff	25,384	0.353	0.598	0.019	0.080	0.166	0.320	4.261
ΔCF_P Diff	25,384	0.001	0.001	0.000	0.000	0.000	0.001	0.008

Table 3 (Continued)

Panel D: Correlations Between Variables Used in Analyst Coverage, Forecast Error, Forecast Dispersion and Forecast Optimism Tests

		(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)	(XII)	(XIII)	(XIV)	(XV)	(XVI)
COVERAGE	(I)	**-0.16**	**-0.20**	**-0.15**	**0.07**	**0.08**	**0.63**	**-0.15**	**-0.17**	0.01	**-0.17**	**-0.29**	**0.40**	**-0.05**	**0.03**	**0.04**
DISPERSION	(II)		**0.65**	**0.53**	**-0.22**	**-0.30**	**-0.30**	**0.27**	**0.30**	0.01	**0.38**	**0.19**	-0.02	**0.08**	**0.16**	0.02
ERROR	(III)			**0.82**	**-0.23**	**-0.29**	**-0.30**	**0.22**	**0.30**	**0.03**	**0.40**	**0.18**	**-0.05**	**0.04**	**0.14**	0.00
OPIMISM	(IV)				**-0.18**	**-0.26**	**-0.25**	**0.18**	**0.24**	**0.03**	**0.38**	**0.14**	**-0.05**	**0.02**	**0.11**	0.00
COMP_IND	(V)					**0.52**	**0.17**	**-0.11**	**-0.15**	0.01	**-0.18**	**-0.07**	-0.01	**-0.04**	**-0.07**	0.00
COMP_CON	(VI)						**0.21**	**-0.13**	**-0.16**	**0.02**	**-0.18**	**-0.17**	**0.07**	**0.02**	**-0.08**	-0.01
SIZE	(VII)							**-0.37**	**-0.25**	**0.03**	**-0.30**	**-0.32**	**0.51**	**-0.03**	**0.02**	**0.13**
BTM	(VIII)								**-0.12**	-0.01	**0.09**	**0.09**	**-0.13**	**-0.08**	-0.01	**-0.06**
EARN_VOL	(IX)									**-0.06**	**0.35**	**0.05**	**0.02**	**0.25**	**0.21**	0.01
EARN_PRED	(X)										0.00	-0.01	0.01	-0.01	0.00	-0.01
LOSS	(XI)											**0.07**	**-0.02**	**0.23**	**0.25**	**0.02**
DAYS	(XII)												**-0.18**	**-0.07**	0.02	**0.03**
VOLUME	(XIII)													**0.04**	**0.12**	**0.12**
R&D	(XIV)														**0.29**	**0.05**
DEPRECIATION	(XV)															**0.05**
ISSUE	(XVI)															

Table 3 (Continued)

Panel E: Correlations Between Variables Used in Tests of the Mandatory Introduction of IFRS and COMP_IND

		(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)	(XII)	(XIII)
COMP_IND	(I)	**0.16**	**-0.22**	**-0.12**	0.00	**-0.07**	**-0.18**	**-0.15**	**-0.02**	**0.17**	**-0.11**	**-0.08**	**-0.12**
IFRS_Post	(II)		**-0.16**	**-0.26**	**-0.03**	**-0.13**	**-0.25**	**-0.14**	**-0.17**	**0.08**	**-0.11**	**-0.06**	**0.04**
BTM Diff	(III)			**0.23**	**-0.02**	**0.14**	**0.17**	**0.38**	**0.12**	**-0.04**	**0.17**	-0.01	**0.03**
SIZE Diff	(IV)				**0.07**	**0.04**	**0.35**	**0.17**	**0.09**	**0.15**	**0.05**	**0.09**	**-0.07**
R&D Diff	(V)					**-0.02**	**0.13**	**-0.02**	**0.03**	**0.04**	**-0.02**	0.00	**0.02**
LEV Diff	(VI)						**0.15**	**0.08**	**0.07**	0.00	0.00	0.01	0.01
ΔINFLATION Diff	(VII)							**0.16**	0.00	-0.01	**0.09**	**0.06**	0.00
ΔCF_P Diff	(VIII)								0.01	**-0.03**	**0.10**	**0.06**	**-0.03**
TANGIBILITY Diff	(IX)									**0.07**	**-0.02**	0.00	0.00
SIZE	(X)										**-0.37**	**0.09**	**-0.16**
BTM	(XI)											**-0.11**	**0.13**
RET	(XII)												**-0.67**
DRET	(XIII)												

Panel F: Correlations Between Variables Used in Tests of the Mandatory Introduction of IFRS and COMP_CON (Table 6)

		(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)	(XII)	(XIII)
COMP_CON	(I)	**0.12**	**-0.22**	**-0.09**	**0.12**	**-0.16**	**-0.04**	**-0.31**	**0.06**	**0.21**	**-0.13**	**-0.10**	**-0.08**
IFRS_Post	(II)		**0.03**	**0.09**	**0.04**	**-0.10**	**0.13**	**-0.10**	**-0.10**	**0.08**	**-0.11**	**-0.06**	**0.04**
BTM Diff	(III)			**0.15**	**0.13**	**0.29**	**0.07**	**0.42**	**0.06**	**0.01**	**0.06**	**-0.03**	**0.03**
SIZE Diff	(IV)				**-0.05**	**0.20**	**0.02**	**0.06**	**0.09**	**0.18**	**-0.07**	**-0.04**	**0.02**
R&D Diff	(V)					**-0.06**	**0.13**	**-0.05**	**0.24**	**0.14**	**-0.09**	**-0.06**	**0.04**
LEV Diff	(VI)						**0.00**	**0.30**	**0.07**	**0.10**	**-0.02**	**0.04**	**-0.02**
ΔINFLATION Diff	(VII)							**-0.02**	**0.07**	**-0.04**	**0.11**	**-0.11**	**0.11**
ΔCF_P Diff	(VIII)								**-0.09**	**-0.06**	**0.14**	**0.08**	**-0.03**
TANGIBILITY Diff	(IX)									**0.14**	**-0.10**	**-0.02**	-0.01
SIZE	(X)										**-0.37**	**0.09**	**-0.16**
BTM	(XI)											**-0.11**	**0.13**
RET	(XII)												**-0.67**
DRET	(XIII)												

Table 3 (Continued)

The complete sample comprises 25,762 firm-year observations from 34 countries between 2001 and 2008. I randomly select up to 200 firms from each benchmark country (see Table 2) and require sufficient data to estimate the least restrictive specification of my primary tests of an effect of IFRS adoption on accounting comparability using either cross-country comparability among industry peers (*COMP_IND*) or cross-industry comparability among country peers (*COMP_CON*). All continuous variables are winsorized at 1% and 99% of their distributions.

Panel A reports all firm-specific variables. *ERROR* is the absolute value of the forecast error, scaled by price, multiplied by 100. I estimate the forecast error as the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the forecast date. *BTM* is the year-end book value of common equity scaled by market value of common equity. *COVERAGE* is the natural log of the number of estimates included in the last I/B/E/S mean annual EPS forecast prior to the earnings announcement date. *DAYS* is the natural log of the number of days between the I/B/E/S earnings announcement date and the last I/B/E/S mean EPS forecast prior to the earnings announcement date. *DEPRECIATION* is depreciation expense scaled by total sales. *DISPERSION* is the I/B/E/S standard deviation of annual EPS forecasts included in the last mean EPS forecast available before the earnings announcement date, scaled by price, multiplied by 100. *EARN PRED* is the R^2 from a regression of annual earnings before extraordinary items scaled by FYE total assets on prior year annual earnings before extraordinary items scaled by prior FYE total assets, estimated over the prior 4 years. *EARN VOL* is the standard deviation of annual earnings before extraordinary items scaled by FYE total assets, estimated over the prior 4 years. *LOSS* is an indicator variable that equals 1 if earnings before extraordinary income < 0 and equals 0 otherwise. *ISSUE* is an indicator variable that equals 1 if the firm exhibits an increase in common equity or debt during the current or prior fiscal year and equals 0 otherwise. *OPTIMISM* is the signed value of the forecast error, scaled by price, multiplied by 100. I estimate the forecast error as the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the forecast date. *R&D* is research and development expense scaled by total sales. *RET* is the buy-and-hold return from 9 months prior to the fiscal year end to 3 months after the fiscal year end. *DRET* is an indicator variable that equals 1 if RET < 0 and equals 0 otherwise. *SIZE* is the natural log of FYE market value of equity in $U.S. dollars. *VOLUME* is the natural log of total share trading volume from 9 months prior to the fiscal year end to 3 months after the fiscal year end.

Panel B reports variables that I use in regression analyses with *COMP_IND*, my firm-year measure of cross-country accounting comparability among industry peers. Larger (i.e. less negative) values reflect greater comparability. (See Sections 3.1 and 3.2) I estimate the following variables using comparison groups in the same industry as the firm but different countries. *BTM Diff* is the absolute difference in the average *BTM* between the firm's country-industry group and its comparison country-industry groups. *INFLATION Diff* is the absolute difference in the average country-specific inflation rate between the firm's country-industry group and its comparison country-industry groups. I estimate firm-specific inflation rates over each firms' fiscal year. *LEV Diff* is the absolute difference in the average financial leverage between the firm's country-industry group and its comparison country-industry groups. I estimate financial leverage as total long-term debt scaled by total assets. *R&D Diff* is the absolute difference in the average *R&D* between the firm's country-industry group and its comparison country-industry groups. *SIZE Diff* is the absolute difference in the average *SIZE* between the firm's country-industry group and its comparison country-industry groups. *Tangibility Diff* is the absolute difference in asset tangibility between the firm's country-industry group and its comparison country-industry groups. I estimate asset tangibility as net PPE scaled by total assets. *ΔCF_P Diff* is the absolute difference in the average annual change in cash flows scaled by price between the firm's country-industry group and its comparison country-industry groups.

Panel C reports variables that I use in regression analyses with *COMP_CON* as the dependent variable, my firm-year measure of cross-industry accounting comparability among country peers. Larger (i.e. less negative) values reflect greater comparability. (See Sections 3.1 and 3.2). I estimate the remaining variables as above in Panel B but use comparison groups in the same country as the firm but different industries.

Panel D reports Pearson correlations for variables used in tests of properties of analyst forecast properties in table 4. Panel E reports Pearson correlations for variables used in tests of mandatory IFRS adoption and *COMP_IND* (cross-country comparability among industry peers) in Table 6. Panel F reports Pearson correlations for variables used in tests of mandatory IFRS adoption and *COMP_CON* (cross-industry comparability among country peers) in Table 6. Bold values indicate significance at the p < 5% level.

4.2 VALIDATION TESTS USING PROPERTIES OF ANALYST FORECASTS

Table 4 presents OLS results of my estimations of equation (5) and analysis of the association between comparability and properties of analyst forecasts. In columns (1) and (2) I find that neither cross-country comparability within industry (*COMP_IND* = -0.039; t = -1.04) nor cross-industry comparability within country (*COMP_CON* = -0.093; t = -1.25) is significantly associated with *COVERAGE*. This result contrasts with the positive association in De Franco et al. [2011] and suggests that the supply-demand relationship for analyst information in the U.S. may not generalize to a cross-country setting. In columns (3) and (4) I find that both *COMP_IND* (-7.276; t = -6.37) and *COMP_CON* (-14.262; t = -8.57) are negatively associated with *ERROR*. This effect is economically significant and implies that a one standard deviation increase in *COMP_IND* (*COMP_CON*) is associated with a decrease in the forecast error of about 1.59 (2.52).[13]

In columns (5) and (6) I find that both *COMP_IND* (-2.007; t = -5.60) and *COMP_CON* (-5.157; t = -9.16) are negatively associated with *DISPERSION*, with a one standard deviation increase in *COMP_IND* (*COMP_CON*) being associated with a 0.440 (0.913) decrease in forecast dispersion. Finally, in columns (7) and (8) I find that both *COMP_IND* (-4.344; t = -4.52) and *COMP_CON* (-11.344; t = -7.60) are negatively associated with *OPTIMISM*, with a one standard deviation increase in *COMP_IND* (*COMP_CON*) being associated with a decrease in forecast optimism of about 0.951 (2.008).

The magnitude of the coefficients on COMP_IND and COMP_CON are smaller than those that De Franco et al. [2011] obtain for a U.S. sample using their within-industry measure of comparability. [14] This suggests that either the relationship between comparability and analyst forecast properties is weaker in an international setting or that

[13] For example, I estimate the effect on the forecast error of a one standard deviation increase in *COMP_IND* as: -1.59 = -7.276* 0.219.

[14] In a comparison to the coefficients in De Franco et al. [2011] based on their industry-level comparability measure, I obtain coefficients that are between 40% and 80% smaller in magnitude.

Table 4

Regression Analysis of the Properties of Analyst Forecasts and Accounting Comparability

	Various Analyst Forecast Properties as Dependent Variable							
	COVERAGE		*ERROR*		*DISPERSION*		*OPTIMISM*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COMP_IND	-0.039		-7.276***		-2.007***		-4.344***	
	(-1.04)		(-6.37)		(-5.60)		(-4.52)	
COMP_CON		-0.093		-14.262***		-5.157***		-11.344***
		(-1.25)		(-8.57)		(-9.16)		(-7.60)
SIZE	0.279***	0.279***	-0.599***	-0.594***	-0.165***	-0.150***	-0.431***	-0.415***
	(33.27)	(32.64)	(-6.25)	(-6.44)	(-4.76)	(-4.59)	(-5.20)	(-5.15)
BTM	0.039***	0.036***	1.695***	1.507***	0.932***	0.845***	0.916***	0.740**
	(3.51)	(3.13)	(4.58)	(4.12)	(7.17)	(6.74)	(2.64)	(2.18)
EARN VOL	-0.289***	-0.309***	23.631***	22.400***	9.891***	9.296***	12.416***	11.113***
	(-2.81)	(-3.02)	(5.96)	(5.74)	(7.34)	(7.04)	(4.00)	(3.69)
EARN PRED	0.003	0.001	1.562***	1.584***	0.243**	0.206*	1.132***	1.132***
	(0.14)	(0.04)	(4.41)	(4.47)	(2.00)	(1.75)	(3.34)	(3.39)
LOSS			7.503***	7.345***	2.362***	2.298***	7.308***	7.103***
			(14.70)	(14.56)	(13.47)	(13.36)	(15.45)	(15.32)
DAYS			2.458***	1.986***	0.959***	0.784***	1.537***	1.131***
			(8.49)	(7.09)	(9.26)	(7.88)	(6.09)	(4.67)
VOLUME	0.017***	0.018***						
	(3.16)	(3.22)						
R&D	0.424***	0.425***						
	(4.05)	(4.03)						
DEPRECIATION	-0.177	-0.143						
	(-1.15)	(-0.93)						
ISSUE	0.006	0.005						
	(0.24)	(0.20)						
# Unique Firms	2,619	2,588	2,619	2,588	2,619	2,588	2,619	2,588
# Observations	10,191	10,124	10,191	10,124	10,191	10,124	10,191	10,124
Adj. R^2	43.5%	43.5%	26.0%	27.0%	27.1%	28.5%	18.9%	20.2%

Table 4 *(Continued)*

This table reports the results of eight OLS regressions where the dependent variables are analyst coverage in columns (1) and (2), forecast error in columns (3) and (4), forecast dispersion in columns (5) and (6) and forecast optimism in columns (7) and (8). *COVERAGE* is the natural log of the number of estimates included in the last I/B/E/S mean annual EPS forecast prior to the earnings announcement date. *ERROR* is the absolute value of the forecast error multiplied by 100, scaled by price. I estimate the forecast error as the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the forecast date. *DISPERSION* is the I/B/E/S standard deviation of annual EPS forecasts included in the last mean EPS forecast available before the earnings announcement date, scaled by price, multiplied by 100. *OPTIMISM* is the signed value of the forecast error, scaled by price, multiplied by 100.

COMP_IND is my firm-year measure of cross-country accounting comparability among industry peers. Larger (i.e. less negative) values reflect greater comparability. *COMP_CON* is my firm-year measure of cross-industry accounting comparability among country peers. Larger (i.e. less negative) values reflect greater comparability. I also include the following control variables. *SIZE* is the natural log of FYE market value of equity in $U.S. dollars. *BTM* is the year-end book value of common equity scaled by market value of common equity. *EARN VOL* is the standard deviation of annual earnings before extraordinary items scaled by FYE total assets, estimated over the prior 4 years. *EARN PRED* is the R^2 from a regression of annual earnings before extraordinary items scaled by FYE total assets on prior year annual earnings before extraordinary items scaled by prior FYE total assets, estimated over the prior 4 years. *LOSS* is an indicator variable that equals 1 if earnings before extraordinary income < 0 and equals 0 otherwise. *DAYS* is the natural log of the number of days between the I/B/E/S earnings announcement date and the last I/B/E/S mean EPS forecast prior to the earnings announcement date. *VOLUME* is the natural log of total share trading volume from 9 months prior to the fiscal year end to 3 months after the fiscal year end. *R&D* is research and development expense scaled by total sales. *DEPRECIATION* is depreciation expense scaled by total sales. *ISSUE* is an indicator variable that equals 1 if the firm exhibits an increase in common equity or debt during the current or prior fiscal year and equals 0 otherwise. Intercepts and indicator variables for industry and year are included in all regressions but not tabulated. T-statistics based on standard errors clustered by firm are in parentheses. *, **, *** indicates significance at the p < 10%, 5% and 1% level, respectively.

my cross-sectional comparability variables measure true comparability with more noise than the De Franco et al. [2011] time-series variables. However, the results in Table 4 provide evidence that my cross-sectional measures of comparability have explanatory power for observed variation in analyst forecast properties. More generally, my results are consistent with information benefits to both cross-country and cross-industry comparability.

4.3 VALIDATION TESTS USING REPORTING INCENTIVES

In Table 5, I test the pre-IFRS period (2001-2004) for an association between accounting comparability and managers' reporting incentives. Columns (1) – (3) report the results of three OLS regressions in which the dependent variable is *COMP_IND* (cross-country comparability among industry peers). I estimate equation (6) using an unconditional version of *COMP_IND* and the seven aggregate control variables in column (1) and using conditional versions in columns (2) and (3). In column (1), I find that four of the eight aggregate control variables that capture differences between estimation groups are significantly negatively associated with *COMP_IND*, consistent with my expectations. Additionally, I find that four of the five observable firm-level characteristics are significantly associated with *COMP_IND* (*BTM* is not). In all, my controls and fixed effects are able to explain almost 28% of the variation in *COMP_IND*. The coefficients on *RET* and *DRET**RET* highlight the relationship between *COMP_IND* and the magnitude of firm returns. Specifically, my measure of comparability is decreasing in the magnitude of returns.[15]

[15] In untabulated results I perform this and all following tests omitting *RET, DRET* and *DRET**RET* and obtain very similar coefficients on my independent variables of interest. While this suggests that differences in returns are affecting the predicted values of my comparability measures in a systematic way, it also suggests that potentially systematic variation in firms' returns over my sample period is not driving my results.

Table 5

Regression Analysis of Accounting Comparability and Country-Level Institutional Factors

	Cross-Country Comparability			Cross-Industry Comparability		
		Country-Level Conditional Variables			Country-Level Conditional Variables	
		Rule of Law (1=Stronger Enforcement)	Aggregate Earnings Management (1=More Transparency)		Rule of Law (1=Stronger Enforcement)	Aggregate Earnings Management (1=More Transparency)
	(1)	(2)	(3)	(4)	(5)	(6)
Conditional Var		0.079***	0.054***		0.065***	0.068***
		(11.07)	(10.17)		(14.02)	(15.82)
BTM Diff	-0.026***	-0.032***	-0.027***	-0.032***	-0.034***	-0.012***
	(-10.59)	(-12.08)	(-11.01)	(-11.29)	(-12.54)	(-5.96)
SIZE Diff	-0.018***	-0.012***	-0.012**	-0.034***	-0.036***	-0.050***
	(-4.18)	(-2.65)	(-2.36)	(-6.07)	(-6.38)	(-8.66)
R&D Diff	-0.003	0.005***	0.006***	0.008***	0.002*	0.001
	(-1.27)	(6.04)	(7.88)	(7.24)	(1.90)	(1.22)
LEV Diff	-0.357***	-0.376***	0.058*	-0.151***	-0.155***	-0.297***
	(-10.02)	(-11.43)	(1.75)	(-6.72)	(-7.16)	(-12.36)
ΔINFLATION Diff	-3.900***	-2.556***	-4.895***	-30.701***	-27.139***	-36.293***
	(-13.98)	(-8.54)	(-13.54)	(-11.87)	(-10.65)	(-15.55)
ΔCF_P Diff	-0.000	-0.014***	-0.013***	-0.046***	-0.037***	-0.070***
	(-0.00)	(-3.24)	(-2.79)	(-12.10)	(-9.51)	(-16.94)
Tangibility Diff	-0.077	-0.098**	-0.008	0.229***	0.190***	0.085**
	(-1.59)	(-2.11)	(-0.19)	(6.86)	(5.68)	(2.54)
SIZE	0.011***	0.011***	0.009***	0.012***	0.012***	0.015***
	(10.27)	(9.47)	(8.50)	(11.28)	(11.47)	(16.28)
BTM	0.001	0.004	0.000	-0.004	-0.000	0.004*
	(0.60)	(1.40)	(0.02)	(-1.51)	(-0.16)	(1.79)
RET	-0.145***	-0.143***	-0.113***	-0.101***	-0.098***	-0.083***
	(-22.64)	(-20.34)	(-16.52)	(-21.64)	(-21.10)	(-19.02)
DRET	-0.072***	-0.070***	-0.062***	-0.048***	-0.043***	-0.037***
	(-12.04)	(-10.90)	(-9.68)	(-9.30)	(-8.60)	(-8.11)
*DRET*RET*	0.440***	0.419***	0.331***	0.287***	0.288***	0.300***
	(23.57)	(21.16)	(17.39)	(18.85)	(19.13)	(22.60)
# Countries	33	33	26	29	29	23
# Unique Firms	4,382	4,280	3,878	4,334	4,334	3,895
# Observations	12,728	12,311	11,282	12,620	12,620	11,566
Adj. R^2	27.6%	29.5%	27.6%	29.6%	31.5%	36.9%

This table reports the results of six OLS regressions over 2001 to 2004. The dependent variable is *COMP_IND*, cross-country accounting comparability among industry peers, in columns (1) to (3) and *COMP_CON*, cross-industry accounting comparability among country peers, in columns (4) to (6). The *COMP_IND* sample comprises 12,728 firm-year observations with necessary data for my base specification in column (1). The *COMP_CON* sample comprises 12,620 firm-year

Table 5 *(Continued)*

observations with necessary data for my base specification in column (4). I partition the sample based on the country medians for the following country-level conditional variables: (1) & (4) the Rule of Law variable for 2005 from Kaufmann et al. (2007); (2) & (5) The aggregate earnings management score from Leuz et al. (2003); (3) & (6) The summary score from Bae et al. (2008) that measures how local domestic GAAP differs from IFRS along 21 dimensions. For example, in column (1) I partition the sample into firms from countries with strong and weak legal enforcement based on high and low scores for the Kaufmann et al. (2008) Rule of Law score. I estimate my comparability measures (*COMP_IND* and *COMP_CON)* and all aggregated control variables using only firms from the same partition. Finally, I include an indicator variable in the specification that equals 1 for firms from countries in the strong enforcement partition. I apply an identical approach for historic earnings transparency and assign the respective indicator variables a value of 1 for firms from countries with more transparent earnings (i.e. lower earnings management scores).

I include aggregated and firm-specific control variables constructed as in Sec. 3.3. *BTM Diff* is the absolute difference in the average *BTM* between the firm's country-industry group and its comparison country-industry groups. *INFLATION Diff* is the absolute difference in the average country-specific inflation rate between the firm's country-industry group and its comparison country-industry groups. I estimate firm-specific inflation rates over each firms' fiscal year. *LEV Diff* is the absolute difference in the average financial leverage between the firm's country-industry group and its comparison country-industry groups. I estimate financial leverage as total long-term debt scaled by total assets. *R&D Diff* is the absolute difference in the average *R&D* between the firm's country-industry group and its comparison country-industry groups. *SIZE Diff* is the absolute difference in the average *SIZE* between the firm's country-industry group and its comparison country-industry groups. *Tangibility Diff* is the absolute difference in asset tangibility between the firm's country-industry group and its comparison country-industry groups. I estimate asset tangibility as net PPE scaled by total assets. *ΔCF_P Diff* is the absolute difference in the average annual change in cash flows scaled by price between the firm's country-industry group and its comparison country-industry groups.

I also include the following firm-specific control variables. *SIZE* is the natural log of FYE market value of equity in $U.S. dollars. *BTM* is the year-end book value of common equity scaled by market value of common equity. *RET* is the buy-and-hold return from 9 months prior to the fiscal year end to 3 months after the fiscal year end. *DRET* is an indicator variable that equals 1 if RET < 0 and equals 0 otherwise. *DRET*RET* is an interaction of *RET* and *DRET*. Intercepts and indicator variables for industry and year are included in all regressions but not tabulated. T-statistics based on standard errors clustered by firm are in parentheses. *, **, *** indicates significance at the p < 10%, 5% and 1% level, respectively

Turning to the conditional versions of my measures, in columns (2) and (3) I find that *COMP_IND* is positively associated with both the strength of legal enforcement (*Conditional Var* = 0.079; t = 11.07) and earnings transparency (*Conditional Var* = 0.054; t = 10.17), consistent with comparability being greater among countries with institutional environments that provide stronger reporting incentives to managers.

In columns (4) – (6) I report the results of three regressions in which the dependent variable is *COMP_CON* (cross-industry comparability among country peers). I find that 11 of the 12 control variables are significantly associated with *COMP_CON* in column (1), although the coefficients on *R&D Diff* and *TANGIBILITY Diff* are unexpectedly positive. Further, my controls and fixed effects are able to explain almost 30% of the variation in *COMP_CON*. The enhanced explanatory power of my aggregate controls in a within-country setting suggests that differences in the characteristics of comparison groups are more important in explaining variation in comparability when

country-specific institutional environments are held constant. Turning to the conditional versions of my measures, I find that *COMP_CON* is positively associated with strength of legal enforcement (*Conditional Var* = 0.065; t = 14.02) in column (2) and earnings transparency (*Conditional Var* = 0.068; t = 15.82) in column (3). The results in Table 5 provide evidence that tests using my cross-sectional measures of comparability are able to detect higher levels of comparability among institutional environments that have historically generated less earnings management and more transparent earnings. This is what I would expect if 1) the FASB is correct in their assertion that comparability and representational faithfulness are positively correlated, and 2) *COMP_CON* and *COMP_IND* are valid measures of comparability. While the tests in Tables 4 and 5 are imperfect, they do provide reasonable validation checks of my cross-sectional adaption of the De Franco et al. (2011) measure of comparability.

5. RESULTS

In this section I present both univariate and multivariate results for empirical tests of my hypotheses. I also present sensitivity analysis.

5.1 MANDATORY IFRS ADOPTION AND ACCOUNTING COMPARABILITY

5.1.1. Univariate Analysis. Table 6 reports the results of univariate tests of moderating effects of the three conditional variables (hypotheses H1 and H2).[16] I use a difference-in-differences analysis in which I condition changes in comparability following IFRS adoption with changes among non-adopters. I partition the sample to allow a moderating effect of legal enforcement (Panel A), earnings transparency (Panel B) and domestic GAAP-IFRS differences (Panel C). In this analysis, and the multivariate analysis that follows, I am comparing any observed change in comparability among IFRS adopters with any concurrent change among non-adopters *in the same partition*. This design permits, but does not require, any observed trends in comparability to vary between the partitions.

I find an increase in both *COMP_IND* and *COMP_CON* for each of my IFRS adopter subsamples. Further, the difference-in-differences analysis shows that IFRS adopters exhibit an incremental increase in comparability relative to non-adopters when located in countries with strong legal enforcement, more earnings transparency, and larger domestic GAAP-IFRS differences. In contrast, I find a difference-in-differences that is negative among adopters in countries with weak legal enforcement, less earnings transparency, and fewer domestic GAAP-IFRS differences. Overall, the results in Table 6 provide preliminary support for hypotheses H1 and H2. Next, I perform multivariate tests that control for other observable and unobservable determinants of comparability.

[16] In untabulated results I test for changes in comparability among the entire pooled sample of IFRS adopters and non-adopters (i.e. without partitions). I find an increase in both COMP_IND (cross-country comparability among industry peers) and COMP_CON (cross-industry comparability among country peers) following the introduction of IFRS. Consistent with Lang et al. [2010], however, the difference-in-differences analysis shows that IFRS adopters do not exhibit an incremental increase in comparability relative to non-adopters, on average.

Table 6

Univariate Analysis of the Impact of Mandatory IFRS Adoption on Comparability

Panel A: Full Sample Partitioned by Strength of Legal Enforcement

Weak Legal Enforcement

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N = 931	-0.304	-0.205	0.099	***	IFRS Adopters N = 1,395	-0.190	-0.125	0.065	***
Benchmark N = 9,855	-0.351	-0.166	0.185	***	Benchmark N = 9,787	-0.241	-0.139	0.102	***
	0.047***	-0.039**	-0.086	***		0.051***	0.014*	-0.04	***

Strong Legal Enforcement

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N = 9,604	-0.188	-0.095	0.093	***	IFRS Adopters N = 9,790	-0.158	-0.093	0.065	***
Benchmark N = 4,423	-0.097	-0.073	0.024	***	Benchmark N = 4,412	-0.093	-0.064	0.029	***
	-0.091***	-0.022***	0.069	***		-0.065***	-0.029***	0.036	***

Panel B: Full Sample Partitioned by Historic Earnings Transparency

Less Earnings Transparency

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N = 1,693	-0.235	-0.156	0.079	***	IFRS Adopters N = 1,943	-0.210	-0.151	0.059	***
Benchmark N = 7,150	-0.304	-0.125	0.179	***	Benchmark N = 7,218	-0.219	-0.109	0.110	***
	0.069***	-0.031***	-0.100	***		0.009	-0.042***	-0.05	***

More Earnings Transparency

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N = 8,913	-0.181	-0.099	0.082	***	IFRS Adopters N = 9,216	-0.151	-0.086	0.065	***
Benchmark N = 4,218	-0.132	-0.121	0.011		Benchmark N = 4,245	-0.127	-0.104	0.023	***
	-0.049***	0.022***	0.071	***		-.024***	0.018***	0.042	***

Table 6 (Continued)

Panel C: Full Sample Partitioned by Difference Between Local GAAP and IFRS

Fewer Differences between Local GAAP and IFRS

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N = 3,575	-0.231	-0.119	0.112	***	IFRS Adopters N = 5,195	-0.139	-0.081	0.058	***
Benchmark N = 10,333	-0.281	-0.134	0.147	***	Benchmark N = 9,945	-0.212	-0.118	0.094	***
	0.050***	0.015***	-0.035	***		0.073***	0.037***	-0.036	***

More Differences between Local GAAP and IFRS

	COMP_IND					*COMP_CON*			
	Pre	Post				Pre	Post		
IFRS Adopters N =5,945	-0.199	-0.107	0.092	***	IFRS Adopters N = 5,964	-0.183	-0.110	0.073	***
Benchmark N = 3,679	-0.213	-0.144	0.069	***	Benchmark N = 1,518	-0.044	-0.037	0.007	***
	-0.105	0.037***	0.023	**		-0.139***	-0.073***	0.066	***

This table reports the results of a univariate difference-in-differences analysis of changes in *COMP_IND* (cross-country accounting comparability among industry peers) and *COMP_CON* (cross-industry accounting comparability among country peers) between the pre-IFRS period (2001 to 2004) and post-IFRS period (2005 to 2008). I partition the sample based on three conditioning variables. In Panel A, Strong (Weak) Legal Enforcement countries have values for the Rule of Law variable for 2005 from Kaufmann et al. (2007) above (below) the country level median. In Panel B, More (Less) Earnings Transparency countries have values for the aggregate earnings management score from Leuz et al. (2003) below (above) the country-level median. In Panel C, More (Fewer) differences between Local GAAP and IFRS countries have values for the summary score from Bae et al. (2008) that measures how local domestic GAAP differs from IFRS along 21 dimensions above (below) the country-level median.

5.1.2. Multivariate Analysis. Columns (1) – (3) of Table 7 reports the results of three OLS regressions in which the dependent variable is *COMP_IND* (cross-country comparability among industry peers). I estimate equation (7) and permit the effect of IFRS adoption to vary with the three conditional variables.[17] In this specification, the coefficient on *IFRS_POST* reflects the impact of IFRS in countries with weak legal enforcement, less transparent earnings, and fewer domestic GAAP-IFRS differences, respectively. The coefficient on *IFRS_POST*Conditional Var* reflects any incremental IFRS effect for firms in countries with strong legal enforcement, more transparent

[17] In untabulated tests, I estimate equation (7) using an unconditional version of *COMP_IND* and the seven aggregate control variables. The coefficient on IFRS_POST (-0.059; t = -9.96) shows a negative main effect of IFRS adoption on cross-country comparability among industry peers, consistent with Lang et al. [2010].

Table 7

Regression Analysis of the Impact of Mandatory IFRS Adoption on Comparability

	Cross-Country Comparability			Cross-Industry Comparability		
	Rule of Law	Aggregate Earnings Management	Difference Between Local GAAP and IFRS	Rule of Law	Aggregate Earnings Management	Difference Between Local GAAP and IFRS
	(1)	(2)	(3)	(4)	(5)	(6)
(1) *IFRS_Post*	-0.021	-0.084***	-0.052***	-0.021**	-0.024**	-0.016***
	(-0.87)	(-4.49)	(-4.37)	(-2.11)	(-2.49)	(-3.22)
(2) *IFRS_Post** *Conditional Var*	0.062**	0.121***	0.075***	0.052***	0.047***	0.031***
	(2.55)	(6.10)	(4.74)	(4.96)	(4.51)	(3.79)
Test (1)+(2) = 0 [p-value]	[0.000]***	[0.000]***	[0.029]**	[0.000]***	[0.000]***	[0.022]**
BTM Diff	-0.019***	-0.026***	-0.031***	-0.038***	-0.017***	-0.035***
	(-4.60)	(-6.08)	(-8.60)	(-13.70)	(-7.83)	(-12.19)
SIZE Diff	-0.011**	-0.029***	-0.028***	-0.018***	-0.014**	-0.022***
	(-2.14)	(-4.06)	(-5.54)	(-2.59)	(-2.10)	(-3.20)
R&D Diff	0.000	0.002***	0.011***	0.008***	0.006***	0.008***
	(0.66)	(2.99)	(6.38)	(10.16)	(8.21)	(8.12)
LEV Diff	-0.001	0.206***	-0.035**	0.045**	-0.211***	0.053**
	(-0.03)	(5.43)	(-2.01)	(2.05)	(-9.02)	(2.26)
ΔINFLATION Diff	-2.332***	-2.434***	-2.354***	-10.337***	-16.254***	-14.405***
	(-9.91)	(-11.21)	(-10.07)	(-6.73)	(-11.07)	(-10.23)
ΔCF_P Diff	0.016***	0.013**	0.007*	-0.001	-0.027***	-0.004
	(3.54)	(2.49)	(1.74)	(-0.36)	(-6.57)	(-1.07)
Tangibility Diff	-0.004	-0.168***	-0.056	0.078	-0.026	0.040
	(-0.08)	(-3.17)	(-0.93)	(1.52)	(-0.54)	(0.77)
SIZE	0.019***	0.019***	0.010***	0.010***	0.017***	0.008***
	(4.74)	(4.72)	(2.65)	(3.63)	(6.19)	(3.02)
BTM	0.006	0.006*	0.002	0.001	0.004	0.000
	(1.62)	(1.67)	(0.63)	(0.48)	(1.53)	(0.12)
RET	-0.129***	-0.097***	-0.122***	-0.086***	-0.076***	-0.085***
	(-20.57)	(-16.57)	(-20.15)	(-21.16)	(-19.54)	(-20.74)
DRET	-0.056***	-0.052***	-0.055***	-0.042***	-0.038***	-0.043***
	(-12.35)	(-11.39)	(-11.05)	(-12.33)	(-12.17)	(-12.41)
*DRET*RET*	0.344***	0.252***	0.323***	0.206***	0.221***	0.202***
	(21.36)	(16.66)	(19.62)	(18.98)	(21.80)	(18.51)
# Countries	34	26	34	30	23	30
# Unique Firms	5,082	4,430	5,012	5,105	4,433	5,105
# Observations	24,813	21,974	23,532	25,384	22,622	25,384
Adj. R^2	35.5%	31.0%	30.1%	45.5%	46.9%	44.4%

Table 7 *(Continued)*

This table reports the results of six OLS regressions. The dependent variable is *COMP_IND*, cross-country accounting comparability among industry peers, in columns (1) to (3). The *COMP_IND* sample comprises 24,813 firm-year observations from 2001 to 2008 with necessary data for the least restrictive specification in column (1). The dependent variable is *COMP_CON*, cross-industry accounting comparability among country peers, in columns (4) to (6). The *COMP_IND* sample comprises 25,384 firm-year observations from 2001 to 2008 with necessary data for the least restrictive specification in column (4). I partition the sample based on: (1) & (4) the Rule of Law; (2) & (5) Earnings transparency; (3) & (6) Differences between local domestic GAAP and IFRS. For example, in column (1) I partition the sample into firms from countries with strong and weak legal enforcement based on high and low scores for the Kaufmann et al. (2008) Rule of Law score. I estimate my comparability measure (*COMP_IND)* and all aggregated control variables using only firms from the same partition. *Conditional Var* is an indicator variable in the specification that equals 1 for firms from countries in the strong enforcement partition. I apply an identical approach for the remaining two conditional variables and assign the respective indicator variables a value of 1 for firms from countries with more transparent earnings (i.e. lower earnings management scores) and with a greater number of discrepancies between local domestic GAAP and IFRS.

IFRS_POST equals 1 for firm-year observations that are from countries that require IFRS adoption beginning in 2005 and that are in 2005 to 2008. I also include an interaction of *IFRS_POST* and *Conditional Var* for each conditional factor that I include in columns (1) to (6).

I include aggregated and firm-specific control variables in each specification that I construct as in Sec. 3.3. *INFLATION Diff* is the absolute difference in the average country-specific inflation rate between the firm's country-industry group and its comparison country-industry groups. I estimate firm-specific inflation rates over each firms' fiscal year. *LEV Diff* is the absolute difference in the average financial leverage between the firm's country-industry group and its comparison country-industry groups. I estimate financial leverage as total long-term debt scaled by total assets. *R&D Diff* is the absolute difference in the average *R&D* between the firm's country-industry group and its comparison country-industry groups. *SIZE Diff* is the absolute difference in the average *SIZE* between the firm's country-industry group and its comparison country-industry groups. *Tangibility Diff* is the absolute difference in asset tangibility between the firm's country-industry group and its comparison country-industry groups. I estimate asset tangibility as net PPE scaled by total assets. *ΔCF_P Diff* is the absolute difference in the average annual change in cash flows scaled by price between the firm's country-industry group and its comparison country-industry groups.

I also include the following firm-specific control variables. *SIZE* is the natural log of year-end market value of equity in $U.S. dollars. *BTM* is the year-end book value of common equity scaled by market value of common equity. *RET* is the buy-and-hold return from 9 months prior to the fiscal year end to 3 months after the fiscal year end. *DRET* is an indicator variable that equals 1 if RET < 0 and equals 0 otherwise. *DRET**RET* is an interaction of *RET* and *DRET*. Intercepts and indicator variables for firm and year (conditional variable*year) are included in column (1) (columns (2) to (5)) but not tabulated. T-statistics based on standard errors clustered by firm are in parentheses. *, **, *** indicates significance at the p < 10%, 5% and 1% level, respectively.

earnings, and more domestic GAAP-IFRS differences, respectively. I also report the p-values from Wald tests assessing the statistical significance of the joint coefficients (*IFRS_POST + IFRS_POST*Conditional*).

I first examine the moderating effect of managers' reporting incentives in columns (1) and (2) and find support for H1. In column (1) I permit the impact of IFRS adoption on comparability to vary with the strength of countries' legal enforcement. IFRS adopters in weak enforcement countries do not exhibit an increase in cross-country comparability relative to *non-adopters* in weak enforcement countries (*IFRS_POST* = -0.021; t = -0.87). However, adopters in strong enforcement countries do exhibit an incremental increase relative to adopters in weak enforcement countries

(*IFRS_POST*Conditional* = 0.062; t = 2.55), consistent with H1.[18] Additionally, adopters in strong enforcement countries exhibit an increase relative to *non-adopters* in strong enforcement countries, as shown by the significantly positive joint coefficient (*IFRS_POST* + *IFRS_POST*Conditional* = 0.041; p< 0.01). Taken together, the results in column (1) are consistent with IFRS adoption increasing comparability among firms in countries with strong legal enforcement but not among firms in countries with weak legal enforcement.

In column (2) I present results that examine a moderating effect of historical earnings transparency and provide additional support for H1. IFRS adopters in low transparency countries exhibit a decrease in cross-country comparability relative to *non-adopters* in low transparency countries (*IFRS_POST* = -0.084; t = -4.49). However, adopters in high transparency countries exhibit an incremental increase relative to adopters in low transparency countries (*IFRS_POST*Conditional* = 0.121; t = 6.10), consistent with H1. Additionally, adopters in high transparency countries exhibit an increase relative to *non-adopters* in high transparency countries, as shown by the significantly positive joint coefficient (*IFRS_POST* + *IFRS_POST*Conditional* = 0.037; p< 0.01). Taken together, the results in columns (1) and (2) are consistent with IFRS adoption increasing comparability only among countries with institutional environments that provide managers with stronger reporting incentives. In contrast, IFRS adopters in countries that provide managers with weaker reporting incentives exhibit no change or a decrease in comparability relative to non-adopters in similar institutional environments.

In column (3), I examine whether IFRS adoption has a larger impact on comparability when countries' domestic standards were less similar to IFRS and find support for H2. IFRS adopters in countries with fewer discrepancies between local GAAP and IFRS exhibit a decrease relative to *non-adopters* in countries with fewer

[18] This result is analogous to a difference-in-differences-in-differences, in which I test whether adopters in strong enforcement countries exhibit a change in comparability, relative to non-adopters in strong enforcement countries, that is more positive than the change exhibited by adopters in weak enforcement countries, relative to non-adopters in weak enforcement countries. I use similar language when presenting tests of additional moderating effects.

discrepancies (*IFRS_POST* = -0.052; t = -4.37); while adopters in countries with more discrepancies exhibit both an incremental increase relative to adopters in countries with fewer discrepancies (*IFRS_POST*Conditional* = 0.075; t = 4.47) and an increase relative to *non-adopters* in countries with more discrepancies (*IFRS_POST* + *IFRS_POST*Conditional* = 0.023; p= 0.03). These results are consistent with H2 and suggest that IFRS adoption is more likely to result in an increase in comparability among firms that previously prepared financial statements using domestic accounting standards that were less similar to IFRS.

Columns (4) – (6) in Table 7 report the results of three OLS regressions in which the dependent variable is *COMP_CON* (cross-industry comparability among country peers). The results lead to the same inferences with respect to cross-industry comparability as those reported above for cross-country comparability and for the sake of brevity I do not discuss them.

Taken together, the analysis that considers the moderating role of reporting incentives and domestic GAAP-IFRS differences show that comparability effects of IFRS adoption are heterogeneous across countries. Further this heterogeneity is consistent with existing research which shows that economic benefits to mandatory IFRS adoption are also concentrated in countries with institutional characteristics that provide managers with stronger reporting incentives and in countries with larger domestic GAAP-IFRS differences. Finally, my ability to demonstrate economically significant cross-sectional variation in the comparability effect of IFRS adoption increases my confidence in my measures and analysis.

5.2 CHANGES IN COMPARABILITY AND THE INFORMATION ENVIRONMENT

In Table 8, I test hypothesis H3 that improvements in comparability following the mandatory introduction of IFRS are positively associated with improvements in the information environment. Panel A reports the results of the univariate analysis. Firms in IFRS adoption countries exhibit a decrease in *ERROR* (2.559 vs. 5.931; $p < 0.01$), *DISPERSION* (1.333 vs. 2.529; $p < 0.01$) and *OPTIMISM* (1.108 vs. 3.036; $p < 0.01$),

Table 8

Analysis of Changes in Properties of Analyst Forecasts and Changes in Accounting Comparability Surrounding the Mandatory Adoption of IFRS

Panel A: Univariate Analysis Comparing Analyst Forecast Properties Before and After the Introduction of IFRS

	ERROR	*DISPERSION*	*OPTIMISM*
Post (N=3,019)	2.559	1.333	1.108
Pre (N=3,294)	5.931	2.529	3.036
Post - Pre	-3.372 ***	-1.196 ***	-1.929 ***

Panel B: Regression Analysis of the Change in Analyst Forecast Properties Following the Introduction of IFRS

	Various Analyst Forecast Properties as Dependent Variable					
	Δ ERROR		*Δ DISPERSION*		*Δ OPTIMISM*	
	(3)	(4)	(5)	(6)	(7)	(8)
Δ COMP_IND	-6.301**		-1.780		-8.126***	
	(-2.39)		(-1.50)		(-3.07)	
Δ COMP_CON		-15.368**		-4.573*		-15.723**
		(-2.18)		(-1.88)		(-2.49)
Δ SIZE	-2.358***	-2.347***	-0.793***	-0.788***	-1.889***	-1.910***
	(-3.15)	(-3.21)	(-2.84)	(-2.92)	(-2.86)	(-2.95)
Δ BTM	-0.017	0.088	-0.122	-0.091	-0.590	-0.453
	(-0.01)	(0.06)	(-0.22)	(-0.17)	(-0.46)	(-0.36)
Δ EARN VOL	22.055**	22.052**	6.776**	6.735**	4.623	4.654
	(2.19)	(2.19)	(2.03)	(2.03)	(0.65)	(0.65)
Δ EARN PRED	-0.867	-0.994	-0.069	-0.125	-1.409	-1.568
	(-0.89)	(-1.02)	(-0.16)	(-0.29)	(-1.48)	(-1.62)
Δ LOSS	6.433***	6.118***	2.396***	2.313***	5.530***	5.318***
	(5.11)	(4.89)	(5.20)	(4.83)	(4.73)	(4.51)
Δ DAYS	2.078	2.402	0.301	0.398	1.391	1.716
	(1.36)	(1.53)	(0.41)	(0.54)	(0.98)	(1.19)
Fixed Effects	Industry, Country	Industry, Country	Industry, Country	Industry, Country	Industry, Country	Industry, Country
# Countries	15	12	15	12	15	12
# Unique Firms	800	791	800	791	800	791
# Observations	800	791	800	791	800	791
Adj. R^2	18.2%	16.3%	17.3%	11.9%	11.0%	11.9%

Panel A of this table present a univariate comparison of analyst forecast properties (i.e. *ERROR*, *DISPERSION* and *OPTIMISM)* before (2001-2004) and after (2005-2008) the mandatory introduction of IFRS. I only include countries that required IFRS adoption in 2005 and the sample comprises 6,313 firm-year observations. *ERROR* is the absolute value of the forecast error, scaled by price, multiplied by 100. I estimate the forecast error as the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last

Table 8 *(Continued)*

available price reported by I/B/E/S prior to the forecast date. *DISPERSION* is the I/B/E/S standard deviation of annual EPS forecasts included in the last mean EPS forecast available before the earnings announcement date, scaled by price, multiplied by 100. *OPTIMISM* is the signed value of the forecast error, scaled by price, multiplied by 100. I estimate the forecast error as the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the forecast date.

Panel B of this table reports the results of six cross-sectional OLS regressions. I only include countries that required IFRS adoption in 2005 and the sample comprises 800 firm observations. The dependent variable in each column is the firm-specific change in the average analyst forecast property (i.e. ERROR, DISPERSION and OPTIMISM) between the post-adoption period (i.e. 2005 to 2008) and the pre-adoption period (i.e. 2001 to 2004). Each independent variable is also the firm-specific change in the average of the variable between the post-adoption period (i.e. 2005 to 2008) and the pre-adoption period (i.e. 2001 to 2004). *COMP_IND* is my firm-year measure of cross-country accounting comparability among industry peers. Larger (i.e. less negative) values reflect greater comparability. *COMP_CON* is my firm-year measure of cross-industry accounting comparability among country peers. Larger (i.e. less negative) values reflect greater comparability. *SIZE* is the natural log of FYE market value of equity in $U.S. dollars. *BTM* is the year-end book value of common equity scaled by market value of common equity. *EARN VOL* is the standard deviation of annual earnings before extraordinary items scaled by FYE total assets, estimated over the prior 4 years. *EARN PRED* is the R^2 from a regression of annual earnings before extraordinary items scaled by FYE total assets on prior year annual earnings before extraordinary items scaled by prior FYE total assets, estimated over the prior 4 years. *LOSS* is an indicator variable that equals 1 if earnings before extraordinary income < 0 and equals 0 otherwise. *DAYS* is the natural log of the number of days between the I/B/E/S earnings announcement date and the last I/B/E/S mean EPS forecast prior to the earnings announcement date. Intercepts and indicator variables for country and industry are included in all regressions but not tabulated. T-statistics based on Huber–White heteroscedasticity-consistent standard errors are in parentheses. *, **, *** indicates significance at the p < 10%, 5% and 1% level, respectively.

consistent with an improvement in firms' information environments following the introduction of IFRS.

Panel B presents the results of six OLS estimations of equation (8) and provides support for hypothesis H3 that improvements in comparability following the introduction of IFRS are positively associated with improvements in the information environment. I find a negative coefficient on *ΔCOMP_IND* and *ΔCOMP_CON* when *ΔERROR*, *ΔDISPERSION* and *ΔOPTIMISM* are the dependent variables, with five of the six coefficients being significant at conventional levels. Taken together, these results are consistent with an improvement in the information environment following the introduction of IFRS that is partially explained by an increase in both cross-country and cross-industry accounting comparability.

5.3 SENSITIVITY ANALYSIS

I perform the following tests to examine whether my results are sensitive to my design choices. Results for each of these tests are similar to the tabulated tests.

1. I estimate the properties of analyst forecasts using the first IBES mean forecast available up to nine months prior to the IBES earnings announcement date.
2. I exclude the transition year (2005).
3. I winsorize all variables at 2.5% and 97.5% of their distributions.
4. To accommodate variation in the returns generation process across countries, I estimate cross-country comparability within industry (*COMP_IND*) using returns and net income that I first mean correct within country.
5. The UK comprises 37% of my IFRS sample. Accordingly I repeat all analysis excluding UK firms.
6. In my analysis I permit firms' accounting income to differentially incorporate positive and negative economic income to accommodate timing differences due to conservatism. As an alternative specification, I estimate equation (1) using current and prior year returns to allow timing differences in the speed with which accounting income incorporates economic income. I do not permit the coefficients on each return to vary based on the sign of the return.

6. CONCLUSION

I begin by assessing the informational benefits of comparability and find that both cross-country and cross-industry comparability have statistically and economically significant information benefits to financial statements users, as proxied by financial analysts. I also examine the role of managers' incentives in shaping accounting comparability prior to 2005 and provide evidence that both cross-country and cross-industry comparability are positively associated with the strength of countries' legal enforcement and historic earnings transparency, consistent with comparability being higher when managers have stronger reporting incentives.

In my primary tests, I examine the impact of mandatory IFRS adoption on accounting comparability and provide evidence that IFRS adoption increased comparability relative to non-adopters, but only in countries that provide stronger reporting incentives or have larger domestic GAAP-IFRS differences. In contrast, I find evidence that IFRS adopters in countries that provide weaker reporting incentives or have smaller domestic GAAP-IFRS differences exhibit a decrease in comparability relative to non-adopters. Consistent with a positive impact of IFRS on the quality of information, I also provide evidence that analyst forecast errors, dispersion and optimism decreased following mandatory IFRS adoption and that these improvements in the information environment are positively associated with increases in comparability.

While I find consistent results in my analysis, I note the following caveats. I use a benchmark of non-adopters that imperfectly controls for time trends. Further, my results may be partially or completely due to correlated omitted firm and country-level factors that change over my sample period. Also, I only consider the four years following IFRS adoption. It is possible that any effects I observe are temporary and will not generalize to later periods or other IFRS adopters. Additionally, I use returns as a proxy for economic events (i.e. economic income) in order to identify differences in how firms' accounting incorporates those economic events. While I include firm fixed effects and both the sign and magnitude of firm returns in my primary tests, I cannot be

sure that differences in the returns generation process (i.e. differences in the speed with which returns capture "true" economic income) across countries and industries is not affecting my results. Also, returns are forward-looking while accounting income is retrospective. Thus timing differences between returns and net income may be affecting my results; although similarities and differences in the timeliness of accounting's recognition of economic events is, arguably, a primary determinant of whether firms' accounting is more or less comparable.

Overall, the results of this study suggest that comparability is shaped by both accounting standards and reporting incentives stemming from countries' institutional environments. Further, the results provide evidence that the anticipated comparability benefits to IFRS are heterogeneous across these institutional environments. My findings are consistent with recent research showing that economic benefits and improvements in the information environment following the mandatory introduction of IFRS are concentrated in countries with institutional characteristics that provide stronger reporting incentives and countries that have more discrepancies between domestic GAAP and IFRS and suggest that an increase in accounting comparability is a primary source of these benefits.

REFERENCES

AHMED, A.; M. NEEL; and D. WANG. 'Does Mandatory Adoption of IFRS Improve Accounting Quality: Preliminary Evidence?' Unpublished paper, 2010. Available at: http://ssrn.com/abstract=1502909.

ARMSTRONG, C. S.; M. BARTH; A. JAGOLINZER; and E. RIEDL. 'Market Reaction to the Adoption of IFRS in Europe.' *The Accounting Review* 85 (2010): 31-61.

BAE, K.; H. TAN; and M. WELKER. 'International GAAP Differences: The Impact on Foreign Analysts.' *The Accounting Review* 83 (2008): 593-628.

BALL, R. 'International Financial Reporting Standards (IFRS): Pros and Cons for Investors.' *Accounting and Business Research* 36, International Accounting Policy Forum (2006): 5-27.

BALL, R.; S.P. KOTHARI; and V. NIKOLAEV. 'On Estimating Conditional Conservatism.' Unpublished paper, 2011. Available at: http://ssrn.com/abstract=1758702.

BALL, R.; S.P. KOTHARI; and A. ROBIN. 'The Effect of International Institutional Factors on Properties of Accounting Earnings.' *Journal of Accounting and Economics* 29 (2000a): 1-51.

BALL, R.; A, ROBIN; and G. SADKA. 'Is Financial Reporting Shaped by Equity Markets or by Debt Markets? An International Study of Timeliness and Conservatism.' *Review of Accounting Studies* 13 (2008): 168–205.

BALL, R.; A. ROBIN; and J. WU. 'Accounting Standards, the Institutional Environment and Issuer Incentives: Effect on Timely Loss Recognition in China, Asia Pacific.' *Journal of Accounting and Economics* 7 (2000b): 71-96.

BALL, R.; A. ROBIN; and J. WU. 'Incentives Versus Standards: Properties of Accounting Income in Four East Asian Countries.' *Journal of Accounting & Economics* 36 (2003): 235-270.

BARTH, M.; W. LANDSMAN; M. LANG; and C. WILLIAMS. 'Are International Accounting Standards-Based and US GAAP-Based Accounting Amounts Comparable?' Unpublished paper, 2011. Available at: http://ssrn.com/abstract=1585404.

BASU, S. 'The Conservatism Principle and the Asymmetric Timeliness of Earnings.' *Journal of Accounting & Economics* 24 (1997): 3-37.

BASU, S.; A. HUANG; T. MITSUDOME; and J. WEINTROP. 'Timeliness and Conservatism of Taiwanese Earnings.' *Asia-Pacific Journal of Accounting and Economics* 12 (2005): 113-134.

BEUSELINCK, C.; P. JOOS; and S. VAN DER MEULEN. 'International Earnings Comparability.' Unpublished paper, 2007. Available at: http://ssrn.com/abstract=1014086.

BROCHET, F.; A. JAGOLINZER; and E. RIEDL. 'Mandatory IFRS Adoption and Financial Statement Comparability.' Unpublished paper, 2011. Available at: http://ssrn.com/abstract=1819482.

BROWN, W. D. JR.; H. HE; and K. TEITEL. 'Conditional Conservatism and the Value Relevance of Accounting Earnings: An International Study.' *European Accounting Review* 15 (2006): 605-626.

BURGSTAHLER, D.; L. HAIL; and C. LEUZ. 'The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms.' *The Accounting Review* 81 (2006): 983-1016.

BUSHMAN, R., and J. PIOTROSKI. 'Financial Reporting Incentives for Conservative Accounting: The Influence of Legal and Political Institutions.' *Journal of Accounting and Economics* 42 (2006): 107-148.

BYARD, D.; L. YING; and Y. YU. 'The Effect of Mandatory IFRS Adoption on Financial Analysts' Information Environment.' *Journal of Accounting Research* 49 (2011): 69-96.

CAMPBELL, J. 'Understanding Risk and Return.' *The Journal of Political Economy* 104 (1996): 298-345.

CASCINO, S., and J. GASSEN. 'Mandatory IFRS Adoption and Accounting Comparability.' Unpublished paper, 2010. Available at: http://ssrn.com/abstract=1402206.

CHRISTENSEN, H.; E. LEE; and M. WALKER. 'Cross-Sectional Variation in the Economic Consequences of International Accounting Harmonization: The Case of Mandatory IFRS Adoption in the UK.' *The International Journal of Accounting* 42 (2007): 341-379.

DASKE, H.; L. HAIL; C. LEUZ; and R. VENDI. 'Mandatory IFRS Reporting Around the World: Early Evidence on the Economic Consequences.' *Journal of Accounting Research* 46 (2008): 1085-1142.

DEFOND, M.; X. HU; M. HUNG; and S. LI. 'The Impact of Mandatory IFRS Adoption on Foreign Mutual Fund Ownership: The Role of Comparability.' *Journal of Accounting and Economics* 51 (2011): 240-258.

DEFOND, M.; M. HUNG; and R. TREZEVANT. 'Investor Protection and the Information Content of Annual Earnings Announcements: International Evidence.' *Journal of Accounting and Economics* 43 (2007): 37-67.

DE FRANCO, G.; S.P. KOTHARI; and R.S. VERDI. 'The Benefits of Financial Statement Comparability.' Forthcoming *Journal of Accounting Research* (2011). Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1475-679X.2011.00415.x/abstract.

DRAKE, M.; L. MYERS; and L. YAO. 'Are Liquidity Improvements Around the Mandatory Adoption of IFRS Attributable to Comparability Effects or to Quality Effects?' Unpublished paper, 2010. Available at: http://ssrn.com/abstract=1466353.

FASB. 'International Convergence of Accounting Standards—Overview.' 2008.

FASB. 'Statement of Financial Accounting Concepts No. 8.' 2010.

FONSECA, A.R., and F. GONZALEZ. 'Cross-Country Determinants of Bank Income Smoothing by Managing Loan-Loss Provisions.' *Journal of Banking and Finance* 32 (2008): 217-228.

GAAP 2001-A Survey of National Accounting Rules. 2001. Jointly by Andersen, BDO, Deloitte Touche Tohmatsu, Ernst & Young Grant Thornton, KPMG and PricewaterhouseCoopers. Available at: www.iasplus.com/resource/gaap2001.pdf.

GASSEN, J.; R. FUELBIER; and T. SELLHORN. 'International Differences in Conditional Conservatism - The Role of Unconditional Conservatism and Income Smoothing.' *The European Accounting Review* 15 (2006): 527-564.

GINER, B., and W. REES. 'On the Asymmetric Recognition of Good and Bad News in France, Germany and the United Kingdom.' *Journal of Business Finance and Accounting* 28 (2001): 1285-1331.

HAIL, L.; C. LEUZ; and P. WYSOCKI. 'Global Accounting Convergence and the Potential Adoption of IFRS by the United States: An Analysis of Economic and Policy Factors.' Unpublished paper, 2009. Available at: http://ssrn.com/abstract=1357331.

HUNG, M. 'Accounting Standards and Value Relevance of Financial Statements: An International Analysis.' *Journal of Accounting and Economics* 30 (2001):401-420.

IASCF. 'Framework for the Preparation and Presentation of Financial Statements.' 2001. Available at: http://www.iasplus.com/standard/framewk.htm.

KAUFMANN, D.; A. KRAAY; and M. MASTRUZZI. 'Governance Matters VI: Aggregate and Individual Governance Indicators 1996-2006.' *The World Bank*, (2007).

LANG, M.; M. MAFFETT; and E. OWENS. 'Earnings Comovement and Accounting Comparability: The Effects of Mandatory IFRS Adoption.' Unpublished paper, 2010. Available at: http://ssrn.com/abstract=1676937.

LA PORTA, R.; F. LOPEZ-DE-SILANES; A. SHLIEFER; and R. VISHNY. 'Law and Finance.' *Journal of Political Economy* 106 (1998): 1113-1155.

LEUZ, C.; D. NANDA; and P. D. WYSOCKI. 'Earnings Management and Investor Protection: An International Comparison.' *Journal of Financial Economics* 69 (2003): 505-527.

LI, S. 'Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital?' *The Accounting Review* 85 (2010): 607-636.

POPE, P., and M. WALKER. 'International Differences in the Timeliness, Conservatism and Classification of Earnings.' *Journal of Accounting Research* 37 (1999): 53-87.

APPENDIX A

VARIABLE DEFINITIONS

Variable		*Definition*
ACCURACY	=	Absolute value of the forecast error multiplied by -1, scaled by price. Where forecast error is the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the FYE.
BTM	=	FYE book value of common equity scaled by market value of common equity,
COMP_CON	=	Firms' comparability to other firms in different industries and in the same country as defined in section 3.2.
COMP_IND	=	Firms' comparability to other firms in the same industry and in different countries as defined in section 3.2.
COVERAGE	=	Natural log of the number of estimates included in the last I/B/E/S mean annual EPS forecast prior to the earnings announcement date.
DAYS	=	Natural log of the number of days between the I/B/E/S earnings announcement date and the last I/B/E/S mean EPS forecast prior to the earnings announcement date.
DEPRECIATION	=	Depreciation expense scaled by total sales.
DISPERSION	=	The I/B/E/S standard deviation of annual EPS forecasts included in the last mean EPS forecast available before the earnings announcement date.
DRET	=	An indicator variable that equals 1 if RET < 0 and equals 0 otherwise
EARN PRED	=	The R2 from a regression of annual earnings before extraordinary items scaled by FYE total assets on prior year annual earnings before extraordinary items scaled by prior FYE total assets over the prior 4 years.
EARN VOL	=	The standard deviation of annual earnings before extraordinary items scaled by FYE total assets over the prior 4 years.
EU	=	An indicator variable that equals 1 when I estimate accounting comparability using only firms from countries within the EU and that equals 0 when I estimate accounting comparability using only firms from countries outside the EU.
IFRS	=	An indicator variable that equals 1 if the firm is from a country that requires IFRS adoption in 2005 and equals 0 otherwise.
ISSUE	=	An indicator variable that equals 1 if the firm issued equity or debt during the current or prior fiscal year and equals 0 otherwise.
Rule of Law	=	An indicator variable that equals 1 when I estimate accounting comparability using only firms from countries with a Strong Rule of Law and that equals 0 when I estimate accounting comparability using only firms from countries with a Weak Rule of Law. I identify a country as Strong (Weak) if its Rule of Law score from Kaufmann et al. (2005) is above (below) the within sample country median score.
LOSS	=	An indicator variable that equals 1 if earnings before extraordinary income < 0 and equals 0 otherwise.

Variable		*Definition*
NI_P	=	Earnings before extraordinary items per share, scaled by price 9 months prior to the fiscal year end.
OPTIMISM	=	Signed value of the forecast error, scaled by price. Where forecast error is the last I/B/E/S mean annual EPS forecast prior to the announcement date minus the actual EPS reported by I/B/E/S and price is the last available price reported by I/B/E/S prior to the FYE.
POST	=	An indicator variable that equals 1 if the observation is from 2005-2008 and equals 0 if it is from 2001-2004
R&D	=	Research and development expense scaled by total sales
RET	=	Compounded return from 9 months prior to the fiscal year end to 3 months after the fiscal year end.
SIZE	=	Natural log of FYE market value of equity in $U.S. dollars.
VOLUME	=	Natural log of total share trading volume from 9 months prior to the fiscal year end to 3 months after the fiscal year end

APPENDIX B

SAMPLE SELECTION

I obtain my initial sample from the Compustat Fundamentals and Global Fundamentals Annual databases. Stock data come from CRSP for U.S. and Canadian firms and from Compustat Global Security Detail for all other firms. Analyst forecast data come from I/B/E/S. I obtain firm-years during the 2001 to 2008 period with non-missing total assets (AT) and a 12 month fiscal year (PDDUR = 12). I delete observations missing data for the accounting standard followed (ACCTSTD) and firms that report using IFRS during any year in which it is not mandatory (i.e. voluntary adopters). I identify a firm as using IFRS if Compustat codes ACCTSTD as DI, DA or DT. I identify whether a firm is required to use IFRS based on both the firm's fiscal year end date and date of adoption in the firm's country (FIC) which I obtain from IASPLUS. This procedure results in 194,388 firm-year observations.

My research design requires that I estimate a distinct accounting function for each country-industry-year group. In order to assure that all firms in each group use either domestic standards or IFRS (mutually exclusive), I delete all IFRS adopters that first report using IFRS in a year subsequent to the first year it is required (i.e., after 2005), leaving 184,536 firm-years. Additionally, Compustat codes some mandatory IFRS adopters as using domestic standards *following* their initial adoption date. Because I am unable to determine if this is a data error or exception I delete all firms that Compustat codes as non-IFRS following their initial adoption date, leaving 165,840 firm-years. I am interested in comparing the accounting comparability for firms that report using IFRS to firms that report using their countries' domestic standards. Accordingly, I delete all non-U.S. firms that Compustat codes as using U.S. GAAP (ACCTSTD = US or MU) during the sample period, leaving 164,204 firm-years.

I delete observations with missing industry affiliation, leaving 159,248 firm-years, and observations lacking sufficient data to calculate the variables *RET* and *NI_P*, my primary variables to estimate firms' accounting functions, leaving 112,672 firm-years. Next I retain each country-industry-year group with at least 8 observations

(106,483) and with at least two positive return observations and two negative return observations to reliably estimate the four coefficients in equation (1), leaving 101,327 observations. These observations comprise the sample that I use to estimate the accounting functions.

I retain observations with non-missing market value of equity and book value of equity because I require *SIZE* and *BTM* in my primary tests, leaving 100,814 firm-year observations. I also want to reduce the influence of any single non-adopting country on my results. In particular, the U.S. and Japan comprise 25% and 41% of my sample of non-IFRS adopters, respectively. Accordingly, I randomly select up to 200 firms from each non-adopting country, taking steps to assure a balanced industry representation from each country. This procedure results in a sample of 25,946 observations. Finally, I retain each country-industry-year with sufficient data to estimate all aggregate control variables associated with either cross-country or cross-industry comparability. This leaves a final sample of 25,762 firm-year observations.

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