The Impact of IFRS Adoption on the Value Relevance of Book Value and Earnings

Abstract

In this study, we investigate the impact of IFRS adoption in Europe and Australia on the relevance of book value and earnings for equity valuation. In doing so, we introduce the product model into the literature. This model enhances the standard linear model and permits inferences regarding change in measurement error of book value and earnings when firms switch from local GAAP to IFRS. Our results indicate that the adoption of IFRS does not increase the correspondence between accounting numbers and stock price. Thus, one must look elsewhere for the benefits of IFRS adoption.

1. Introduction

In this paper, we investigate the impact of International Financial reporting Standards (IFRS) adoption on the relevance of book value and earnings for equity valuation. The 2005 switchover to IFRS in Europe and Australia provides an ideal natural experimental setting. The opportunity is that the 2005 filings of European and Australian public companies contain restated 2004 GAAP numbers in accordance with IFRS which can be compared to the former country level GAAP numbers reported in the original 2004 filings. This allows the measurement of performance for the 2004 fiscal year using both the original local GAAP numbers and the new IAS numbers. Each firm can serve as its own control and the time period studied is the same for both sets of numbers.[1]

The value relevance of aggregate book value and earnings is a natural place to look for the benefits of IFRS adoption, given the paramount role of equity valuation in the IFRS conceptual framework. We view book value and earnings as summary descriptors of value and explore how value relevance changes subsequent to the adoption of IFRS. Our value relevance perspective is not the only one for examining the capital market benefits of IFRS adoption, and concurrent research (for example, Daske, Hail, Leuz, and Verdi, 2008) explores other benefits of IFRS adoption such as changes in the cost of capital. Our research complements the cost of capital evidence of Daske et. al. in the following way. Greater value relevance is one dimension of accruals quality (Francis, LaFond, Olsson, and Schipper, 2004) and higher accruals quality can translate into a lower cost of capital, especially when firms raise equity financing from investors in distant countries where investors are not insiders in the sense described by Ball, Kothari, and Robin (2000). Put simply, a greater value relevance of book value and earnings means investors need to rely less on "other information" (Ohlson, 1995), hence firm information risk declines. Thus, a "null result" for changes in value relevance subsequent to IFRS adoption, combined with the Daske et. al. result that cost of capital declines modestly (28 basis points)

[1] For some firms, depending upon the firm's fiscal year-end and the effective date for the standard in the firm's home country, the switchover alternatively occurred in 2006.

for mandatory IFRS adopters implies that the benefit to IFRS adoption arises from an overall increase in the informativeness of the IFRS disclosure package rather than an increase in the informativeness of book value and earnings for value per se. The latter is a worthy focus of research inquiry in its own right, since the measurement of book value and earnings is the primary (but not sole) output of the IFRS standard setting process.

From a methodological perspective, we initially use standard linear valuation models in order to evaluate the improvement in fit for equity valuation as GAAP regimes change. These are our benchmark models, since they represent current operating procedure for analyses in the spirit of Ball and Brown (1968). Then, following the arguments of Riffe and Thompson (1998), we step beyond a linear model and develop a so-called 'product' model which evolves from alternative assumptions about the measurement error existing between accounting information and true economic indicators of value. The logic is that, while the true valuation model relating "assets" and "cash flow" to equity value is proportional, book values and earnings measure true assets and cash flow with a deviation driven by accounting standards. Introducing assumptions about these deviations imposes a model form between value and accounting variables. The specific form that we explore augments the traditional book value and earnings model with an additional explanatory variable that is the product of the individual book value and earnings terms, the cross-product variable. The valuation relevance of GAAP numbers such as book value and earnings captures the extent to which accounting numbers are associated with the information investors use to assess the amounts, timing and uncertainty of future cash flows in order to value stocks. Thus, for the valuation models we examine, we employ absolute pricing errors to infer changes in value relevance due to changes in country level GAAP.

As alluded to at the outset, the setting we consider allows for an investigation of the impact of IFRS adoption from several perspectives. The fact that the financial reports from the year of IFRS adoption also contain restated prior year statements based on IFRS allows us first to hold firms and

time constant in the pre-switch period and vary the GAAP, a setting where only one research dial is being turned. Hung and Subramanyam (HS, 2007) refer to this "same firm year" research design as a powerful one, since it controls for cross sectional and time series differences in our sample firms. This allows us to compare the value relevance of the two GAAP regimes (the new IFRS rules versus the former local country GAAP) for the pre-switch year. Clearly, in addition to the strengths of this design, it also suffers the weakness that the restated figures were only available with a one-year delay. Thus, we use future price-based tests as described by HS.

We expect to observe an overall increase in accounting quality using IFRS GAAP, with the greatest improvement in model pricing errors for countries with the greatest measurement error in local GAAP. In this regard, we expect greater measurement error in the local GAAP of code law countries compared to common law countries, since the latter are "shareholder" economies while the former are "stakeholder" economies for which purposes other than equity valuation (e.g., tax, bank loan security, distributions to multiple stakeholders) are paramount when GAAP standards are set.[2] However, as noted by Ball (2006) and Daske *et al* (2007), even if IFRS are the same across Europe and Australia in 2005, the inferred measurement error in GAAP book values and earnings can still vary from country to country to the extent that regulatory enforcement, incentives, or opportunity vary.

Our sample data, obtained from Worldscope, consist of 3,810 firms from 14 EU countries and Australia (3 Common Law and 12 Code Law). Our results on IFRS adoption suggest the following. First, the adoption of IFRS has had a greater impact on the financial statements of code versus common law countries. For code law countries, IFRS increases book value and earnings, consistent with the consensus view expressed in the literature that code law GAAP was conservative in nature (see, for example, Jermakowicz and Gornik-Tomaszewski, 2006, p. 186). In contrast, the adoption of IFRS results in an increase in absolute pricing errors for common law countries but no significant change, on

[2] For elaboration, see Ball, Kothari and Robin (2000) and Hung (2001).

average, for code law countries, using the "same firm year" valuation tests. Moreover, the product model tests also suggest increased measurement error in the IFRS accounting regime for common law countries and no significant change for code law countries. Thus, there is evidence of only minor changes in value relevance for code law countries, while for common law countries, value relevance is decreased subsequent to the adoption of IFRS.

In terms of contribution, our analyses would seem retrospective, in that all European countries and Australia have already switched to IFRS and the historical relevance of former home county GAAP may be less interesting. Nevertheless, there are many countries which have not yet adopted IFRS, including Canada (which will adopt IFRS in 2011) and the United States. Our results, to the extent they yield reliable inferences about the changes in the value relevance of accounting numbers when IFRS is adopted, will be of interest to those countries and indeed, to standard setters and accounting professionals around the globe who are interested in the benefits of IFRS conversion.

The remainder of the document is organized as follows. In the next section, we present a review of the relevant literature. Section 3 then presents a conceptual case for an alternative specification which incorporates an additional explanatory variable – the cross-product term - within the traditional OLS regression model. The methodology is discussed in Section 4 followed by the sample data in Section 5. Section 6 then presents the empirical results and Section 7 concludes.

2. Literature Review

Prior to the voluntary adoption of IFRS, international accounting researchers examined the value relevance of book value and earnings using cross sectional designs. For example, Arce and Mora (2002) explore the valuation relevance of book value and earnings in a levels valuation model across 8 European countries using data from 1990-1998. Basing their inferences on model R^2, they conclude that earnings are more relevant than book value in Common law countries and vice versa for

Code law countries. Using data from 21 countries during 1991-1997, Hung (2001) explores the association between earnings and returns using a perfect foresight returns approach and concludes that the value relevance of financial statements is weaker in Code law, as compared to Common law, countries.[3] This is consistent with prior expectations because the valuation role for earnings should be more important in shareholder economies as opposed to stakeholder economies.

Some studies have examined the valuation relevance of book value and earnings for voluntary IAS adopters. The samples have tended to be small and the results mixed. For example, Bartov, Goldberg and Kim (2005) examine the effects of IAS GAAP versus German GAAP using a linear returns-earnings association model. For their sample of 37 IAS adopters, they employ a pre-post design and find an increase in the value relevance of earnings when firms switch to IAS from German GAAP. These findings contrast those of HS (2007). Using the "same firm year" design discussed in Section 1 and an Ohlson valuation model in the levels, HS explore the valuation relevance of restatement differences for 80 voluntary IAS adopters in Germany. They find that the value relevance of book value increases, but not that of earnings, when German companies switch to IAS. Similar results are observed by Stergios, Athanasios and Nilolaos (2007) for 40 voluntary IAS adopters in Greece.

Also focusing on voluntary IAS adoption, Barth, Landsman and Lang (BLL, 2008) observe that: "there is little large-sample empirical evidence on whether applying IAS improves accounting quality." For a sample of 319 firms that voluntarily adopted IAS between 1994 and 2003, BLL use a linear price on book value and earnings valuation model as well as a linear returns-earnings association model. Using a pre-post design, they find that the R^2 for the price level model increases from 28 to 40 (27 to 30) percent in the adoption year, relative to the pre adoption year, for IAS adopters (control firms). The returns-earnings models exhibit only a modest corresponding increase in model R^2. They conclude that accounting quality is higher following IAS adoption. Again, this conclusion is based on

[3] Ball, Kothari and Robin (2000) also find that the accounting numbers from common law countries are more highly correlated with prices than are the numbers from code law countries.

voluntary IAS adopters. By focusing on all 2005 adopters in a particular country with data on Worldscope, we employ a much larger sample. Perhaps most importantly, we base inferences on our same firm-year approach and a variety of econometric models.

One country at a time mandatory IFRS adoption studies which focus on value relevance are beginning to appear. These include Ahmed and Goodwin (2006) and Goodwin, Ahmed and Heaney (2007) – Australia; Christensen, Lee, and Walker (2007) and Horton and Serafeim (2007) – U.K.; and Gjerde, Knivsfla and Saettem (2008) – Norway. In addition, multiple country mandatory IFRS adoption studies focusing on value relevance are also starting to appear. These include Capkun, Cazavan-Jeny, Jeanjean and Weiss (2007) – for 7 EU countries; and Wang (2008) – for 14 EU countries and Australia.

For Australia, Ahmed and Goodwin (2006) and Goodwin, Ahmed, and Heaney (2007) conclude that aggregate differences between IFRS and local GAAP have no incremental information for price in their samples. For the U.K., Christensen, Lee, and Walker (2007) and Horton and Serafeim (2007) report that earnings reconciliations have incremental price relevance over local U.K. GAAP numbers. For the seven countries they examine (2 common law and 5 code law), Capkun et. al. (2007) report incremental tests which again point to IFRS financial statements conveying incremental value relevant information relative to local GAAP. Finally, Wang (2008) observes that IFRS net income reconciliation differences are positively associated with returns, a finding that is once again consistent with incremental value relevance for IFRS EPS. She reports results for Australia and the same 14 countries which we examine.

All of the above described mandatory adoption studies use incremental value relevance approaches. Relative value relevance tests address the question of which GAAP numbers fit price better, whereas incremental value relevance tests ask whether, given knowledge of local GAAP numbers, IFRS numbers have incremental explanatory power for price, and if so, in what direction. It is

well established in the literature (see for example, Biddle, Seow, and Siegel, 1995) that two GAAP regimes (e.g., local and IFRS) could each have incremental value relevance for price given the other, but one of these regimes could have greater value relevance for price compared to the other. In our application, the relative tests seem more meaningful because investors will have one set of numbers or the other, but not both, when countries switch to IFRS.[4]

Finally, Daske, Hail, Leuz and Verdi (2008) examine the impact of mandatory IFRS adoption on cost of capital around the world, including EU countries. They report that first time mandatory adopters experience a modest decrease in the cost of capital (28 basis points). They observe that capital market benefits of IFRS adoption are most pronounced for countries with strict enforcement regimes and institutional environments that provide strong reporting incentives. Their effects are stronger for countries where local GAAP differs more from IFRS.

A challenge facing mandatory adoption researchers is the problem of early adoption and any residual self-selection issues involving late adopters. As discussed by Capkun et. al. (2007), of the 15 countries in our sample, a number of countries allowed IFRS adoption prior to 2005 and the greatest incidence of early adoption is Germany. Our search of Worldscope reveals that 326 public companies on Worldscope indicated as residing in Germany switched prior to 2005, compared to the 195 mandatory adopters in our sample. Other than Germany, only a minor percentage of companies in our 15 countries opted for early adoption. Again, our search of Worldscope reveals that, for the 14 remaining countries, 392 public companies switched prior to 2005 compared to the 3,615 mandatory adopters in our sample. Jermakowicz and Gornik-Tomaszewski (2006) survey the early adoption literature and identify the following firm characteristics of early adopters: lower debt-equity ratio,

[4] As a robustness check, we also conducted (but do not tabulate) incremental value relevance tests. For code and common law countries, our results (available upon request) are broadly consistent with IFRS financial statements conveying modest incremental value relevant information relative to local GAAP. The average adjusted R^2 improvement when reconciliation differences are added to a local only model are 3.03 and 2.78 percent, respectively, for common and code law countries. These findings are not inconsistent with the relative tests which we tabulate, which suggest that a modestly better fit, overall, for local GAAP over IFRS for common law countries, and on average, little difference in relative value relevance for code law countries.

higher percentage foreign sales, higher number of foreign listings, more diffuse ownership and larger capitalization. Thus mandatory adopters, especially in Germany, are not a random subset of the population. Christensen, Lee, and Walker (2008) show that mandatory adopters are smaller, less dependent on foreign capital markets, more dependent on local bank financing, and have more concentrated ownership. While it is difficult to ascertain the impact of this self selection on our tests, especially for German firms, we believe this constitutes a conservative bias for our tests for the following reasons. For the HS sample of 80 German early adopters, available firm-year data (see their Table 3) indicates that the book value of equity increased approximately 50% for IAS GAAP over local German GAAP. As we report in our Table 1, we observe a corresponding percentage increase in the book value of equity of only 13%. Thus, it appears that early German adopters faced larger local versus IAS impacts. As such, our tests of IFRS impact would appear to yield a lower bound on the valuation impact of IFRS for German firms.

3. A Suggestion Concerning the Model Form Linking Stock Value to Accounting Information

With a few exceptions, the literature surrounding price level regressions, wherein either gross stock values or prices per share are modeled in terms of accounting based explanatory variables, has tended to focus on a linear functional form.[5] In this section, we propose extending the traditional linear pricing equation to include an additional explanatory term, the product of earnings and book value. This term is motivated by an intuition that follows from assuming that accounting earnings and book value serve as measurements of true economic income and net assets, along with associated measurement errors.[6] Formal models developed in Riffe and Thompson (1998) and Beatty, Riffe, and

[5] Within the linear form, the most widely cited papers such as those by, for example, Christie (1987), Landsman and Magliolo (1988), Barth and Kallapur (1996), Beatty, Chamberlain and Magliolo (1995), Easton (1998), and Barth and Clinch (1999) study the question of deflation and adjustments for heteroscedasticity.

[6] The term "measurement error" is not intended to suggest that accountants have trouble measuring economic earnings. Rather, accounting standards have evolved to serve the needs of many users of financial statements; and in bridging across these uses can be thought of as creating a signal about the underlying economic value of the firm with an associated error.

Thompson (2002) contain similar product terms within closed-form non-linear model specifications. The existence of closed-form solutions to these non-linear models depends on specific assumptions about the distributions of errors. The central driver behind the models however, is easy to visualize and would seem to transcend the exact distributional properties of the variables.

Here is the core intuition. Imagine that accounting earnings is a measurement on the economic cash flow driving price although it contains a deviation largely uncorrelated with this cash flow. Likewise, imagine accounting book value as a measure of the economic net assets that drive price but containing an error also largely uncorrelated with price. In addition, assume that the error variances are heteroscedastic such that higher valued firms have higher absolute variance in the deviation between price and accounting information. It follows that a product term in a regression of price on earnings and book will have explanatory power in helping to identify the size of these measurement errors. Because of heteroscedasticity in measurement errors, where earnings and book give similar value predictions, Baye's Rule can be used to infer that these measures come from a firm with relatively low error variance. Conversely, where one value measure is high and the other low, it is more likely that there is higher error variance. This inference about error variance influences the ultimate prediction of price. Moreover, because the geometric mean falls below the arithmetic mean as an increasing function of variance, the cross product term should have a negative sign in so far as the influence of heteroscedasticity is concerned.

By way of an example, assume there are two firms which can only be of three valuation types, high (H), medium (M), or low (L).[7] Each firm reports earnings and book value which also can only be one of three signals: H, M or L. Investors combine the signals on earnings and book value to get a prediction on overall firm type. Further, assume that we know that there is one type M firm and one type H firm. When the firms report their accounting numbers for the period, firm A reports earnings of

[7] This example is an oversimplification given that it unrealistically restricts the signals that firms of type H or L may provide. The intuition regarding firms signaling type M may still provide some useful intuition.

M and book value of M, while firm B reports earnings of L and book value of H. Which firm is more likely to be the high value (H) firm? Both firm A (M, M) and firm B (L, H) have "average" signals of M in this case but the difference between them is the variance in the errors of the earnings and book value signals. Because we have assumed that higher valued firms have more error variance in the signals, it is more likely that firm B's underlying true value is H when compared to firm A. In a regression of price on earnings and book value with a cross-product term included, if M is half way between H and L in this example, the cross product of H and L will be below M squared. Thus a negative coefficient on the cross-product term predicts a higher value for a firm with signals H and L than for a firm with two M signals.

Imagining a regression with this cross-product term and a negative coefficient on this term, what does the pricing model actually look like? If the data are cut holding either book or earnings constant while varying the other, the model is conditionally linear. If the data are cut so that the spread between earnings and book is increasing, the model will contain a convexity. Alternatively if the data are cut so that the spread is decreasing, a concavity follows.[8]

To take an extreme example, suppose that earnings are negative while book value is positive, implying an implausibly low book ROE. In the usual case, where estimated coefficients on earnings and book are positive, we expect a negative coefficient on the cross-product term. A negative coefficient on the cross-product term results in increases to the predicted price (the value of the cross-product is itself negative). If earnings became less extreme (became less negative), the amount that is added to value by this term would decrease. Therefore, as the two signals become more similar, the cross-product adds less to the firm's value estimate – consistent with more valuable firms having higher error variances. Similarly, in the case of extreme positive earnings, given book value (i.e., an implausibly high ROE), the cross-product model would also increase the price prediction relative to

[8] The formal model of Riffe and Thompson (1998) also implies a convexity in the pricing function when either earnings or book is held constant while the other varies. But this is of second order importance except at extreme values.

that of a linear model. Therefore, the cross-product term is not simply an attempt to attenuate outliers.[9] The cross-product term uses the information in extreme observations to estimate the amount of error variance present in the observed data and uses this to improve the price estimates. Given the need for the information gained in extreme observations, the results in all tables are presented without data filtering, winsorizing or truncation.

3.2 Simulation results supporting a cross-product term

To substantiate the importance of a cross-product term in the presence of heteroscedastic measurement errors, we simulated (results available upon request) data under varying assumptions about the true linkage between price and accounting variables. If, for example, price is treated as the "dependent" variable where the independent variables of earnings and book value are multiplied by coefficients and an error term added to the right hand side, no cross-product term emerges in the data, regardless of whether or not heteroscedasticity is introduced. This result is obvious. Because the pricing model does not contain a cross-product term, the data do not reveal one.

On the other hand, let price be generated first with earnings created as a measure of price (times a multiplier) and book created as a measure of price, both with measurement errors. Further, let the error variances be linked back to the level of price. In this case, a negatively signed cross-product term emerges consistently in simulated data.

The conclusion is that, although the exact model form linking price to multiple accounting signals is dependent upon specific assumptions about the error distributions, the over-arching touchstone of these models is the existence of a cross-product term. Where one views price as a measure of the accounting signals (with an independent error), no cross-product term emerges. Thus

[9] A number of researchers have sought corrections for outliers, such as winsorizing, trimming and so forth. Adding dummy variables for negative earnings and book have also been investigated. None of these solutions is equivalent to a non-linear correction like the one being proposed here. Although in some circumstances these *ad hoc* procedures may help ameliorate the problem of heteroscedastic measurement error, they also 'remove some of the baby with the bath water.'

the explanatory power of a cross product captures the degree to which the lack of model fit is driven by measurement errors in the accounting information rather than errors in market prices around intrinsic value.

4. Empirical Strategy and Econometric Models

As discussed in the Introduction, we employ a "same firm year" research design (HS, 2007) wherein we compare the relevance of local GAAP accounting measures as originally reported for the pre-IFRS adoption year with the relevance of the restated accounting measures for the same year, as are presented in the comparative financial statements for the IFRS adoption year. Under this design, GAAP is varied while holding the sample composition and time period constant. For all analyses, we partition our sample countries in accordance with the 'Common Law' versus 'Code Law' dichotomy following the argument that the impact of IFRS adoption for any given country should depend upon the quality of the original (local) GAAP earnings figures in that country.

In conducting the analysis, we begin by considering the linear valuation model

$$P = \delta_0 + \delta_1 BVPS + \delta_2 EPS + \upsilon \qquad (1)$$

where:

P	=	price pre share as at the Balance Sheet date;
$BVPS$	=	per share book value of common equity; and
EPS	=	earnings per share from continuing operations.

We estimate this basic model first as an OLS regression and then as a weighted OLS regression using 1/[SQRT(|BVPS|)] as the weight.

Following these analyses, we then consider an alternative non-linear model which incorporates the cross-product of book value and earnings into the model. This so-called 'product model' adopts the following form:

$$P = \gamma_0 + \gamma_1 BVPS + \gamma_2 EPS + \gamma_3 BVPS * EPS + \tau \qquad (2)$$

with all measures as previously defined. As discussed in Section 3 above, the cross-product term has the potential to shed light on the source of a change in overall model fit.

5. Sample Data and Descriptive Statistics on IFRS Impact

The primary source of data used in this paper is Worldscope, which contains financial information on public companies worldwide. We identified the countries where mandatory IFRS adoption was required with effect from fiscal year 2005 onwards. For these countries, we downloaded the accounting and fiscal year end stock price data from Worldscope, and monthly stock returns from Datastream necessary to complete our analysis. The data were extracted using the July 2007 version of the Worldscope files.

For the year prior to the mandatory adoption, we required that each firm have local GAAP and restated IFRS data available. Firms for which prior year restated financials did not exist on Worldscope were deleted from our sample. We only included firms that switched from their local GAAP to IFRS – those which used U.S. GAAP instead of local GAAP prior to the switch to IFRS were deleted. We further required that only those firms which restated the prior year's data due to "change in GAAP" were included in our sample. If part of the restatement was identified by Worldscope as due to other reasons, we did not retain that observation. Finally, we delete firms with a share price equivalent to $0.10 U.S. or less.[10]

As reported in Table 1, our final sample consists of 3,810 firms from 14 European Union (EU) countries and Australia. The countries with the largest number of observations are Australia (984), the United Kingdom (U.K.) (768), and France (523), while the smallest number of observations are for

[10] This final sampling constraint had the greatest impact on the Australian sample which was reduced from 1,326 firms to 984. The next greatest impact was on the U.K. sample which was reduced from 775 firms to 768. For the 13 remaining countries, the impact was negligible.

Portugal (38), Ireland (38), and Belgium (80).[11] Overall, the data comprise 3 Common Law countries (Australia, Ireland and the United Kingdom) and 12 Code Law countries.

Table 1 also reports descriptive statistics for book value per share (*BVPS*) and earnings per share before extraordinary items (*EPS*) by country for the year prior to mandatory IFRS adoption based on both local GAAP (as originally reported) and restated to IFRS (as presented in the comparative financial statements for the year of IFRS adoption). In addition, the table presents the percentage change in each, measured as the difference between the IFRS restated amount and its local GAAP counterpart scaled by price. Panel A presents the statistics for the 3 Common Law countries and Panel B for the 12 Code Law countries, with the latter further partitioned according to legal system (French, German or Scandinavian) following La Porta *et al*. (2006). The measures presented are the mean, median, standard deviation, and 10th to 90th percentile range.[12] In conjunction, the table also presents the percentage of firms for which the restatement resulted in an increase or a decrease. While the table presents various descriptive statistics by country by reporting standard (local GAAP or restated to IFRS), given the relative heterogeneity of firms both intra-country and most certainly inter-country, as well as currency differences, we focus our discussion below on the percentage of firms for which the adoption of IFRS resulted in either an increase or a decrease in *BVPS* and/or *EPS*.

In this regard, summing across the three common law countries (Australia, the U.K., and Ireland), we find that *BVPS* increased for 46.7 percent of firms (836 firms) whereas it decreased for 53.2 percent (953 firms) (with the remainder experiencing no change). For the three common law countries, Table 1 indicates that the mean percentage decline in *BVPS* is -2.6%, implying that the local GAAP of such countries did not exhibit balance sheet conservatism, relative to IFRS reporting requirements. Alternatively, we find that *EPS* increased for 49.7 percent of firms (890 firms) and

[11] The U.K. sample only includes firms listed on the main exchange of the London Stock Exchange. Firms listed on the Alternative Investment Market (AIM), which comprises approximately one-half of listed U.K. firms, are not included because their IFRS adoption date was for fiscal years starting January 1, 2007.

[12] We report the 10th to 90th percentile range as an additional measure of dispersion since we do not delete outliers in Table 1, an approach consistent with other tables.

decreased for only 33.6 percent (602 firms). Moreover, the mean percentage increase in EPS is 0.40%. Thus, for common law countries, the restatement appears to have had a negative impact on book value but a positive impact on earnings, a finding echoed in Horton and Serafeim (2007) for U.K. firms. Closer examination reveals that the positive impact for earnings is predominantly being driven by the U.K. firms with a mean increase in earnings scaled by market capitalization of 1.8%. Thus, overall, the adoption of IFRS appears to have had a relatively limited impact on the financial statements of common law countries.

In contrast, as can be seen from Panel B of Table 1, the adoption of IFRS had a much greater impact on the financial statements of code law countries. An examination of the numbers of increases and decreases reveals considerable change and provides a strong contrast with the analogous figures from the common law subsample. For the code law subsample, *BVPS* figures increase for 66.7 of firms (1,348 firms) whereas only 33.2 percent (670 firms) experience a decrease. For Germany, France, Italy, and Sweden, our largest code law countries in terms of sample size, the mean percentage increases in BVPS are 12.9%, 5.9%, 4.7%, and 3.1%, respectively. The overall mean percentage increase in *BVPS* is 3.7%. Clearly, these patterns are quite different from the common law countries and point to balance sheet conservatism in code law countries prior to the adoption of IFRS. Equally compelling are the figures for *EPS* where 63.7 percent of firms (1,286 firms) experience an increase but less than one-half as many experience a decrease (30.1 percent; 608 firms). The mean percentage increase in *EPS* is 0.5%. These results also point to conservative income measurement for code law countries prior to adopting IFRS.

The differences observed in the initial application of IFRS accounting standards to common and code law countries is not unexpected given the local versus IAS GAAP studies by Bae, Tan and Welker (2007) and Ding, Hope, Jeanjean and Stolowy (2007). Both groups of authors based their analyses on *GAAP 2001: A Survey of National Accounting Rules Benchmarked Against International*

Accounting Standards edited by Nobes (2001). For 21 IAS items making up their initial GAAP differences measure ('gaapdiff1'), Bae *et al* observe an average GAAP difference of 2 out of 21 items for the three common law countries in our sample and 12 out of 21 for the 12 code law countries in our sample. Examples of such differences include local GAAP having no rules prohibiting liability reserves, a common practice for code law countries. Similarly, Ding *et al* observe greater absence (no local GAAP rule matching an IAS rule) and divergence (local GAAP differs from IAS) for code law countries relative to common law countries. While IFRS GAAP in 2005 evolved from IAS GAAP in 2001, the findings of these studies complement ours.

6. Empirical Results

In this section, we discuss the impact of IFRS on the valuation relevance of book value and earnings across the 15 adopting countries considered in this study. We use tests that compare relative value relevance across GAAP regimes. All reported results are for stock price observed 6 months following the fiscal year of adoption, which is in effect 18 months after the fiscal year for which we compare the value relevance of local and IFRS GAAP (see Capkun *et al.* (2007) for a similar approach). These are in the spirit of future price-based tests as advocated by Aboody, Hughes and Liu (2002) and described by Hung and Subramanyam (2007, p. 648). The advantage of this approach is that we can be sure investors have access to the IFRS numbers from the following year's financial statements. While at first glance the disadvantage of this approach is that future price reflects future information, Aboody *et. al.* argue that future information adds uncorrelated measurement error to the dependent variable.

For the relative tests, we begin by considering both overall model fit (adjusted R^2) and coefficient estimates from the various valuation models we employ. Again, the three regression analyses that we report are the simple linear model (equation 1) estimated both using OLS and WLS,

and the 'product model' (equation 2) estimated using OLS. These results are presented in Table 2. In Table 3 we present two summary model error measures, one based on the difference in absolute pricing error between accounting regimes and the other on the percentage of observations for which the local GAAP accounting regime results in smaller prediction errors. In Table 4 we report the results of tests of the association between either local GAAP or IFRS with stock prices. Table 5 contains an analysis of the impact of IFRS on the cross-product term of the product model. Throughout the analysis, we partition our sample by common law and code law country-origin and then, following La Porta *et al*. (2006), we further partition the code law sample by legal origin, German, French, and Scandinavian.

6.1 Relative Value Relevance Results

6.1.1 Common Law Countries

Perhaps as expected, given the descriptive statistics relating to the impact of IFRS adoption on *BVPS* and *EPS*, the results for the Common Law countries (Table 2, Panel A) suggest that adoption only modestly impacted the valuation relevance of book value or earnings.[13] Focusing on model adjusted R^2, Panel A indicates that, for our Australian firms, adjusted R^2 drops from 58.6% to 53.7%, 56.3% to 52.8%, and 66.7% to 63.9%, for local GAAP versus restated IFRS GAAP in the comparative year, across the OLS, WLS and product models, respectively. For the U.K firms, the corresponding adjusted R^2 drops from 91.1% to 90.6%, 66.7% to 61.5%, and 91.5% to 90.7%, for local GAAP versus restated IFRS. For Ireland, the pattern is opposite and suggests a modest increase in value relevance. Formal statistical tests on the difference in absolute pricing errors across GAAP regimes for the three common law countries will be discussed next.

Table 3 presents, for all model specifications: (1) the mean difference in absolute pricing errors between the model based on local GAAP and that based on restated data and (2) the percentage of

[13] While the tabulated results are based on the price 18 months (P_{+18}) after the comparative year balance sheet date, results (untabulated) and conclusions are qualitatively similar when the valuation models are based on the price at the comparative year balance sheet date (P_0) or price 3 months (P_{+3}) after the comparative year balance sheet date.

firms for which the local GAAP model error is smaller than that for the restated model. Table 4 reports aggregate tests across models. In interpreting and discussing the Table 4 results, we adopt an agnostic view on model specification and focus on the last three columns in the table which present average *t*-statistics across the OLS, WLS, and product model analyses for both the absolute error statistics and the percentage of closer predictions. Beginning with Australia, Table 3 indicates that mean differences in absolute pricing errors (local minus IFRS, with a negative difference in favor of local) are -0.132, -0.094 and -0.040 for OLS, WLS and the product model, respectively. The corresponding two-tailed *t*-statistics (testing a null of zero) are -4.309, -3.132, and -0.904 (the last not significant at conventional levels). Table 3 also indicates the percentage of observations where local GAAP results in a predicted price closer to actual price, with a percentage greater than 50% being in favor of local GAAP (hereafter referred to as percent with smaller ABS(error)). For Australia, the percent with smaller ABS(error) are 72.0%, 66.1% and 51.3% for the OLS, WLS and product models, respectively. All three numbers favor local GAAP. The corresponding two-tailed *t*-statistics (testing a null of no difference from 50%) are -15.320, -10.632 and –0.956, respectively (again with only the first two being significant at traditional levels). Table 4 uses the t-statistics reported in Table 3 to calculate combined significance tests across models. For Australia, the six *t*-statistics referred to above appear in columns (1), (2), (4), (5), (7) and (8). Columns (3), (6) and (9) report average *t*-statistics for each of the OLS, WLS and PROD models, respectively, averaging across the two *t*-statistics derived from each of the models. For approach (1), which focuses on ABS(error), column (10) of Table 4 reports the average t-statistic across OLS, WLS and PROD. For approach (2), which focuses on percent with smaller ABS(error), column (11) reports the average *t*-statistics across the OLS, WLS and PROD models. Finally, Column (12) reports the average *t*-statistic averaged across the two approaches (ABS(error) versus percent with smaller ABS(error)) and the three models (OLS, WLS and PROD). Focusing on the last three columns, the average *t*-statistics for Australia are -2.782, -8.969 and -5.876. These are all

significant at conventional levels and lead to the conclusion that, for Australia, local GAAP dominates IFRS. These reinforce the impression obtained by comparing adjusted R^2s and suggest that there was actually a decline in the value relevance of book value and earnings for the comparative year when Australia switched to IFRS.

Similar inferences hold for the UK. Focusing on the last three columns of Table 4, the average *t*-statistics for the UK are -1.627, -2.076 and -1.852. These latter two are significant at conventional levels and lead to the conclusion that, for the UK, local GAAP dominates IFRS. For Ireland, the average *t*-statistics of 1.456, -0.107 and 0.675 are not statistically significant. For the three common law countries as a whole, the last three columns of Table 4 indicate that the average *t*-statistic across the three countries is -0.984, -3.718 and -2.351, respectively, with the latter two being significant at conventional levels. These reinforce the impression obtained by comparing adjusted R^2 and suggest that there was actually a modest but statistically significant decline in the value relevance of book value and earnings for the comparative year when common law countries switched to IFRS. This result is not as surprising as it might seem at first glance. Common law countries already had GAAP that had evolved within shareholder economies (the Anglo-Saxon model) but each country had GAAP ideally suited to its own particular circumstances in terms of ideal accounting from a valuation perspective. IFRS has the advantage of being universally understood but it comes at the cost that no one GAAP (i.e., IFRS) fits each Anglo-Saxon country as ideally as that country's local GAAP. In other words, "no one size fits all". That said, the costs in terms of a small decline in the value relevance of aggregate book value and earnings for explaining price, for common law countries, must be compared to the benefits to global investors (which is beyond the scope of this study) in being able to compare the performance and financial position of companies around the world using a common measuring unit.

6.1.2 Code Law Countries

The flow of table discussion for code law countries will follow that for common law countries. We initially discuss the Table 2 regression results, and then discuss the absolute error differences across the two GAAP's and aggregate tests across models in Tables 3 and 4, respectively. The Table 1 descriptive statistics for code law countries relating to the impact of IFRS adoption on *BVPS* and *EPS* indicate large differences between local and IFRS GAAP. Thus, one might expect these differences to manifest itself in a greater change in value relevance, following the logic of Daske *et al*. (2007) that the benefits to investors from a switch to IFRS will be increasing in the distance of IFRS from local GAAP. The results for the code law countries reported in Table 2 suggest that adoption improved the value relevance of book value and earnings, at least for some code law countries such as Germany, Italy and Finland. The discussion to follow will be for each of the La Porta legal origin clusters, beginning with Germany.

6.1.1.1 German Legal Origin Countries

We begin with Germany, our only sample country in the German Legal tradition category. Table 2 reports that the adjusted R^2 statistic for Germany increases modestly from 99.1% to 99.3%, 93.9% to 94.4%, and 99.1 to 99.3%, for local GAAP versus restated IFRS GAAP in the comparative year, across the OLS, WLS and product models, respectively.

For Germany, Table 3 indicates that mean differences in absolute pricing errors (local GAAP minus restated IFRS, with a positive difference in favor of IFRS) are 3.951, 5.481 and 5.411 for OLS, WLS and the product model, respectively. The corresponding two-tailed *t*-statistics (testing a null of zero) are 2.871, 3.571 and 3.641 (all significant at conventional levels). For Germany, the percent with smaller ABS(error) are 55.4%, 42.9% and 33.8% for the OLS, WLS and product models, respectively. The latter two numbers favor IFRS. The corresponding two-tailed *t*-statistics (testing a null of no

difference from 50%, with a positive t-statistic favoring IFRS) are -1.509, 2.095 and 4.755, respectively, with the latter two being significant at the 0.01 level. Once again, all six *t*-statistics can be traced to Table 4. Focusing on the last three columns of Table 4, the average *t*-statistics for Germany are 3.361, 1.780 and 2.571, all in favor of IFRS. These are all significant or close to being significant at conventional levels and lead to the conclusion that, for Germany, IFRS dominates local GAAP. These results are stronger than a mere comparison of adjusted R^2 would imply and point to the need to carefully test for differences in model fit across rival GAAP regimes. The results suggest that there was an improvement in the value relevance of book value and earnings for the comparative year when Germany switched to IFRS. The result is in contrast to that of Hung and Subramanyam (2007) who observe for their sample of 80 voluntary German adopters that the explanatory power of book value and net income is 84.1% for local GAAP versus 79.6% for IAS GAAP. This finding led them to conclude that book value and net income are no more value relevant under IAS than under local German GAAP at the time. The difference between their findings and ours is perhaps attributable to a difference in firm characteristics between voluntary and mandatory adopters, but do underscore that the results of voluntary adopter value relevance studies may not generalize to mandatory settings.

The results for Germany point to value relevance benefits from the adoption of IFRS, which is not surprising given the orientation of German GAAP towards stakeholders as opposed to shareholders. Indeed, IFRS follows the shareholder model and one would expect an increase in value relevance for German adopters. Panel C of Table 4 reports a test of aggregate differences between the German legal system versus the English legal system. Focusing on the last three columns, the average differences in aggregated *t*-statistics across the three common law countries and Germany are 4.345, 5.498 and 4.922, respectively. All significant at conventional levels, the test statistics point to a relatively greater improvement in value relevance for Germany relative to the three common law countries. The results constitute strong evidence in favor of IFRS adoption benefits for a country like Germany.

6.1.1.2 French Legal Origin Countries

We next examine the group of firms that have legal traditions most similar to the French system. This group includes Belgium, France, Greece, Italy, Holland, Portugal and Spain. For Italy, the French legal origin country with the greatest increase in value relevance from IFRS adoption, Table 2 indicates that adjusted R^2 increases modestly from 70.6% to 71.0%, 66.8% to 68.1% and 71.2% to 72.0%, for local GAAP versus restated IFRS GAAP in the comparative year, across the OLS, WLS and product models, respectively. Table 3 indicates that mean differences in absolute pricing errors (local minus IFRS, with a positive difference in favor of IFRS) are 0.053, 0.051 and 0.069 for OLS, WLS and the product model, respectively. The corresponding two-tailed *t*-statistics (testing a null of zero) are 0.760, 0.777 and 0.992 (none significant at conventional levels). Continuing with Italy, the percent with smaller ABS(error) are 35.7%, 38.3% and 38.3% for the OLS, WLS and product models, respectively. All three percentages favor IFRS. The corresponding two-tailed *t*-statistics (testing a null of no difference from 50%, with a positive t-statistic favoring IFRS) are 4.533, 3.655 and 3.655, respectively, all being significant at the .01 level. Once again, all six of these t-statistics can be traced to Table 4, where focusing on the last three columns, the average t-statistics for Italy are 0.843, 3.948 and 2.395, with the last two test statistics being significant at conventional levels and in favor of IFRS. The lack of significance of the column (10) number, 0.843, combined with the results for columns (11) and (12) suggests that there are many small pricing errors that favor IFRS but the magnitude of the ABS(error) differences are not dramatic. Nevertheless, the results indicate that, for Italy, IFRS dominates local GAAP.

For France, in contrast, the results indicate that local GAAP dominates IFRS. Focusing on the last three columns in Table 4, the average *t*-statistics for France are -0.417, -2.590, and -1.504, with -2.590 being significant at the 0.01 level in favor of local GAAP over IFRS. The results for the other

French legal origin countries point to little impact of IFRS adoption on value relevance. Focusing on the last three columns of Panel C of Table 4, the average differences in aggregate *t*-statistics across the three common law countries and the French legal origin countries are 1.162, 3.959 and 2.560, respectively. The last two test statistics are significant at conventional levels, and point to a relatively greater improvement in value relevance for French legal origin countries relative to the three common law countries. That being said, the results are driven by a decline in value relevance for the common law countries rather than an improvement in the value relevance for code law countries. In fact, the three average test statistics for the French legal origin countries in the last three columns, 0.178, 0.241 and 0.210, are not significantly different from zero, suggesting no change in value relevance for the French legal origin cluster taken as a whole.

6.1.1.3 Scandinavian Legal Origin Countries

For Finland, the Scandinavian legal origin country with the greatest increase in value relevance from IFRS adoption, Table 2 indicates that adjusted R^2 increases modestly from 64.2% to 64.6%, 67.8% to 69.0% and 64.6% to 65.1%, for local GAAP versus restated IFRS GAAP in the comparative year, across the OLS, WLS and product models, respectively. Table 3 indicates that mean differences in absolute pricing errors (local minus IFRS, with a positive difference in favor of IFRS) are 0.247, 0.194 and 0.248 for OLS, WLS and the product model, respectively. The corresponding two-tailed *t*-statistics (testing a null of zero) are 2.241, 1.827 and 2.363 (all significant or near significance at conventional levels). For Finland, the percent with smaller ABS(error) is 33.6%, 40.0% and 35.5% for the OLS, WLS and product models, respectively. All three percentages favor IFRS. The corresponding two-tailed *t*-statistics (testing a null of no difference from 50%, with a positive t-statistic favoring IFRS) are 3.616, 2.131 and 3.174, respectively, all being significant at the .05 level. Once again, all six *t*-statistics can be traced to Table 4. Focusing on the last three columns of Table 4, the

average *t*-statistics for Finland are 2.144, 2.974 and 2.559, with all three test statistics significant at the 0.01 level in favor of IFRS. The results indicate that, for Finland, IFRS dominates local GAAP.

The results for the other Scandinavian legal origin countries are mixed. For Sweden, the results indicate that local GAAP dominates IFRS. Focusing on the last three columns of Table 4, the average *t*-statistics for Sweden are -2.255, -3.975 and -3.115, with all three test statistics being significant at the 0.01 level and in favor of local GAAP over IFRS. The results for the other Scandinavian legal origin countries, which point to little impact of IFRS adoption on value relevance, are consistent with the results of Gjerde *et al*. (2008), which studied the impact of IFRS adoption in Norway. The average *t*-statistics for the Scandinavian legal origin countries in the last three columns of Table 4, 0.352, 0.136 and 0.244, are insignificant, pointing to no change in value relevance for the Scandinavian legal origin cluster taken as a whole. Panel C of Table 4 reports a test of aggregate differences between the Scandinavian legal system versus the English legal system. Focusing on the last three columns, the average differences in aggregate *t*-statistics across the three common law countries and the Scandinavian legal origin countries are 1.750, 5.045 and 3.397, respectively. The last two test statistics are significant at conventional levels, and point to a relatively greater improvement in value relevance for Scandinavian legal origin countries relative to the three common law countries. That being said, the results are again driven more by the decline in value relevance for common law countries.

6.1.1.4 Summary of Code law Versus Common Law Results

Panel C of Table 4 reports a test of aggregate differences between all code law countries versus the English legal system countries (or common law countries). Focusing on the last three columns of this table, the average differences in aggregate t-statistics across code and common law countries are 2.301, 6.277 and 4.289, respectively. All three test statistics are significant at conventional levels, and point to a relatively greater improvement in value relevance for code law countries relative to common

law countries. Once again, this is not unexpected, as the local GAAP for common law countries was shareholder oriented in the Anglo-Saxon tradition (see Ball 2006) and, as documented earlier, the differences between the local GAAP and IFRS are modest.

6.2 Comparing the Performance of OLS, WLS and Product Models

In our comparisons of the ability of accounting numbers to explain prices, we have used three different empirical models to assess goodness-of-fit: ordinary least squares (OLS), weighted least squares (WLS), and the product model (PROD). These models differ in their approach to dealing with measurement error in the independent variables. OLS assumes no measurement error. WLS weights observations based upon the likelihood of significant measurement error. The product model includes an additional cross-product term to capture likely measurement error.

As can be seen in Table 2, the cross-product term introduced by the product model has very high explanatory power across the board, evidence of the importance of including it in the evaluation of value relevance. On the other hand, the general conclusions of our tests for hypotheses that are central to the current investigation do not seem sensitive to the choice of model, when tests are aggregated. Clearly, there are specific countries where model form makes a difference but the aggregation tends to reveal similar conclusions regardless of model. This is quite comforting in that model form does not seem to be creating spurious results at the aggregate level, which is the primary concern in this paper.

If the product model is, as proposed earlier, effective at identifying observations with significant amounts of measurement error, then some of the results reported in Panel C of Table 4 yield an enticing observation. While most of the “action” contributing to the statistically significant difference between common law and code law countries is driven by a decrease in explanatory power for common law countries when using the OLS and WLS model specifications, there is little evidence of this reduction in explanatory power when using the product model. Rather, the cross-product term

picks up the measurement error as part of its coefficient. This suggests an additional test of value relevance that focuses on the cross-product term separately.

Table 5 contains an assessment of changes in the significance of the cross-product term when moving from local GAAP to IFRS. Where measurement error increases, we would expect to see a more negative cross-product term or a less positive one. As argued previously, heteroscedastic measurement error imparts a negative influence on the cross-product term.

For each accounting method, Table 5 shows the average *t*-statistic, the standard deviation of *t*-statistics and two *t*-ratios for the average, assuming independence across countries. In Panel A, these statistics are shown for all countries pooled, for the common law countries and for the code law countries. Panel B shows results for tests of the difference between common and code law countries. Focusing first on the common law countries in Panel A, local GAAP has an average *t*-statistic on the cross-product term of -2.38, while the average *t*-statistic for the cross-product term under IFRS is -4.18. The difference in these is -1.80 and both reported measures of significance indicate that the decline in average *t*-statistic is significant at the 5% level. The theoretic *t*-ratio assumes that the *t*-statistics are normal (0, 1) variates while the empirical *t*-ratio estimates the standard deviation of the difference in *t*-statistics using the sample data. The code law countries also show a decline in the significance of the cross-product term but the difference is not itself significant. It is also interesting to note that the cross-product terms, although negative on average, are not significant on average for the code law countries.[14]

In Panel B, tests of the difference across the common and code law countries suggests a significant difference using the theoretic t-ratio. The last column shows a *t*-ratio of -2.15 for the

[14] At first glance, it is surprising that the average *t*-statistic on the cross-product term is significantly negative for common law but not code law countries. An inspection of Table 2 reveals that the result is driven entirely by Australia, where the *t*-statistic is -15.126 (-16.310) on the cross-product term using local (IFRS) GAAP. Potential cross-country differences in industry mix confound attempts to compare measurement error or value relevance across countries. For this reason, we use the firm as its own control and compare how measurement error (Table 5) or value relevance (Tables 2 to 4) changes when the GAAP is switched from local to IFRS GAAP.

difference (common law – code law) in the change in the significance of the product term as firms move from local GAAP to IFRS. Based on the empirical estimate of the standard deviation of the *t*-statistics, the empirical *t*-ratio is -1.4 and is not significant. In all, however, the evidence in Table 5 points toward an increase in measurement error for the common law countries and no appreciable change for the code law countries, with the difference in the changes also arguable marginally significant.

7. Conclusions

This paper sets out to examine how the mandatory adoption of IFRS accounting standards in Europe and Australia affected the ability of reported earnings and book value numbers to explain stock prices. The initial adoption of IFRS in 2005, and the requirement that firms restate their comparative 2004 numbers to IFRS in the 2005 filing, provides an opportunity to compare the explanatory power of 2004 earnings and book value numbers measured under two different sets of accounting rules, the original local-country GAAP and IFRS. We also compare the changes for common law and code law countries.

Our expectations were that the adoption of IFRS accounting rules had the potential to improve the correspondence between accounting measures of earnings and book value with stock prices. Given the conventional wisdom that code law countries accounting numbers have a lower correspondence with stock prices before the adoption of IFRS, it was reasonable to expect evidence of greater improvement for the code law relative to the common law country firms.

We observe larger changes in the earnings and book value accounting numbers for the code law countries, as compared to common law countries. Generally, the adoption of IFRS appears to increase both the reported earnings and book value numbers for code law countries. This is consistent with the view that these code law countries have encouraged relatively conservative financial statements and

suggests that firms from code law countries might experience significant changes upon the adoption of IFRS. Instead, these changes did not increase the correspondence between accounting numbers and stock prices. Moreover, the albeit smaller changes in accounting numbers under IFRS for the common law countries causes a decrease in the correspondence between stock prices and reported accounting numbers.

We use two different approaches to the problem of identifying changes in the value relevance of accounting numbers. Regressions of earnings and book values on stock prices using both the original local GAAP accounting numbers and the restated IFRS numbers were compared using various goodness-of-fit statistics. Adjusted R^2 statistics decrease for regressions using common law firms and change little for regressions using code law firms. To formally test this change in explanatory power, we compare the mean errors from predictions of price and the percentage of predicted prices that are closer to actual across the local GAAP and IFRS accounting regimes. For both measures, we report evidence that the goodness-of-fit for the regressions using firms from common law countries decreases upon the restatement to IFRS numbers. For firms from code law countries, there is little evidence of a change in these statistics.

Second, in this paper we have introduced a regression model that includes an additional explanatory term - the cross-product - that is explicitly intended to capture the presence of measurement error in the accounting variables. If accounting information exhibits measurement error that increases with the value of the firm, the cross-product variable is predicted to have a significant negative coefficient. We report evidence that the cross-product variable is more significant when using IFRS accounting numbers (compared to the local GAAP regressions) and that the estimated coefficients become more negative for the common law firms as compared to those from code law countries.

These two different approaches to our examination of the value relevance of accounting numbers each suggests that the correspondence between accounting numbers and stock prices is not generally enhanced by the adoption of IFRS accounting rules in Europe and Australia. There is evidence of only minor changes for the firms from code law countries and there is evidence that, for firms from common law countries, the value relevance has decreased subsequent to the adoption of IFRS.

The results for common law countries are perhaps not surprising. Common law countries already had GAAP that had evolved within shareholder economies but each country had GAAP ideally suited to its own particular economic circumstances. Thus, while IFRS has the advantage of being universally understood, our results suggest that IFRS comes at a cost in that no single, universal GAAP fits each Anglo-Saxon country as ideally as that country's local GAAP.

Our results for code law countries are somewhat more surprising given that local GAAP in those countries evolved to suit purposes other than valuation yet the valuation perspective is paramount in IFRS GAAP. Despite the on average null result for code law countries, a detailed country level examination reveals an improvement in value relevance for at least some countries (e.g., Germany, Italy, and Finland) but a statistically significant decline in value relevance for other code law countries (e.g., France and Sweden). Thus, once again, it would appear that "no one size fits all".

Taken together, we evidence against the conclusion that a primary benefit of adopting IFRS accounting rules is that it increases the correspondence between accounting numbers and stock prices. This is not to say that there are no other benefits that might be associated with moving towards an international set of accounting rules, such as increasing the overall disclosure package and enhancing the comparability of performance and financial position for companies seeking access to global capital. Perhaps the literature should turn to examining the value of these other potential benefits.

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TABLE 1 Descriptive Statistics for the Impact of IFRS Adoption

Measure	Local GAAP mean	Local GAAP med	Local GAAP s.d.	Local GAAP (10th → 90th percentile)	IFRS Restated mean	IFRS Restated med	IFRS Restated s.d.	IFRS Restated (10th → 90th percentile)	Signed % Δ mean	Signed % Δ med.	Signed % Δ s.d.	Signed % Δ (10th → 90th percentile)	% inc	% dec
Panel A: Common Law (CML) (English Legal Origin) Countries														
Australia (n = 984) (AUD)														
BVPS	1.270	0.406	3.950	(0.068 → 3.181)	1.217	0.395	4.217	(0.066 → 2.976)	-0.025	-0.001	0.134	(-0.027 → 0.036)	42.7	57.2
EPS	0.127	0.027	0.572	(-0.075 → 0.373)	0.139	0.028	0.621	(-0.082 → 0.404)	-0.001	0.000	0.268	(-0.027 → 0.036)	40.3	38.9
U.K. (n = 768) (GBP)														
BVPS	2.052	0.929	8.734	(0.120 → 3.856)	1.994	0.865	8.834	(0.112 → 3.676)	-0.033	0.001	0.260	(-0.174 → 0.049)	52.0	48.0
EPS	0.146	0.081	0.402	(-0.055 → 0.458)	0.205	0.102	0.480	(-0.039 → 0.565)	0.018	0.005	0.066	(-0.007 → 0.062)	61.1	27.2
Ireland (n = 38) (Euro)														
BVPS	2.240	1.029	2.825	(0.176 → 7.565)	2.157	0.999	2.758	(0.140 → 6.816)	-0.020	-0.003	0.060	(-0.113 → 0.044)	44.7	55.3
EPS	0.407	0.163	0.659	(-0.104 → 1439)	0.395	0.162	0.639	(-0.039 → 1.320)	-0.005	0.002	0.154	(-0.039 → 1.320)	63.2	26.3
Panel B: Code Law Countries														
GERMAN LEGAL ORIGIN														
Germany (n = 195) (Euro)														
BVPS	27.312	5.229	184.99	(0.217 → 36.405)	42.641	6.075	337.21	(0.527 → 45.722)	0.129	0.055	0.317	(-0.049 → 0.433)	73.8	26.2
EPS	3.933	0.480	33.857	(-0.980 → 5.047)	3.476	0.450	24.806	(-1.050 → 4.110)	0.000	0.004	0.138	(-0.048 → 0.071)	56.9	39.5
FRENCH LEGAL ORIGIN														
France (n = 523) (Euro)														
BVPS	39.660	11.628	130.64	(0.799 → 76.639)	43.927	12.015	135.50	(0.898 → 91.407)	0.059	0.010	0.228	(-0.040 → 0.205)	68.6	31.4
EPS	2.895	1.000	11.824	(-0.520 → 6.770)	3.351	1.170	12.045	(-0.360 → 7.881)	0.012	0.006	0.160	(-0.012 → 0.047)	69.2	25.4
Italy (n = 230) (Euro)														
BVPS	4.365	2.369	5.998	(0.423 → 10.540)	4.613	2.501	6.117	(0.502 → 11.469)	0.047	0.015	0.146	(-0.032 → 0.167)	72.2	27.8
EPS	0.183	0.133	0.865	(-0.320 → 0.962)	0.252	0.160	0.855	(-0.264 → 1.075)	0.014	0.005	0.065	(-0.018 → 0.044)	70.0	27.0
Belgium (n = 80) (Euro)														
BVPS	116.06	18.156	391.30	(3.263 → 132.414)	151.60	22.352	582.31	(3.210 → 171.512)	0.077	0.040	0.152	(-0.056 → 0.259)	73.8	26.3
EPS	12.265	2.371	41.543	(-0.440 → 18.045)	12.172	2.110	38.782	(-0.175 → 19.610)	0.002	0.002	0.043	(-0.037 → 0.045)	55.0	45.0

Holland (n = 112) (Euro)											
BVPS	10.892	6.530	12.755	10.508	6.420	12.332	-0.027	-0.008	0.099	37.5	62.5
	(1.203 → 25.838)			(1.173 → 26.127)			(-0.132 → 0.060)				
EPS	0.872	0.640	1.729	0.902	0.892	1.953	-0.003	0.004	0.091	57.1	28.6
	(-0.580 → 2.780)			(-0.620 → 3.040)			(-0.007 → 0.045)				
Greece (n = 155) (Euro)											
BVPS	2.448	1.733	1.783	2.756	2.190	2.037	0.110	0.055	0.579	62.6	37.4
	(0.830 → 4.774)			(0.859 → 5.268)			(-0.333 → 0.485)				
EPS	0.176	0.110	0.344	0.184	0.104	0.491	-0.011	0.000	0.177	49.0	49.0
	(-0.061 → 0.642)			(-0.063 → 0.610)			(-0.074 → 0.079)				
Spain (n = 117) (Euro)											
BVPS	6.132	4.008	6.706	6.402	4.062	7.985	0.014	-0.003	0.111	44.4	55.6
	(0.639 → 13.106)			(0.568 → 12.958)			(-0.067 → 0.101)				
EPS	0.845	0.553	1.015	0.824	0.574	0.981	-0.004	0.000	0.021	47.9	47.9
	(0.013 → 1.970)			(0.007 → 1.900)			(-0.019 → 0.012)				
Portugal (n = 38) (Euro)											
BVPS	2.153	1.562	2.407	1.804	1.401	1.435	-0.040	-0.017	0.602	47.4	52.6
	(0.237 → 4.150)			(0.227 → 3.340)			(-0.350 → 0.172)				
EPS	0.169	0.127	0.321	0.174	0.130	0.333	0.018	0.015	0.065	73.7	26.3
	(-0.140 → 0.440)			(-0.081 → 0.475)			(-0.042 → 0.071)				
SCANDINAVIAN LEGAL ORIGIN											
Denmark (n = 103) (Euro)											
BVPS	541.09	116.91	2792.2	513.50	114.06	2510.5	-0.001	0.002	0.083	59.2	39.8
	(15.751 → 730.415)			(15.822 → 756.560)			(-0.040 → 0.044)				
EPS	86.396	12.400	582.57	95.408	14.000	673.22	0.002	0.000	0.029	49.5	38.8
	(-0.070 → 81.900)			(-0.100 → 82.300)			(-0.012 → 0.020)				
Finland (n = 110) (Euro)											
BVPS	4.432	2.488	5.556	4.507	2.470	5.596	0.010	0.006	0.084	66.4	33.6
	(0.396→ 9.244)			(0.396→ 9.244)			(-0.077 → 0.088)				
EPS	0.481	0.310	0.683	0.556	0.353	0.687	0.003	0.010	0.109	72.7	21.8
	(-0.095 → 1.140)			(-0.045 → 1.440)			(-0.011 → 0.042)				
Norway (n = 122) (NOK)											
BVPS	61.558	17.212	128.83	66.223	17.539	136.22	0.035	0.023	0.136	68.9	31.1
	(1.241 → 167.321)			(1.351 → 194.631)			(-0.043 → 0.131)				
EPS	7.729	1.651	18.239	7.551	1.947	13.716	0.013	0.006	0.075	68.0	27.0
	(-1.005→ 24.060)			(-1.050 → 25.327)			(-0.009 → 0.051)				
Sweden (n = 235 (SEK)											
BVPS	24.881	15.741	27.140	27.176	16.137	31.643	0.031	0.008	0.099	82.1	17.4
	(1.574 → 58.875)			(1.628 → 64.421)			(0.000 → 0.059)				
EPS	2.751	2.120	5.130	3.371	2.450	5.597	0.015	0.007	0.030	72.3	12.3
	(-0.980 → 9.690)			(-0.980 → 10.860)			(-0.001 → 0.041)				

The table presents the number of observations for each country (N), the country's currency, in parenthesis, and descriptive statistics for book value per share (*BVPS*) and earnings per share (*EPS*).

The first three sets of columns present the mean value, median value, standard deviation, and 10th to 90th percentile range of: (1) the reported values based on local GAAP for the year preceding the adopting of IFRS; (2) the restated amount using IFRS for the same year (i.e., the year preceding) as presented for comparative purposes in the statements for the year of adoption; and (3) the percentage change in the figures measured as the difference between the IFRS restated and the local GAAP amounts, scaled by price.

The last two columns present the percentage of firms for which the restated figure exceeds the initially reported local GAAP figure (increase) or for which the restated figure is lower (decrease).

TABLE 2 Regression Results across all 15 Countries

Country		Local GAAP Results for 2005					Restated IFRS Results for 2005				
	PRICE =	β_0	$+ \beta_1$*BVPS	$+ \beta_2$*EPS	$+ \beta_3$*(BVPS*EPS)	ADJ R^2	β_0	$+ \beta_1$*BVPS	$+ \beta_2$*EPS	$+ \beta_3$*(BVPS*EPS)	ADJ R^2
Panel A: Common Law (English Legal Origin) Countries											
Australia	OLS	1.012	1.558	5.763		58.6	1.116	1.654	4.357		53.7
		(5.163)	(12.456)	(9.788)			(5.426)	(12.171)	(7.978)		
	WLS	0.488	2.191	3.587		56.3	0.523	2.289	2.971		52.8
		(4.578)	(20.994)	(8.639)			(4.664)	(20.088)	(7.722)		
	PROD	0.280	2.088	9.142	-0.275	66.7	0.368	2.102	8.451	-0.251	63.9
		(1.536)	(17.750)	(15.934)	(-15.126)		(1.965)	(17.066)	(15.536)	(-16.310)	
U.K.	OLS	1.707	1.084	4.245		91.1	1.702	1.070	3.587		90.6
		(13.093)	(69.766)	(12.462)			(12.453)	(67.750)	(11.974)		
	WLS	1.388	1.027	6.148		66.7	1.599	1.117	2.840		61.5
		(13.370)	(26.162)	(15.207)			(14.645)	(27.274)	(10.385)		
	PROD	2.032	0.809	4.749	0.086	91.5	1.904	0.899	3.670	0.052	90.7
		(14.737)	(17.055)	(13.865)	(6.125)		(12.156)	(13.362)	(12.229)	(2.605)	
Ireland	OLS	1.993	1.532	5.294		68.6	2.223	1.229	6.885		73.0
		(1.822)	(3.281)	(2.650)			(2.185)	(1.979)	(2.574)		
	WLS	1.377	2.252	2.350		62.2	1.542	2.246	2.652		64.3
		(1.747)	(5.107)	(1.521)			(2.058)	(3.297)	(0.906)		
	PROD	2.944	0.869	2.350	0.760	71.6	2.770	0.947	4.049	0.500	74.1
		(2.509)	(1.512)	(0.941)	(1.858)		(2.489)	(1.431)	(1.129)	(1.178)	
Panel B: Code Law Countries											
GERMAN LEGAL ORIGIN											
Germany	OLS	6.157	2.046	7.767		99.1	9.328	1.501	5.525		99.3
		(1.354)	(11.331)	(7.874)			(2.397)	(29.008)	(7.853)		
	WLS	3.262	2.512	5.157		93.9	5.054	1.577	4.758		94.4
		(1.386)	(14.227)	(5.524)			(2.545)	(23.553)	(6.182)		
	PROD	6.490	2.028	7.702	0.000	99.1	5.126	1.764	5.216	-0.001	99.3
		(1.302)	(9.703)	(7.249)	(0.165)		(1.206)	(14.206)	(7.367)	(-2.324)	

FRENCH LEGAL ORIGIN

France	OLS	-5.054	2.045	1.747		81.5	-10.850	1.777	4.110		79.8
		(-0.793)	(25.887)	(2.001)			(-1.616)	(23.777)	(4.887)		
	WLS	6.259	1.893	1.143		73.8	5.095	1.671	2.291		74.7
		(2.965)	(27.017)	(1.760)			(2.478)	(25.759)	(3.580)		
	PROD	23.683	1.792	-8.808	0.009	87.6	23.804	1.586	-7.836	0.010	86.8
		(4.274)	(26.826)	(-8.961)	(15.684)		(4.083)	(25.768)	(-7.852)	(16.361)	
Italy	OLS	2.884	1.364	2.423		70.6	2.648	1.316	2.516		71.0
		(5.803)	(19.108)	(4.882)			(5.293)	(17.658)	(4.759)		
	WLS	1.859	1.554	2.109		66.8	1.691	1.492	2.231		68.1
		(5.240)	(17.956)	(4.426)			(4.766)	(17.244)	(4.496)		
	PROD	2.590	1.445	3.284	-0.081	71.2	2.195	1.431	3.547	-0.092	72.0
		(5.081)	(18.192)	(5.261)	(-2.240)		(4.239)	(17.059)	(5.583)	(-2.828)	
Belgium	OLS	-2.203	1.084	10.592		96.7	5.080	0.956	8.435		95.6
		(-0.122)	(17.471)	(18.125)			(0.243)	(22.880)	(13.434)		
	WLS	2.681	1.159	9.616		93.8	4.243	0.992	7.992		92.9
		(0.350)	(13.036)	(14.222)			(0.560)	(15.503)	(11.022)		
	PROD	12.591	0.819	9.673	0.002	97.0	3.550	0.978	8.607	0.000	95.6
		(0.703)	(7.726)	(15.270)	(3.015)		(0.153)	(6.932)	(6.823)	(-0.157)	
Holland	OLS	11.536	0.759	3.604		69.9	11.325	0.886	2.552		68.2
		(9.511)	(7.797)	(5.011)			(9.120)	(9.355)	(4.263)		
	WLS	9.049	0.883	3.787		62.5	8.716	1.029	2.706		60.6
		(8.743)	(7.152)	(4.906)			(8.218)	(8.313)	(4.130)		
	PROD	10.626	0.899	4.156	-0.045	70.8	10.340	1.036	3.160	-0.048	69.2
		(8.174)	(7.293)	(5.373)	(-1.822)		(7.723)	(8.349)	(4.664)	(-1.846)	
Greece	OLS	1.222	0.877	5.305		33.4	0.835	1.100	2.376		35.5
		(2.165)	(4.256)	(4.938)			(1.499)	(6.148)	(3.192)		
	WLS	1.322	0.820	5.577		31.7	0.916	1.032	2.858		33.8
		(2.636)	(3.656)	(5.194)			(1.969)	(5.590)	(3.520)		
	PROD	0.964	1.006	6.770	-0.458	33.8	0.572	1.170	4.424	-0.330	36.7
		(1.535)	(4.058)	(3.573)	(-0.939)		(0.994)	(6.401)	(3.078)	(-1.662)	
Spain	OLS	4.516	0.849	11.904		83.3	4.730	0.756	12.395		83.4
		(4.538)	(4.062)	(8.639)			(4.867)	(5.414)	(10.920)		
	WLS	3.663	0.966	11.764		78.9	4.364	0.849	11.883		76.2
		(4.585)	(3.946)	(7.722)			(5.326)	(4.223)	(8.609)		
	PROD	3.933	0.959	12.322	-0.041	83.4	5.152	0.675	12.074	0.033	83.4
		(3.020)	(3.656)	(8.181)	(-0.696)		(4.115)	(3.265)	(9.381)	(0.536)	
Portugal	OLS	2.400	0.314	5.406		51.6	1.658	0.937	3.688		52.2
		(5.069)	(1.971)	(4.528)			(2.964)	(3.505)	(3.205)		
	WLS	1.762	0.562	5.169		55.0	1.226	1.138	3.736		58.9
		(4.266)	(2.568)	(3.986)			(2.688)	(3.855)	(3.192)		
	PROD	2.142	0.502	7.158	-0.668	52.9	1.324	1.175	7.317	-1.439	56.7
		(3.939)	(1.993)	(3.290)	(-0.964)		(2.330)	(4.091)	(3.294)	(-1.886)	

SCANDINAVIAN LEGAL ORIGIN

Denmark	OLS	92.206	2.529	-4.195		99.4	41.478	2.546	-2.610		99.5
		(2.240)	(10.019)	(-3.547)			(1.029)	(12.295)	(-3.475)		
	WLS	60.513	2.321	-3.102		95.9	45.317	2.389	-2.012		96.5
		(2.861)	(9.672)	(-2.712)			(2.222)	(11.937)	(-2.694)		
	PROD	26.827	2.397	-0.562	-0.000	99.5	30.865	2.437	-1.301	0.000	99.5
		(0.641)	(10.071)	(-0.390)	(-3.931)		(0.747)	(10.685)	(-0.945)	(-1.134)	
Finland	OLS	2.590	1.073	6.186		64.2	2.273	0.972	6.644		64.6
		(3.169)	(6.153)	(5.304)			(2.773)	(5.283)	(5.340)		
	WLS	1.598	1.314	5.692		67.8	1.504	1.157	6.298		69.0
		(2.999)	(7.282)	(5.267)			(2.871)	(6.150)	(5.683)		
	PROD	2.029	1.253	6.804	-0.119	64.6	1.599	1.212	7.185	-0.139	65.1
		(2.093)	(5.181)	(5.234)	(-1.073)		(1.614)	(4.476)	(5.443)	(-1.205)	
Norway	OLS	60.218	-0.220	5.987		36.9	57.551	0.656	-0.893		29.0
		(5.091)	(-1.376)	(5.296)			(4.571)	(3.414)	(-0.570)		
	WLS	23.310	0.371	4.020		42.9	22.159	0.815	0.420		41.9
		(4.341)	(2.142)	(3.714)			(4.152)	(4.381)	(0.299)		
	PROD	35.102	0.430	6.891	-0.009	50.7	25.846	1.260	1.596	-0.011	51.0
		(3.074)	(2.348)	(6.775)	(-5.612)		(2.264)	(6.944)	(1.180)	(-7.118)	
Sweden	OLS	25.601	1.687	1.698		58.0	29.389	1.337	1.906		54.6
		(6.472)	(12.408)	(2.352)			(7.352)	(10.448)	(2.626)		
	WLS	14.469	1.939	2.373		61.7	15.767	1.624	2.518		59.2
		(5.652)	(12.761)	(3.183)			(6.114)	(10.878)	(3.370)		
	PROD	15.186	2.293	3.961	-0.071	61.0	18.640	1.924	3.365	-0.048	58.0
		(3.333)	(11.741)	(4.493)	(-4.191)		(4.045)	(10.339)	(4.318)	(-4.259)	

Variable definitions: *PRICE* is the firm's market price measured 18 months after the 2005 fiscal year end balance sheet date; *BVPS* is the firm's accounting book value deflated by the number of common shares outstanding; and *EPS* is the firm's earnings per share for the fiscal year. *PRICE* will be the same number for both regressions reported above. The only variables changing are the measures of *BVPS* and *EPS*.

OLS indicates ordinary least squares regression estimates. WLS indicates the estimation is done using weighted least squares, where the weighting factor is 1/(SQRT(*BVPS*)+0.01). PROD indicates the estimates are the result of using the product model described in the text. The product model adds the product of *BVPS* and *EPS* to the OLS estimation model. The additional variable is intended to reflect measurement error in the underlying accounting variables.

TABLE 3 Tests for Differences between Local GAAP and IFRS in Explaining Prices

Country	Model	Mean difference in absolute errors	*t*-statistic <> 0	% of Obs with closer prediction using Local GAAP	*t*-statistic <> 0.5
Panel A: Common Law (English Legal Origin) Countries					
Australia	OLS	-0.132	-4.309	72.0	-15.320
	WLS	-0.094	-3.132	66.1	-10.632
	PROD	-0.040	-0.904	51.3	-0.956
U.K.	OLS	-0.055	-1.450	51.3	-0.721
	WLS	-0.121	-2.027	65.1	-8.776
	PROD	-0.059	-1.405	44.1	3.268
Ireland	OLS	0.265	1.459	52.6	-0.321
	WLS	0.075	0.587	60.5	-1.310
	PROD	0.231	2.323	39.5	1.310
Panel B: Code Law Countries					
GERMAN LEGAL ORIGIN					
Germany	OLS	3.951	2.871	55.4	-1.509
	WLS	5.481	3.571	42.6	2.095
	PROD	5.411	3.641	33.8	4.755
FRENCH LEGAL ORIGIN					
France	OLS	-3.781	-1.697	72.3	-11.369
	WLS	0.170	0.073	47.6	1.093
	PROD	0.863	0.373	44.6	2.505
Italy	OLS	0.053	0.760	35.7	4.533
	WLS	0.051	0.777	38.3	3.655
	PROD	0.069	0.992	38.3	3.655
Belgium	OLS	6.079	0.570	42.5	1.348
	WLS	4.824	0.449	43.8	1.120
	PROD	-0.627	-0.067	40.0	1.814
Holland	OLS	-0.314	-1.465	54.5	-0.944
	WLS	-0.267	-1.104	53.6	-0.754
	PROD	-0.238	-0.991	54.5	-0.944

Country	Model	Mean difference in absolute errors	*t*-statistic <> 0	% of Obs with closer prediction using Local GAAP	*t*-statistic <> 0.5
Greece	OLS	0.114	1.014	49.0	0.240
	WLS	0.120	1.091	46.5	0.883
	PROD	0.113	1.003	46.5	0.883
Spain	OLS	0.195	0.763	56.4	-1.392
	WLS	0.123	0.513	55.6	-1.204
	PROD	0.148	0.539	54.7	-1.017
Portugal	OLS	-0.012	-0.121	47.4	0.321
	WLS	0.000	-0.002	44.7	0.644
	PROD	0.031	0.259	50.0	0.000
SCANDINAVIAN LEGAL ORIGIN					
Denmark	OLS	14.796	1.606	42.7	1.487
	WLS	8.752	0.852	42.7	1.487
	PROD	-0.280	-0.075	59.2	-1.896
Finland	OLS	0.247	2.241	33.6	3.616
	WLS	0.194	1.827	40.0	2.131
	PROD	0.248	2.363	35.5	3.174
Norway	OLS	2.293	0.438	47.5	0.542
	WLS	1.629	0.460	50.8	-0.180
	PROD	6.012	1.276	36.1	3.192
Sweden	OLS	-1.781	-2.426	64.7	-4.699
	WLS	-1.544	-1.803	60.9	-3.401
	PROD	-1.613	-2.535	62.1	-3.825

The % of Obs with closer predictions compares the ability of the WLS and PROD models to predict actual prices, relative to that of the OLS model. The average absolute % error is specified for each of the 3 models used. Each of the 3 models is used to explain Price (measured 18 months after the end of fiscal 2005) as a function of earnings per share (*EPS*) and accounting book value per share (*BVPS*) under either the local GAAP or the IFRS measurement regimes. For the difference in goodness-of-fit statistics, the mean difference in the absolute errors is a paired comparison across the Local versus IFRS measurement regimes. The % of Observations where Local has better prediction captures when the model estimated using Local GAAP yields estimates closer to actual Price than the predictions from the model using IFRS.

TABLE 4 Differences between Common Law and Code Law Firms (Local GAAP versus Restated IFRS)

	OLS			WLS			Product Model			Combined Statistics		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	t-stat for difference in ABS(error)	t-stat for % obs with smaller ABS(error)	average of (1) and (2)	t-stat for difference in ABS(error)	t-stat for % obs with smaller ABS(error)	average of (4) and (5)	t-stat for difference in ABS(error)	t-stat for % obs with smaller ABS(error)	average of (7) and (8)	average of (1), (4) and (7)	average of (2), (5) and (8)	average of (3), (6) and (9)
Panel A: Common Law (English Legal Origin) Countries												
Australia	-4.309	-15.320	-9.815	-3.132	-10.632	-6.882	-0.904	-0.956	-0.930	-2.782	-8.969	-5.876
U.K.	-1.450	-0.721	-1.086	-2.027	-8.776	-5.402	-1.405	3.268	0.932	-1.627	-2.076	-1.852
Ireland	1.459	-0.321	0.569	0.587	-1.310	-0.362	2.323	1.310	1.817	1.456	-0.107	0.675
Panel B: Code Law												
GERMAN LEGAL ORIGIN												
Germany	2.871	-1.509	0.681	3.571	2.095	2.833	3.641	4.755	4.198	3.361	1.780	2.571
FRENCH LEGAL ORIGIN												
France	-1.697	-11.369	-6.533	0.073	1.093	0.583	0.373	2.505	1.439	-0.417	-2.590	-1.504
Italy	0.760	4.533	2.647	0.777	3.655	2.216	0.992	3.655	2.324	0.843	3.948	2.395
Belgium	0.570	1.348	0.959	0.449	1.120	0.785	-0.067	1.814	0.874	0.317	1.427	0.872
Holland	-1.465	-0.944	-1.205	-1.104	-0.754	-0.929	-0.991	-0.944	-0.968	-1.187	-0.881	-1.034
Greece	1.014	0.240	0.627	1.091	0.883	0.987	1.003	0.883	0.943	1.036	0.669	0.852
Spain	0.763	-1.392	-0.315	0.513	-1.204	-0.346	0.539	-1.017	-0.239	0.605	-1.204	-0.300
Portugal	-0.121	0.321	0.100	-0.002	0.644	0.321	0.259	0.000	0.130	0.045	0.322	0.184
SCANDINAVIAN LEGAL ORIGIN												
Denmark	1.606	1.487	1.547	0.852	1.487	1.170	-0.075	-1.896	-0.986	0.794	0.359	0.577
Finland	2.241	3.616	2.929	1.827	2.131	1.979	2.363	3.174	2.769	2.144	2.974	2.559
Norway	0.438	0.542	0.490	0.460	-0.180	0.140	1.276	3.192	2.234	0.725	1.185	0.955
Sweden	-2.426	-4.699	-3.563	-1.803	-3.401	-2.602	-2.535	-3.825	-3.180	-2.255	-3.975	-3.115

	OLS			WLS			Product Model			Combined Statistics		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel C: Tests of Differences												
Common Law versus Code Law Firms												
CML AVE	-1.433	-5.454	-3.444	-1.524	-6.906	-4.215	0.005	1.207	0.606	-0.984	-3.718	-2.351
CDL AVE	0.380	-0.652	-0.136	0.559	0.631	0.595	0.565	1.025	0.795	0.501	0.334	0.418
Diff	1.813	4.802	3.307	2.083	7.537	4.810	0.560	-0.183	0.189	1.485	4.052	2.769
Std Dev*	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645	0.645
t-stat	2.808	7.439	5.124	3.226	11.676	7.451	0.868	-0.283	0.292	2.301	6.277	4.289
German Legal System versus English												
CML AVE	-1.433	-5.454	-3.444	-1.524	-6.906	-4.215	0.005	1.207	0.606	-0.984	-3.718	-2.351
GER AVE	2.871	-1.509	0.681	3.571	2.095	2.833	3.641	4.755	4.198	3.361	1.780	2.571
Diff	4.304	3.945	4.125	5.095	9.001	7.048	3.636	3.548	3.592	4.345	5.498	4.922
Std Dev*	1.155	1.155	1.155	1.155	1.155	1.155	1.155	1.155	1.155	1.155	1.155	1.155
t-stat	3.728	3.416	3.572	4.412	7.795	6.104	3.149	3.072	3.111	3.763	4.761	4.262
French Legal System versus English												
CML AVE	-1.433	-5.454	-3.444	-1.524	-6.906	-4.215	0.005	1.207	0.606	-0.984	-3.718	-2.351
FR AVE	-0.025	-1.038	-0.531	0.257	0.777	0.517	0.301	0.985	0.643	0.178	0.241	0.210
Diff	1.408	4.416	2.912	1.781	7.683	4.732	0.296	-0.222	0.037	1.162	3.959	2.560
Std Dev*	0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690	0.690
t-stat	2.041	6.400	4.220	2.581	11.133	6.857	0.430	-0.322	0.054	1.684	5.737	3.710
Scandinavian Legal System versus English												
CML AVE	-1.433	-5.454	-3.444	-1.524	-6.906	-4.215	0.005	1.207	0.606	-0.984	-3.718	-2.351
SCA AVE	0.465	0.237	0.351	0.334	0.009	0.172	0.257	0.161	0.209	0.352	0.136	0.244
Diff	1.898	5.691	3.794	1.858	6.915	4.387	0.253	-1.046	-0.397	1.336	3.853	2.595
Std Dev*	0.764	0.764	0.764	0.764	0.764	0.764	0.764	0.764	0.764	0.764	0.764	0.764
t-stat	2.485	7.451	4.968	2.433	9.054	5.743	0.331	-1.370	-0.519	1.750	5.045	3.397

t-statistics come from country-specific regressions of Price = $b_0 + b_1(BVPS) + b_2(EPS)$. The first *t*-statistic for each model is based on the difference in the ABS(residual error) and a negative value indicates that local GAAP results in a lower residual error. The second *t*-statistic is based on the percentage of observations where local GAAP is closer to actual than is the prediction using IFRS. A negative value for this second *t*-statistic indicates that local GAAP results in a closer estimate of price.

The standard deviation of the difference between these groups is $SQRT((1/N_1) + (1/N_2))$, where N_1 and N_2 are the number of countries in each of the code law and common law categories. This standard error assumes independence across the countries.

The standard deviation used in calculating columns (10) through (12) is conservative in that it assumes perfect correlation across the three models. Less than perfect correlation will further reduce the estimated standard deviation.

TABLE 5 Significance of the Product Term under Local GAAP and IFRS

	Local GAAP	IFRS	Difference
Panel A: Test of Average t-statistics			
All Firms in Sample			
Average	-0.650	-1.337	-0.687
Std dev	6.518	6.601	1.631
theoretic t	-2.517	-5.177	-2.660
empirical t	-0.386	-0.784	-1.631
Common Law (CML) Countries			
Average	-2.381	-4.176	-1.795
Std dev	11.242	10.533	1.515
theoretic t	-4.124	-7.232	-3.108
empirical t	-0.367	-0.687	-2.051
Code Law (CDL) Countries			
Average	-0.217	-0.627	-0.410
Std dev	5.484	5.704	1.597
theoretic t	-0.752	-2.171	-1.420
empirical t	-0.137	-0.381	-0.889
Panel B: Tests of Average Improvement of Common Law versus Code Law Firms			
CML AVE	-2.381	-4.176	-1.795
CDL AVE	-0.217	-0.627	-0.410
Difference	-2.164	-3.549	-1.385
Std Dev	0.645	0.645	0.645
theoretic t	-3.352	-5.498	-2.145
Emp Std Dev	6.681	6.300	0.989
empirical t	-0.324	-0.563	-1.400

t-statistics come from country-specific regressions of Price = $b_0 + b_1(BVPS) + b_2(EPS) + b_2(EPS * BVPS)$. The *t*-statistics reported above are those from the *EPS* * *BVPS* term only.

The standard deviation of the difference between groups in Panel B is SQRT((1/N1) + (1/N2)), where N1 and N2 are the number of countries in each of the code law and common law categories. This standard error assumes independence across the countries.

None of the LaPorta sub-classifications within the Code Law group demonstrate results different from the entire group.