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Measuring the impact of international reporting standards on market performance of publicly traded companies

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ABSTRACT

The decision whether to require publicly traded companies to adopt International Financial Reporting Standards (IFRS) remains in flux. In 2008, the US Securities and Exchange Commission proposed a roadmap leading to complete acceptance of IFRS in the US. With the potential replacement of US GAAP with IFRS in the near future, understanding the impact of IFRS on corporate financial reporting is more important than ever. This study examines two factors which are critical considerations in the decision to accept or not to accept IFRS in the US: How different is financial statement information derived under IFRS from information derived under US generally accepted accounting principles (GAAP); and how much incremental information value, if any, is provided by IFRS over US GAAP? The present study extends prior research by examining concurrently both differences and their impact on market performance. Findings of this study support the view that differences on financial statement results between IFRS and US GAAP are not significant, thus, supporting proponents of adoption of IFRS in the US, after which all US publicly traded companies would use IFRS and not US GAAP.

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1. Introduction

Use of International Financial Reporting Standards (IFRS) is a major financial reporting issue worldwide and the subject of extensive academic research (e.g. Barth, 2008, Blanco & Osma, 2004, Daske, Hail, Leuz, & Verdi, 2008, Heino and Fontana, 2011, Hope, Jin, & Kang, 2006, Pownall & Schipper, 1999, Rees & Weisbach, 2002, Reineking, Chamberlain, Rudolph, & Smith, 2013, Smith, 2012, Wang & Smith, 2009). Pivotal events of the past decade include acceptance of IFRS for financial reporting in the European Union in 2005 and the US Securities and Exchange Commission's decision in 2007 to accept IFRS for financial reporting by non-US firms trading in US markets. In 2008, the Commission proposed a timeline leading to eventual acceptance of IFRS for all US publicly traded companies, foreign and domestic; this timeline was later revised in 2010. According to the timeline, complete acceptance of IFRS in the US may occur as early as 2015.

Corporate management is accountable for the quality and reliability of financial statements. The increasing globalization of business, along with improvements in technology, has led to a globalization of the capital markets and increased foreign direct investment. Understanding the potential impact of IFRS on a company's accounting process is critical to accountants, auditors, corporate management, investors, lenders, financial analysts, regulators, and others connected to corporate financial reporting. This has led to increasing inclusion of an international accounting course in many university accounting programs, and corresponding development of international accounting textbooks (e.g. Doupnik & Perera, 2011; Saudagaran & Smith, 2013).

The pivotal question remains: Is acceptance of IFRS in the US inevitable? Smith (2008) refers to adoption of IFRS as an 'unstoppable juggernaut.' Even after much public discussion and notable academic research, the answer remains unclear. However, assuming the potential replacement of US generally accepted accounting principles (GAAP) with IFRS in the near future, understanding the impact of IFRS on corporate financial reporting is more important than ever. The overall purpose of this paper is to provide a better understanding of IFRS and its impact on corporate financial reporting in relation to US generally accepted accounting principles. Specifically, this paper addresses two questions which are critical considerations in the decision to accept or not to accept IFRS in the US: (1) How different is financial statement information derived under IFRS from information derived under US GAAP and, (2) how much incremental information value, if any, is provided by IFRS over US GAAP? No prior study has examined concurrently both differences and impact on market performance.

To address these questions, we hand-collect financial data for 64 European Union firms that list stock on the New York Stock Exchange in both 2005 and 2006. We limit our sample to the years 2005 and 2006 in order to fall between two important rulings made by the EU and United States. First, beginning in 2005, all EU firms were required to use IFRS-based financial reports. Second, in 2007, the US Securities

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and Exchange Commission (SEC) ruled that non-US firms are no longer required to reconcile IFRS with US GAAP when reporting earnings (SEC, 2007). Therefore, 2005 and 2006 represent unique years in which the EU firms trading in US markets reported financial statements using two different standards: IFRS and US GAAP.

We exploit this dual-reporting regime to evaluate the extent to which key financial statement numbers differ across IFRS and US GAAP. We find that over 67% of our sample firms report higher net income when reporting under IFRS than GAAP. However, the average difference in revenue, net income, total assets, total liabilities, and shareholders equity across the two reporting regimes is insignificantly different from zero. For the EU firms in our sample, reported earnings per share (EPS) are the only key financial figure that significantly differs across IFRS and US GAAP. Under IFRS, the mean EPS (basic) is $14.68 but falls to $7.39 when reporting under US GAAP. To better understand the differences (or lack thereof) between IFRS-reported and US GAAP-reported financial numbers, we also collect and summarize the primary reconciliation categories cited by the firms in our sample. In each Form 20-F, the average firm reports 7.5 reconciliations, with those related to "Intangible Assets, Impairments, and Goodwill" being the most frequent.

Financial statement items do not appear to differ significantly between IFRS and US GAAP. However, the value-relevance of IFRS data to market participants in the US is still an empirical question. Each EU firm in the sample is matched to a corresponding US firm based on year, industry, firm performance, and size and compares long-run abnormal returns between groups. No evidence is found that 12-month abnormal returns are different for EU firms providing both IFRS and US GAAP information, compared to US firms reporting only US GAAP. Market participants do not place a premium on IFRS-based financial information, supporting the view that accounting quality and disclosure levels under IFRS are relatively equal to those under US GAAP.

2. Literature review

In 2001, the International Accounting Standards Board (IASB) was created by its predecessor, the International Accounting Standards Committee (IASC). The IASC was itself formed in 1973. The parent body of the IASB is the IASC Foundation. The organizational structure of the IASB resulted from a strategy review carried out by the Board of the International Accounting Standards Committee. Standards released by the IASB are designated International Financial Reporting Standards. In the past decade, the IFRS transitioned from being little used to what is now the world's dominant set of accounting standards (Rezaee, Smith, & Szendi, 2010).

The US Securities and Exchange Commission revised its rules in December 2007 permitting non-US companies to include in their SEC filings financial statements without reconciliation to US GAAP if the financial statements are prepared in accordance with IFRS as issued by the International Accounting Standards Board (IASB). Many regard this as a historic event in US financial reporting, as acceptance of IFRS removes a major obstacle for foreign private issuers to enter and to remain in the US markets (Deloitte — Federation Schools of Accountancy, 2008; Gibson, Dunn, and Crutcher, LLP, 2008). Street and Linthicum (2007) indicated that the SEC's invitation to comment offered an excellent opportunity for academics to apply their research and expertise to help shape the future of US GAAP and IFRS, and thereby the broader global capital markets.

The US's largest accounting professional organization, the American Institute of Certified Public Accountants (AICPA), has long advanced the goal of one set of high-quality globally accepted accounting standards among public companies worldwide and preparing US CPAs for use of IFRS. Towards this end, the AICPA initiated an IFRS Certificate Program in 2011 to increase member familiarity with IFRS (AICPA, 2011a).

The SEC appears close to accepting IFRS, not just for non-US companies trading in the US stock market but for US-based companies, too. Business leaders encouraging acceptance of IFRS include John Thain, CEO of the New York Stock Exchange, and Paul Volcker, former Federal Reserve Chairman (White, 2007). After her appointment in 2009, SEC Chairperson Mary Schapiro, expressed misgivings about the US adoption of IFRS and her unwillingness to be locked into the timetable put forward by her predecessor (WebCPA, 2009). Despite misgivings expressed by the SEC chairperson, FASB Chairman Robert Herz said that the US should consider adopting IFRS in the next three to five years even if all differences between US GAAP and IFRS are not resolved (Pickrell, 2009). Other findings regarding the adoption of IFRS echo such mixed sentiments. According to a 2011 survey published by the AICPA, almost 54% of current CPAs support the adoption of IFRS. Conversely, researchers who recently surveyed individual investors found that they are satisfied with the accounting standards model currently in place and have no desire to switch to IFRS (McEnroe & Sullivan, 2011).

While most CPAs (54%) support the optional adoption of IFRS standards, many (44%) are delaying IFRS preparation until the SEC reaches a decision on incorporating IFRS standards into US reporting requirements (Journal of Accountancy, 2011). The IFRS adoption complexities have led to the term "condorsement", which combines convergence of standards by "endorsing them one standard at a time into US GAAP" (WebCPA, 2011). Condorsement is favored by FASB Chair Leslie Seidman as a potential way to reconcile the differences between US GAAP and IFRS.

Although segments of the financial community continue to prevaricate on the issue, prior research suggests that the adoption of IFRS yields specific benefits. Spence (1973) uses signaling theory to demonstrate why companies adopt IFRS in international capital markets (Tarca, 2004). Information asymmetry and agency problems are probably lessened after adoption of IFRS, as insiders face greater risk of legal action by minority shareholders (Hope et al., 2006). IFRS require greater disclosure than that required by most countries' domestic accounting standards (Ding, Hope, Jeanjean, & Stolowy, 2006). The study by Rees and Weisbach (2002) indicates that greater investor protection associated with IFRS leads to improve stock price. The uniform reporting standards provided by multinational adoption of IFRS lower the costs of financial statement reconciliation associated with multinational equity (stock) listings (Biddle & Saudagaran, 1989) and potentially promote economic development (Hope et al., 2006). Hellman (2011) found a research opportunity created by Sweden's voluntary adoption of IFRS during 1991–2004. Empirical results of the study suggest that a 'soft' adoption of IFRS in Sweden provided firms discretion that was used for earnings management purposes.

Prior research by Barth (2008), Ball (2006), and Nobes (2006) evaluate the feasibility of convergence to IFRS, including the potential advantages of producing more accurate, timely, and complete financial information, removing international differences in accounting standards, and eliminating impediments to the global capital markets. Impediments to IFRS convergence examined in these studies include persistence of international differences under IFRS, the existence of market, legal, and political differences, and IFRS enforcement issues (Rezaee et al., 2010).

Mandatory IFRS adoption within the European Union has allowed researchers to uncover interesting findings with regard to domestic standard comparison. Aharony, Barniv, and Falk (2010) discovered that the valuation of goodwill, research and development expenses, and asset revaluation were increased in regard to value relevance to equity security investors. Research by Armstrong, Barth, Jagolinzer, and Riedl (2010) compared pre-IFRS adoption data with post-IFRS adoption data and found that investor reaction to adopting firms was generally positive. Research by Byard, Li, and Yu (2011) found that analysts' forecast errors and dispersions were lessened during the period of IFRS adoption in those European countries with strong enforcement regimes. Another study determined that mandatory

adoption of IFRS significantly lowers the cost of equity to domestic firms; however, this result was tempered by the country's legal enforcement strength (Li, 2010). Taken together, these results lend support to the expectation that IFRS adoption reaps certain benefits.

IFRS is not universally accepted as a panacea for accounting and financial reporting, as indicated in a study by Noël, Ayayi, and Blum (2010). In their study, Habermasian philosophy is used as a reading grid to understand the eminently political facet of international accounting standard-setting. The authors evaluate accounting regulations regarding exploration for and evaluation of mineral resources in the European context. The IASB favors the development of a new phase in accounting standard-setting, with a change from a ruling logic to regulations that place the economic and social actors at the forefront of the negotiations. This change is especially evident in the 'notorious' exception permitted under IFRS 6 (exploration for and evaluation of mineral resources) exempting applicants from the earlier standard, IAS 8. This exception, the authors maintain brings into question the ethicality of international accounting standardization.

Members of the American Accounting Association's Financial Accounting Standards Committee (AAA FASC) reported their response to the SEC's call for comment on a proposal to adopt a roadmap for potential use of IFRS by US companies (Jamal et al., 2010). The committee commented on key issues raised by the SEC proposal. Significantly, the FASC indicated that the need for a global regulator was overstated. The FASC questioned whether a global regulator would help achieve the stated goals of comparability and consistency of financial reporting on a global basis. The FASC proposed their preference for companies being allowed to choose use of US GAAP or IFRS rather than mandating one global monopoly set of standards. The FASC indicated that the SEC had not paid sufficient attention to the educational and professional judgment consequences of its proposals.

Sunder (2009) questions the broad consensus in accounting that favors principles over rules to guide development of a uniform high-quality set of standards, and bestowing monopoly power to a single body for this purpose. In other words, he contradicts prevailing wisdom that has given IFRS a powerful hold on accounting development worldwide, with only a few countries, such as the US holding out. The author calls for a re-examination of the accounting consensus.

Hail, Leuz, and Wysocki (2010a) analyze economic and policy factors concerning the potential adoption of IFRS by the United States. The authors create a conceptual framework to evaluate potential costs and benefits from IFRS adoption in the United States. In their follow-up study, the researchers analyze the pros and cons of several standard-setting approaches, including maintaining US GAAP, offering the option to adopt IFRS, mandating the adoption of IFRS, or, interestingly, creating a US-driven global standard alternative to IFRS (Hail, Leuz, & Wysocki, 2010b). Henry, Lin, and Yang (2009) determined that despite convergence in recent years, significant numerical differences still exist between financial reporting results under IFRS and US GAAP. The SEC's removal of the requirement for reconciliations between the two sets of standards may could potentially cause problems for investors and other financial statement users if they should be unaware of those differences.

Wang and Smith (2009) examine how different GAAPs, including IFRS, affect performance of valuation models. Their study analyzed financial data from Asia-based companies, including those in China. Daske et al. (2008) report on early evidence of the economic consequences of mandatory IFRS reporting globally. Bolt-Lee and Smith (2009) offer a review of recent studies. Botzem and Quack (2009) observe that development of the current IASB from the earlier International Accounting Standards Committee (IASC) offers insight into many issues of international financial reporting, including characteristics of international accounting standards themselves.

Goncharov and Hodgson (2011) examine the IASB discussion paper, Preliminary Views on Financial Statement Presentation (IASB, 2008) and extend prior research by examining impact metrics, in 16 European countries, that include information, measurement, prediction, and conditional conservatism issues. The researcher found that reported aggregated comprehensive income reverses the conservative characteristics of income and has policy inferences for providers of debt capital in a European setting.

McAnally, McGuire, and Weaver (2010) examine equity-based compensation and determine how IFRS conversion will affect financial statements and the quality of reported numbers. US GAAP and IFRS differ in that IFRS reports tax benefits from equity-based compensation at their intrinsic value each period, compared to historical cost under GAAP. The researchers conclude that IFRS improves the relevance, and thus, the quality, of at least some reported numbers.

A number of studies consider the benefits that IFRS may provide to specific countries. For example, Alp and Ustundag (2009) consider the need for IFRS in Turkey, a developing country seeking foreign capital and foreign investments to finance its economic growth. For Turkey, IFRS would provide the accounting foundation for improved and high quality financial reporting. As a result of globalization of capital markets and the higher volume of international investments, companies operating in Turkey are called on to provide high quality financial information to access financial resources. IFRS was also needed to facilitate Turkey's candidation for European Union membership. The study examines the proper and consistent manner of implementing a "Principle Based" IFRS in Turkey.

Kumar, Wilder, and Stocks (2008) examine voluntary disclosures, provided in the US, by US-listed Asian companies. Results show that significantly fewer (greater) voluntary disclosures are provided by US-listed Asian companies from countries which have a strict (less strict) mandatory disclosure regime in their home country. This result was the opposite found by the model developed in Einhorn (2005).

The IFRS convergence process is occurring in a number of countries, including the US. Rodrigues and Russell (2006) use an innovative approach to examine processes, effects and likely future progress of the convergence of national accounting standards with IFRS. The authors apply Hegelian dialectic concepts of thesis, antithesis and synthesis; concepts of isomorphism and decoupling; and, to a smaller extent, Foucault's model of power-knowledge. The study presents four factors that are likely to improve understanding of the process of international accounting standards harmonization.

Accounting is called "the language of business," and the question that has been recently the center of attention is, "Can all accountants worldwide speak the same language?" Put another way, "Is a set of globally accepted accounting standards feasible through an effective convergence?" Effective accounting standards enable investors to access appropriate and reliable financial information. Even though approximately 120 countries require or allow their companies to prepare their financial statements using IFRS (AICPA, 2011b), IFRS is not universally perceived as a panacea to global financial reporting because the financial reporting process, even if IFRS is adopted everywhere, will still be influenced by political, cultural, and regulatory differences that can result in inconsistent application of an accounting standard from one country to another (Rezaee et al., 2010).

3. Hypotheses development

Based on the above discussion, two research questions were developed, which are as follows:

RQ1 Does use of IFRS in place of US GAAP significantly affect major components of the financial statements of publicly traded companies?

RQ2 Does use of IFRS in addition to US GAAP on financial reports of publicly traded companies significantly affect market performance of those companies? (i.e., is there incremental value for IFRS-based financial statement information?)

To answer these two research questions, the following two hypotheses will be tested:

H1. Use of IFRS in place of US GAAP will significantly affect major components of the financial statements of publicly traded companies.

H2. Use of IFRS in addition to US GAAP on financial reports of publicly traded companies will significantly affect market performance of those companies. (i.e., there is incremental value for IFRS-based financial statement information.)

4. Methodology

To test the first hypothesis, univariate tests are used to evaluate whether key financial statement items (e.g. total revenues, net income, total assets, total liabilities, and total stockholders' equity) are significantly affected by use of IFRS versus US GAAP. To address the second hypothesis, a multivariate framework is used to compare the abnormal returns of companies using IFRS and US GAAP to a matched sample of companies using only US GAAP. The abnormal returns model is described as follows:

$$\begin{aligned}\text{ABRET12} = {} & \alpha + \beta_1 \text{IFRS} + \beta_2 \%\,\text{CHANGE NI} + \beta_3 \text{TOTAL ASSETS} + \beta_4 \text{ROA} \\ & + \beta_5 \text{YEAR DUMMY} + \beta_{6-25} \text{INDUSTRY DUMMIES} + \varepsilon \end{aligned} \quad (1)$$

where: ABRET12 = Abnormal return measured over a 360 day window (−180, +180), with day 0 being the date of the 20-F filing for each sample firm and corresponding control firm, winsorized at the 1st and 99th percentiles. Abnormal returns are calculated using Barber and Lyon's (1997) application of the three-factor model developed by Fama and French (1993), plus a momentum factor. The daily excess returns for firm i are regressed on a market factor, a size factor, a book-to-market factor, and a momentum factor:

$$R_{it} - R_{rf} = \alpha + \beta_1 (R_{mt} - R_{rf}) + \beta_2\ \text{SMB}_t + \beta_3\ \text{HML}_t + \beta_4\ \text{MOM}_t + \varepsilon \quad (2)$$

where:

R_{it} is the daily holding period return on the common stock of firm i

R_{rf} is the return on three-month Treasury bills (i.e., risk-free rate)

R_{mt} is the return on a value-weighted market index

SMB_t is the return on a value-weighted portfolio of small stocks less the return on a value-weighted portfolio of big stocks

HML_t is the return on a value-weighted portfolio of high book-to-market stocks less the return on a value-weighted portfolio of low book-to-market stocks, and

MOM_t is the average return on two high prior return portfolios less the average return on two low prior return portfolios.

IFRS an indicator variable equal to 1 if the firm is headquartered in the EU and reports both IFRS and US GAAP financial statements in a Form 20-F and 0 if the firm is headquartered in the US and reports only using US GAAP,

% CHANGE NI percentage change in annual net income: [(Net Income$_t$ − Net Income$_{t-1}$) / Net Income$_{t-1}$] where t is fiscal year 2005 or 2006, depending on the observation. This variable is winsorized at the 5th and 95th percentiles. A positive (negative) number indicates a positive (negative) earnings surprise,

TOTAL ASSETS Total assets, calculated using US GAAP, winsorized at the 1st and 99th percentiles, and

ROA Return on assets, calculated using US GAAP numbers: [Net Income / Total Assets], winsorized at the 1st and 99th percentiles.

The variable of interest is the intercept, α, which is relabeled as ABRET12. A positive intercept indicates that, after controlling for market returns, size, book-to-market, and momentum, the firm in question has performed better than expected.

5. Sample selection

The sample consists of all firms headquartered in the European Union (EU) that list stock on the New York Stock Exchange (NYSE) in both 2005 and 2006. Financial statements by non-US firms are reported on an annual basis to the SEC using a Form 20-F. Using the NYSE website (www.nyse.com), which includes a listing directory by region, we find 64 EU firms whose stock is listed on the NYSE in both 2005 and 2006 (128 firm-year observations). The sample is restricted to parent companies only. For each observation in the sample, the Form 20-F

Table 1
IFRS-reported versus US GAAP-reported financial statement information for EU firms cross-listed on NYSE.

Panel A: IFRS-reported and US GAAP-reported financial statement information

		Reported using IFRS ($MM)					Reported using US GAAP ($MM)				
	N	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max
Revenue	126	46,109	28,132	60,079	116	306,731	50,548	28,253	72,597	116	384,653
Net income	126	4420	3092	7359	−26,031	28,864	5394	2858	7821	−780	31,864
Total assets	126	200,707	48,591	385,299	511	1,860,758	188,187	49,124	320,453	342	1,406,955
Total liabilities	126	154,351	20,793	354,151	−11,149	1,745,830	155,296	23,996	310,838	18	1,442,989
Shareholder equity	126	43,912	15,437	124,210	44	972,466	33,926	15,438	51,039	50	287,989
EPS (basic)	122	14.68	1.93	39.70	−21.51	186.30	7.39	1.67	19.98	−36.87	92.96
EPS (diluted)	126	13.97	2.02	38.23	−21.51	184.90	7.64	1.76	20.01	−36.87	91.91

Panel B: Test of differences between IFRS-reported and US GAAP-reported financial statement information

	Difference (mean)		Difference (median)	
	GAAP − IFRS	t-Value	GAAP − IFRS	Chi-square
Revenue	4439	1.11	121	0.01
Net income	974	1.57	−234	0.04
Total assets	−12,520	−0.96	533	0.08
Total liabilities	945	0.07	3203	0.44
Shareholder equity	−9986	−0.92	1	0.00
EPS (basic)	−7.29	−2.72***	−0.26	1.43
EPS (diluted)	−6.33	−2.57***	−0.26	0.61

*, **, and *** indicate that values are significantly different from zero at the p = 0.10, 0.05, and 0.01 levels, respectively.

is retrieved from the SEC's website (www.sec.gov) and financial information prepared under both IFRS and GAAP is hand-collected, including net income, revenue, total assets, total liabilities, shareholders' equity, and earnings per share (EPS). GAAP information, when unavailable in the Form 20-F, is obtained from Compustat.

In addition to financial data, for each company, we also examine the reconciliation between IFRS and GAAP and classify each reconciling item into 1 of 18 different categories. After eliminating two observations with insufficient IFRS data, our final sample consists of 126 firm-year observations with both IFRS and GAAP information reported in a Form 20-F. Forty-two firms in our sample (33%) disclose IFRS numbers in a currency other than US dollars (USD). Accordingly, we use the average monthly currency conversion value corresponding to the year and month in which the Form 20-F was filed to convert amounts into USD.

Table 3
Mean comparison of EU sample firms and US control firms.

	All numbers reported using US GAAP ($MM)		
	EU firms	US control firms	Difference (sample − control)
Revenue	$50,548	$12,103	$38,445***
Net income	$5394	$1038	$4356***
Total assets	$188,187	$28,526	$159,661***
Total liabilities	$155,296	$21,904	$133,392***
Shareholder equity	$33,926	$6462	$27,464***
ROA	0.059	0.057	0.002
ABRET12	6.09%	5.09%	1.00%
% CHANGE NI	70.55%	20.57%	49.98%***

*, **, and *** indicate that values are significantly different from zero at the p = 0.10, 0.05, and 0.01 levels, respectively.

6. Results

Table 1 compares the financial statement numbers reported under International Financial Reporting Standards (IFRS) and US generally accepted accounting principles (GAAP) for the same European Union (EU) firms. Each firm, which is headquartered in the EU but lists stock on the New York Stock Exchange (NYSE), is mandated by the EU to report using IFRS and mandated by the Securities and Exchange Commission (SEC) to provide reconciliation of differences between IFRS and US GAAP in a Form 20-F. All values (except earnings per share values) are reported in millions ($MM) and have been winsorized at the 1st and 99th percentiles.

IFRS financial statement information is hand-collected from the Form 20-F filed with SEC. In some cases, the 20-F reports IFRS financial statements in Euros, Great Britain Pounds, etc. For the purposes of our study, all numbers have been converted to US dollars using the average monthly currency conversion value for the month and year in which the 20-F was filed. GAAP financial statement information is hand-collected directly from the Form 20-F, when available. Otherwise, this information is collected from Compustat.

Differences are computed as [GAAP − IFRS]. Chi-square values are computed using the Kruskal–Wallis test.

Table 1, Panel A, reports summary statistics for the financial information collected for each firm, as reported under both IFRS and US GAAP. Average net income reported using IFRS and GAAP is $4420 and $5394 million, respectively, suggesting that income reported under GAAP appears to be higher. The median net income value, however, is higher when reporting under IFRS ($3092 million versus $2858 million). In fact, over 67% (85/126 companies) of our sample reports a higher net income number when reporting under IFRS than GAAP (see Table 2). Table 1, Panel B, statistically tests differences between IFRS- and GAAP-reported financial numbers. Only the earnings per share figures have statistically different means between IFRS and GAAP, and no values have statistically different medians. The lack of significant differences between IFRS- and GAAP-reported financial statements is an important finding.

Despite the similarity in reported numbers, many slight differences do exist between IFRS and GAAP, including (but not limited to) the manner in which pensions, derivatives, and mergers and acquisitions are accounted for. As such, each firm in our sample lists those reconciling items that drive the differences in their IFRS and GAAP financial statements. Using data directly reported by the company in its 20-F, we create 18 reconciliation categories, which are detailed in Table 2. Among the 126 firm-year observations in our sample we identified a total of 950 reconciliations, amounting to approximately seven and one-half items in each 20-F (950/126). The categories mentioned by the greatest number of firms are “Intangible Assets, Impairments, and Goodwill” (100), “Assets/Fair Value of Assets” (92), “Taxes” (88), and “Pensions, Post-retirement Benefits” (84).

Table 2 splits the sample into three groups, based on the relative value of IFRS net income and GAAP net income: Group 1 — IFRS greater than GAAP; Group 2 — IFRS less than GAAP; and Group 3 — IFRS equal to GAAP. In those instances when GAAP net income is higher than IFRS net income, 50% of firms report reconciliations dealing with derivatives or financial instruments. In contrast, when IFRS net income is greater than GAAP net income, this reconciling item is only reported at 13% of the

Table 2
Reported differences between IFRS and US GAAP for EU firms cross-listed on NYSE.

Difference category	Total frequency	Percent of times each category cited		
		Group 1 (n = 85): IFRS NI > GAAP NI	Group 2 (n = 24): IFRS NI < GAAP NI	Group 3 (n = 17): IFRS NI = GAAP NI
Assets/fair value of assets	92	76%	88%	35%
Business combinations, mergers, acquisitions	56	55%	29%	12%
Capitalization and development costs	16	11%	13%	12%
Derivatives, hedges, financial instruments	68	13%	50%	24%
Exchange rate, cumulative translation adjustments	66	54%	50%	47%
Insurance	30	31%	17%	0%
Intangible assets, impairments, and goodwill	100	88%	71%	47%
Investments	34	28%	17%	35%
Minority interest	28	26%	25%	0%
Pensions, post-retirement benefits	84	79%	46%	35%
R&D expense	26	25%	13%	12%
Real estate, property	20	19%	17%	0%
Restructuring	30	31%	17%	0%
Revenue recognition	52	44%	46%	24%
Sale and lease-back transactions	38	28%	42%	24%
Share-based compensation	62	51%	46%	47%
Taxes	88	82%	58%	24%
Other	60	44%	71%	35%
Total	950			

time. Comparing reconciliations between Groups 1 and 2 also reveal that, when IFRS net income is greater than GAAP net income, it is more likely that a firm will have a reconciling item relating to either pensions or taxes.

These differences are hand-coded from the Form 20-F filed with the SEC. Within the Form 20-F, each EU firm reports a reconciliation between IFRS and US GAAP, including the reasons for the differences, which we have condensed into 18 different categories.

Each firm can cite more than one reason for the difference between IFRS and US GAAP. Hence, the number of total reasons cited is greater than the number of firm-year observations in our sample.

To determine if the market places a premium on IFRS-based financial information, we match each of our EU sample firms to a corresponding US firm based on year, industry, firm performance, and firm size. Specifically, each sample firm is matched to a US firm in the same year and 2-digit SIC industry classification. From this set of potential matches, we retain the three control firms with the smallest absolute difference in return on assets (ROA) to a sample firm. Of the three remaining options, the control firm with total assets closest in value to that of the sample firm becomes the final match. After matching, we have a sample of 252 firm-year observations.

Table 3 compares financial statement data between our EU sample firms and the matched sample of US firms. We select a control firm for each sample firm based on year, industry, performance and size. More specifically, we match each EU firm to those domestic firms (headquartered in the US) falling in the same year and 2-digit SIC industry classification. We then retain only the three control firms with the smallest absolute difference in ROA to the sample firm. Of the three remaining control firms, the firm with the smallest difference in total assets to the sample firm is chosen as the final match. This matching procedure results in a one-to-one match of all sample firms. All numbers are reported using US GAAP and are stated in millions of dollars (with the exception of ROA, ABRET12, and % CHANGE NI).

On average, our sample firms appear to have statistically higher revenue, net income, assets, liabilities, and shareholder's equity than the control firms. There is no significant difference in ROA, confirming that our matching procedures effectively control for firm performance. Given that total assets are still significantly different between groups, however, we can conclude that our matching procedure did not fully remove the effects of firm size. Accordingly, we control for firm size in all subsequent tests.

The significant difference in total assets between the sample and control firms indicates that our matching procedure did not fully remove the effects of firm size. Accordingly, we include a control for firm size in all subsequent models.

Table 4 presents results of the multivariate analysis of abnormal returns (12-month). The calculation of abnormal returns is done using the Fama and French (1993) method (as applied by Barber & Lyon, 1997), so market returns, size, book-to-market, and momentum are controlled for. Our variable of interest is IFRS, which is not significant. This is an important finding, which means that investors do not give a market premium to those firms that provide both IFRS and GAAP information. This would support the view that the accounting quality and/or disclosure levels under IFRS are relatively equal to GAAP.

Table 4
Multivariate analysis of abnormal returns (12-month).

$ABRET12 = \alpha + \beta_1\ IFRS + \beta_2\%\ CHANGE\ NI + \beta_3\ TOTAL\ ASSETS + \beta_4\ ROA + \beta_5\ YEAR\ DUMMY + \beta_{6-25}\ INDUSTRY\ DUMMIES + \varepsilon$

	OLS regression with dependent variable = ABRET12		
Variable	Prediction	Coefficient	p-Value
Intercept		0.235	(<0.001)
IFRS	?	0.012	(0.466)
% CHANGE NI	(+)	0.023	(<0.001)
TOTAL ASSETS	?	0.000	(0.475)
ROA	(+)	0.075	(0.310)
n	203		
Adj. R^2	24.64%		
F-value	3.64		
Pr > F	<0.001		

Industry- and year-fixed effects are included in the model but are not reported. Two-tailed (one-tailed) tests are shown for variables without (with) a signed prediction.
49 observations are excluded from the regression due to missing ABRET12 and % CHANGE NI values.

7. Conclusions

While the US Securities and Exchange Commission, in 2008 and revised in 2010, proposed a timeline leading to eventual acceptance of IFRS for all US publicly traded companies, foreign and domestic, there remains considerable debate as to whether this timeline will be followed, culminating in US acceptance of IFRS. If the timeline was followed, complete acceptance of IFRS in the US could be as early as 2015. Better understanding of IFRS is essential to resolving the debate. Public discussion and academic research have not settled the matter. As a result, this study was initiated to further a better understanding of IFRS and its impact on corporate financial reporting in relation to US generally accepted accounting principles. Findings of this study support the view that differences between IFRS and US GAAP are not significant, thus, supporting proponents of adoption of IFRS in the US, after which all US publicly traded companies would use IFRS and not US GAAP.

In this study, two factors were examined that play a key role in the US's decision to accept or not accept IFRS for all US publicly traded companies. The first factor examined is how different is financial statement information derived under IFRS from information derived under US GAAP; and the second, how much incremental information value, if any, is provided by IFRS over US GAAP. These two factors are evaluated via two research questions.

The first research question addressed is: Does use of IFRS in place of US GAAP significantly affect major components of the financial statements of publicly traded companies? Results show a lack of significant differences between IFRS- and GAAP-reported financial statements. This is an important finding, as it shows there is substantial convergence between IFRS and US GAAP.

The second research question examined is: Does use of IFRS in addition to US GAAP on financial reports of publicly traded companies significantly affect market performance of those companies (i.e., is there incremental value for IFRS-based financial statement information)? Results indicate that investors do not give a market premium to those firms that provide both IFRS and GAAP information. This is also an important finding, as it affirms the view that the accounting quality and/or disclosure levels under IFRS are relatively equal to GAAP.

8. Limitations and future research

This study is limited by the sample of firms and time period examined. As explained, this is a unique sample because of the timing of the EU's requirement of use of IFRS and the SEC's requirement for reconciliation to US GAAP. Future research can examine other firms and time periods, although it will be unlikely that other samples can provide such rich data regarding both IFRS-based and US GAAP-based financial data generated by the same firms. Since both US GAAP and IFRS continue to develop, future research will be needed to compare the two and to evaluate ongoing convergence efforts.

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