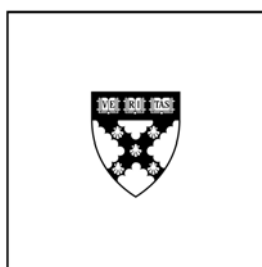


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Market Reaction to the Adoption of IFRS in Europe

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Market Reaction to the Adoption of IFRS in Europe

Abstract

This study examines the European stock market reaction to sixteen events associated with the adoption of International Financial Reporting Standards (IFRS) in Europe. European IFRS adoption represented a major milestone towards financial reporting convergence yet spurred controversy reaching the highest levels of government. We find a more positive reaction for firms with lower quality pre-adoption information, which is more pronounced in banks, and with higher pre-adoption information asymmetry, consistent with investors expecting net information quality benefits from IFRS adoption. We also find that the reaction is less positive for firms domiciled in code law countries, consistent with investors' concerns over enforcement of IFRS in those countries. Finally, we find a positive reaction to IFRS adoption events for firms with high quality pre-adoption information, consistent with investors expecting net convergence benefits from IFRS adoption. Overall, the findings suggest that investors in European firms perceived net benefits associated with IFRS adoption.

Market Reaction to the Adoption of IFRS in Europe

I. INTRODUCTION

This study examines the European stock market reaction to events associated with the 2005 adoption of International Financial Reporting Standards (IFRS) in Europe.¹ Prior to 2005, most European firms applied domestic accounting standards. Thus, the adoption of IFRS in Europe represented one of the largest financial reporting changes in recent years and was controversial, generating debate that reached the highest levels of government. The adoption of IFRS as issued by the International Accounting Standards Board (IASB) would result in the application of a common set of financial reporting standards within Europe, and between Europe and the many other countries that require or permit application of IFRS. Thus, the debate was about not only the benefits and costs of IFRS adoption itself, but also the global financial reporting convergence implications if IFRS were modified as a result of the adoption process.² Modifying IFRS would result in European standards differing from those used in other countries, thereby eliminating some potential convergence benefits. We refer to the adoption of IFRS as issued by the IASB as the adoption of IFRS – adoption of modified standards is not adoption of IFRS. It is unclear how investors in European firms would react to this anticipated change in financial reporting. This study examines these reactions.

It is possible that investors in European firms would react positively to movement towards IFRS adoption if, for example, investors expected application of IFRS to result in higher quality financial reporting information, thereby lowering information asymmetry between the

¹ We examine market reactions in all stock markets in Europe. Throughout, we refer to these markets collectively as the European stock market. Also, we examine market reactions for firms trading in the European stock market. Throughout, we refer to these firms as European firms.

² For example, the US Securities and Exchange Commission (SEC) recently eliminated the requirement for cross-listed firms that prepare their financial statements using IFRS as issued by the IASB to reconcile net income and shareholders' equity from those based on IFRS to those based on US standards. The SEC did not propose to eliminate the requirement for cross-listed firms that use IFRS as modified by any particular jurisdiction, including the European Union.

firm and investors and information risk and, thus, cost of capital. Investors also might have believed that application of a common set of standards would have convergence benefits, such as lowering the costs of comparing firms' financial position and performance across countries, and that IFRS adoption would enable European capital markets to become more globally competitive, with consequent increases in liquidity for European firms. Alternatively, it is possible that investors in European firms would react negatively to movement towards IFRS adoption. This could be the case if investors believed that IFRS would result in lower quality financial reporting information. For example, IFRS might not adequately reflect regional differences in economies that led to differences in domestic accounting standards. Also, investors might have believed that potential variation in the implementation and enforcement of IFRS would lead to an increase in the exercise of opportunistic managerial discretion when applying IFRS. Finally, investors might have believed that the implementation and transition costs associated with IFRS would exceed any benefits.

To gain insight into investors' expectations regarding the net cost or benefit of IFRS adoption in Europe, we examine three-day market-adjusted returns for the portfolio of all firms with equity traded in the European stock market centered on sixteen events that we assess as affecting the likelihood of IFRS adoption in Europe. We find that, in aggregate, investors reacted positively to the increased likelihood of IFRS adoption. We also find that this aggregate reaction derives from both a positive reaction to the thirteen events that we assess increased the likelihood of IFRS adoption and a negative reaction to the three events that we assess decreased it. Taken together, these findings are consistent with equity investors in European firms perceiving that the expected benefits of IFRS adoption exceeded the expected costs.

To assess whether investors reacted differently to IFRS adoption events as a function of firms' information asymmetry and accounting standards enforcement, as well as their pre-adoption information quality, we estimate the cross-sectional relation between firms' event returns and proxies for these characteristics. We find a larger positive reaction for firms with lower pre-adoption information quality, which is consistent with investors expecting that IFRS adoption will result in greater informational benefits for these firms. We find an even larger positive reaction for banks – but only those banks with lower pre-adoption information quality. This is consistent with investors expecting that IFRS will result in a greater improvement in information quality for these banks, perhaps reflecting perceived net benefits associated with adoption of the controversial International Accounting Standard (IAS) 39, *Financial Instruments: Recognition and Measurement*. We also find a larger positive reaction for firms with higher pre-adoption information asymmetry, which is consistent with investors expecting that IFRS adoption will mitigate this asymmetry. Finally, we find a less positive reaction for firms domiciled in code law countries. Although we cannot derive definitive inferences from this finding, it is consistent with investors harboring concerns regarding implementation of IFRS in countries that are generally thought to have weaker accounting standards enforcement.

Further analyses reveal a positive reaction to IFRS adoption events for the subset of European firms with the highest quality pre-adoption information. To the extent investors expect little, if any, informational benefits from IFRS adoption for these firms, this finding is consistent with investors expecting net benefits associated with convergence. Sensitivity analyses reveal that our results are robust to alternative proxies for information quality, measures of standards enforcement environments, and benchmark returns.

The remainder of the paper is organized as follows. Section II discusses the background of IFRS adoption in Europe. Section III reviews prior research and provides the basis for interpreting the market reaction to each event. Section IV describes our data and research design. Section V presents our empirical results, and Section VI presents sensitivity analyses. Section VII concludes.

II. BACKGROUND

European Union Adoption Process

We focus on the European Union (EU) adoption of IFRS because the EU comprises most countries in Europe.³ In March 2002, the European Parliament passed a resolution requiring all firms listed on stock exchanges of European member states to apply IFRS when preparing their financial statements for fiscal years beginning on or after January 1, 2005. This requirement affected approximately 7,000 firms.⁴ The prospects of adopting IFRS represented a substantial shift in financial reporting for European firms because many requirements in IFRS differ from those in domestic standards of European countries. Also, the adoption of IFRS in Europe reflects an EU goal of achieving capital market integration; it is a necessary step towards convergence of financial reporting not only across Europe, but also between Europe and the rest of the world. Although the resolution requires firms to use IFRS, which are issued by the IASB, a private-sector standard setter, the European Commission (EC) must endorse the standards before they are required in the EU. Thus, the EC retains the power to reject any standard, or part

³ The exceptions are Iceland, Liechtenstein, and Norway, which are members of the European Economic Area (EEA), and Switzerland. Members of the EEA are committed to following EU Directives, including those relating to IFRS adoption. Switzerland is centrally located in Europe and, thus, has close economic ties with other European countries. Effective in 2005, Switzerland required all listed firms to use either IFRS or US standards. Presumably its decision was related to that of the EU. Thus, our sample includes firms in Norway and Switzerland; no firms in Liechtenstein or Iceland met our data requirements. Because Switzerland is not committed to following EU Directives, we conducted all of our tests omitting Swiss firms with no change in our inferences.

⁴ The required adoption date is January 1, 2007 for firms trading securities in the US and basing their financial statements on US standards, and firms trading debt securities but not equity securities.

of a standard, it believes does not meet its criteria for endorsement. The three primary criteria are: the standard is not contrary to the EU's true and fair principle; the standard meets the criteria of understandability, relevance, reliability, and comparability; and adopting the standard is in the European public interest.

The EC endorsement process, which played a key role in the adoption of IFRS in Europe, is as follows (Brackney and Witmer 2005; KPMG IFRG Limited 2005). The IASB develops IFRS in accordance with due process procedures outlined in its governing constitution (IASB 2006). This process involves public meetings and extensive input from interested parties around the world. Among these is the European Financial Reporting Advisory Group (EFRAG), a private-sector organization comprised of accounting experts from the EU, which provides advice to the EC regarding technical accounting matters. After the IASB issues a standard, EFRAG reviews it and, after public consultation, EFRAG decides whether to recommend that the EC endorse the standard for use in Europe. Taking EFRAG's advice into account, the EC drafts proposed regulation. The EC then seeks input from the Accounting Regulatory Committee (ARC). The ARC, a governmental organization comprised of representatives from each EU member state, reviews the regulation and provides its recommendation about adoption in the EU. The ARC considers the technical merits of the standard as expressed in EFRAG's recommendation letter, as well as the implications of the standard for the European public interest. If the ARC recommends endorsement, the EC then decides whether to endorse the standard, as written by the IASB or as amended, or to reject it. If endorsed, the standard becomes regulation applicable to firms in the EU. If the ARC recommends rejection of the

standard, the EC can ask EFRAG to consider it further, or send it to the European Parliament for a decision.⁵

The debate surrounding the adoption of IFRS in Europe initially focused on the merits of adopting IFRS, such as whether the benefits of the expected increased capital flows would outweigh the costs of implementation and lost diversity in domestic accounting standards. The debate later centered on IAS 39 *Financial Instruments: Recognition and Measurement* and, to a lesser extent, on IAS 32 *Financial Instruments: Disclosure and Presentation*. The provisions in these two standards, particularly IAS 39, had the potential to materially affect financial statement amounts for firms with a large number of financial instruments, notably banks. The debate regarding IAS 39 ultimately led to the modification of IAS 39 for adoption in Europe. Modifications to IAS 39, or any other IASB standard, undermine the EU's goal of adopting global standards.

Regarding IAS 39, the controversy focused on two types of requirements. The first relates to the requirement to use fair value as the measurement attribute. IAS 39 requires many financial instruments – notably derivatives – to be recognized at fair value, with changes in fair value recognized in profit or loss.⁶ Also, IAS 39 includes a fair value option, which permits firms to designate financial instruments irrevocably on initial recognition as ones to be measured at fair value with changes in fair value recognized in profit or loss. The second relates to

⁵ The process can apply to a single standard or to a group of standards. For the initial endorsement of IFRS in Europe, the extant set of standards was considered as a group. Specifically, the EC considered all standards effective at March 1, 2002, which included IAS 1 through IAS 41, as well as the related Standing Interpretations Committee (SIC) interpretations, i.e., SIC 1 through SIC 33.

⁶ IAS 39 classifies financial assets into (1) loans and receivables not held for trading; (2) held-to-maturity investments; (3) financial instruments held for trading, including derivatives; and (4) available-for-sale financial assets. Financial assets in (1), (2), (3), and (4) are recognized at, respectively, amortized cost; amortized cost subject to impairment; fair value with changes in fair value recognized in profit or loss; and fair value with changes in fair value recognized in other comprehensive income. Most financial liabilities are recognized at cost, except derivatives and liabilities held for trading, which are recognized at fair value with changes in fair value recognized in profit or loss.

qualifying criteria for hedge accounting – IAS 39’s qualifying criteria are specific and not easy to satisfy. Hedge accounting generally results in gains (losses) on a hedged item and losses (gains) on a designated hedging instrument being recognized in profit or loss at the same time to the extent the gains (losses) on the hedged item result from the hedged risk(s). Thus, hedge accounting reduces volatility in profit or loss resulting from, e.g., measuring derivatives entered into for hedging purposes at fair value and measuring the hedged item at amortized cost. However, IAS 39 does not permit hedge accounting for many financial instruments ostensibly entered into for hedging purposes. For example, IAS 39 does not permit hedge accounting for interest rate risk associated with core demand deposits; European banks commonly state that they hedge this risk. For many European firms, the fair value and hedging requirements in IAS 39 differ substantially from requirements in their domestic standards. In fact, most European domestic standards do not include standards specifying the financial reporting for many financial instruments.

IFRS Adoption Events

Although the adoption of IFRS was an involved process with considerable discussion, we identify sixteen specific events between 2002 and 2005 that we assess as affecting the likelihood that IFRS would be adopted in Europe. We identify the events by searching *Dow Jones News Retrieval* using the terms “IFRS,” “international financial reporting standards,” “harmonization,” and “IAS 39,” as well as by examining press releases and available listings of documents publicly released by the IASB, the European Parliament, the EC, and EFRAG. This search provided an initial listing of approximately forty events. Each author independently verified each event’s timing, content, and likely directional effect on IFRS adoption likelihood. Each author then independently identified the events that likely had the greatest effect on IFRS

adoption likelihood; events that simply confirmed an earlier event were eliminated. Table 1 lists the resulting sixteen events and our assessment as to whether each event increased or decreased adoption likelihood. We assess thirteen events as increasing the likelihood of IFRS adoption and three events as decreasing it. Our assessment of each event's directional effect on adoption likelihood reflects our assessment of how the event likely affected investors' expectations conditional on prior events and discussions, and enables us to aggregate the market reaction across events.

The first event is March 12, 2002, when the European Parliament passed the resolution requiring all firms listed on stock exchanges in the EU to apply IFRS by 2005. The resolution passed by a vote of 429 for, 5 against, and 29 abstentions, indicating broad support for adoption of IFRS. Even though convergence towards international standards had been under consideration in Europe prior to 2002, we use the March 12, 2002 resolution as our first event because passage of the resolution was the first clear commitment to IFRS adoption.⁷ On May 14, 2002 and June 19, 2002, EFRAG issued its draft and final recommendations that extant IFRS be endorsed *en bloc*. The endorsement recommendation letters stated EFRAG's view that the regulation requiring European firms to adopt IFRS by 2005 is a major achievement in that the common basis for financial reporting based on high quality global standards provides a platform for efficient cross-border investment both within and beyond the EU. EFRAG further noted that the IASB is reviewing several standards with the objective of making some improvements to them; EFRAG will consider those changes and make its recommendation on them after the IASB

⁷ Prior research finds little (Comprix et al. 2003) or limited (Pae et al. 2007) evidence of a market reaction to IFRS adoption events before March 12, 2002. These findings suggest that investors' IFRS adoption expectations were not affected by events prior to the March 12, 2002 resolution, the studied events were not those that affected investors' expectations, or the event windows were too narrow to capture the market reaction to the events. Nonetheless, our findings may only partially capture the market reaction to EU IFRS adoption to the extent that events prior to March 12, 2002 affected investors' expectations about the European Parliament's resolution. The direction of any bias arising from the omission of such events is unclear.

issues them. These three events reflected clear support for the broad adoption of IFRS.

Therefore, we assess these events as increasing the likelihood of IFRS adoption in Europe.

During the remainder of 2002 and into 2003 the EC considered whether to accept EFRAG's recommendation to endorse extant IFRS. On July 4, 2003, Jacques Chirac, President of France, wrote a letter to Romano Prodi, President of the EC, to express concern that adopting IFRS, particularly IAS 39, would not be in the best interest of Europe. Chirac's interest in the debate arose at least in part because French banks were among the most critical of IAS 39. Chirac's involvement showed IFRS-related concern at the highest level of government. Therefore, we assess this event as decreasing the likelihood of IFRS adoption.

On July 9, 2003, Frits Bolkestein, the EC commissioner responsible for internal markets, expressed to Sir David Tweedie, Chairman of the IASB, similar concern about IAS 39, but expressed support for the broader goal of convergence using IFRS. On July 16, 2003, the ARC and the EU's Economic and Financial Affairs Council (ECOFIN), which is comprised of the Economics and Finance ministers of the EU member states, echoed Bolkestein's support for adoption of IFRS, despite also echoing his concern about IAS 39. On September 29, 2003, the EC endorsed all extant IFRS, except IAS 32 and IAS 39. Even though all of these events reflect concern about IAS 39, they all expressed clear support for IFRS adoption and the desire to work to resolve in the near term the remaining issues relating to IAS 39. Therefore, we assess these three events as increasing the likelihood of IFRS adoption.

After the EC's endorsement of most extant IFRS, the debate seemingly focused on IAS 32 and IAS 39, although the debate also reflected the possibility that the EU would amend IASB-issued standards – and the implications this might have for the adoption of future standards by the EU. Although the IASB revised IAS 39 in December 2003, the revisions did not resolve the

controversial issues relating to the fair value option and hedge accounting requirements. Thus, the endorsement of IAS 32 and IAS 39 remained uncertain.

On February 3, 2004, Bolkestein indicated his intention to continue postponing endorsement of IAS 32 and IAS 39 until the issues could be resolved. To facilitate resolution, he announced establishment of a high level consultative group. On March 30, 2004, HSBC, the largest European bank, expressed its support for adoption by announcing its plans to implement IAS 39 in full, regardless of whether the EC endorsed it. On June 4, 2004, EFRAG issued draft recommendations to endorse IAS 32 and IAS 39. Although the IAS 32 recommendation was unanimous, 6 of 11 EFRAG members voted against the IAS 39 recommendation. A majority negative vote is insufficient for EFRAG to recommend non-endorsement of a standard – the EFRAG constitution requires a two-thirds negative vote. On July 8, 2004, EFRAG issued its final recommendations to endorse IAS 32 and IAS 39, both based on the same votes as the draft recommendations. Although each of these events continued to reflect concern regarding IAS 39, the actions taken by Bolkestein to resolve the conflicts, the support of IAS 39 by a major European bank, and EFRAG’s recommended endorsement of IAS 39 all reflected events that likely increased the likelihood of IFRS adoption. Thus, we assess them as such.

On October 1, 2004, the ARC added its endorsement recommendation to that of EFRAG. However, the ARC did not recommend endorsement of IAS 39 as issued by the IASB. Rather, the ARC recommended that the EC “carve out” of IAS 39 the two parts of the standard that were the focus of the controversy. Endorsing IAS 39 with this carve-out would mean that IFRS as applied in Europe would differ from IFRS applied elsewhere in the world, thereby thwarting the goal of global convergence described in the 2002 EFRAG endorsement recommendation letters. On November 19, 2004, the EC followed the ARC recommendation and endorsed a carve-out

version of IAS 39. Because these two events indicated that the EC was willing to alter IFRS, we assess these events as decreasing the likelihood of IFRS adoption.

The EC indicated its intention that the carve-outs be temporary, only in place until the technical controversies were resolved. On June 16, 2005, the IASB revised the fair value option in IAS 39, and on July 8, 2005 ARC recommended endorsement of it. The EC endorsed the revised fair value option on November 15, 2005, thereby eliminating one of the two carve-outs of IAS 39.⁸ Because these three events supported the EC's intention to eliminate the carve-outs and made IFRS as endorsed in the EU closer to IFRS as issued by the IASB, we assess these events as increasing the likelihood of IFRS adoption.

III. PRIOR RESEARCH AND EXPECTED MARKET REACTION

Little is known about how investors perceived the possibility of IFRS adoption in Europe. This study infers investor perceptions by examining the equity market reaction to events leading to the adoption. Prior research uses this approach to assess US investor perceptions regarding individual standards (e.g., fair value accounting in SFAS 115 by Beatty et al. 1996 and Cornett et al. 1996; and stock-based compensation accounting in SFAS 123 by Dechow et al. 1996). However, our setting, which investigates investor perceptions regarding an entire set of accounting standards, is perhaps more analogous to prior research that has examined investor perceptions to broad pieces of legislation (e.g., the Sarbanes-Oxley Act by Jain and Rezaee 2006, Zhang 2007, and Li et al. 2008).

It is unclear how investors in European firms would react to movement towards IFRS adoption. It is possible that investors would react positively to movement towards IFRS adoption if, for example, they expect application of IFRS to result in higher quality financial

⁸ As of the writing of this manuscript, the second carve-out relating to hedge accounting remains in place.

reporting relative to application of domestic standards, thereby enhancing financial reporting transparency, reducing information asymmetry and information risk and, thus, lowering cost of capital. This prediction is supported by prior research. For example, Barth et al. (2008) finds that application of International Accounting Standards (IAS), which comprise a large portion of extant IFRS, is associated with higher quality accounting amounts than application of non-US domestic standards. Similarly, Karamanou and Nishiotis (2005) finds positive abnormal returns for a small set of non-US firms announcing voluntary adoption of IAS between 1989 and 1999. Diamond and Verrecchia (1991), Baiman and Verrecchia (1996), Leuz and Verrecchia (2000), and Barth et al. (2007), among others, find that higher financial reporting quality is associated with lower cost of capital. These studies are consistent with Aboody et al. (2004) and Easley and O'Hara (2004), which provide evidence that information risk is priced and, thus, its perceived reduction could result in a detectable market reaction.

Investors might also react positively to movement towards IFRS adoption if they expect application of IFRS to have positive cash flow effects. These effects could include reduced contracting costs (e.g., Beatty et al. 1996) or reduced scope for managerial rent extraction associated with greater financial reporting transparency (e.g., Hope et al. 2006). It is also possible that investors in European firms would react positively to movement towards IFRS if they believed that IFRS would provide convergence benefits. For example, Barth et al. (1999) finds that there can be positive market effects associated with convergence.⁹ Similarly, Ashbaugh and Pincus (2001) finds that previous convergence efforts relating to IAS resulted in reductions in analyst forecasts errors. Pae et al. (2007) finds that firm values, reflected in

⁹ Barth et al. (1999) shows that the net market effect of convergence is a function of two effects. The first is the direct informational effect, i.e., whether convergence increases or decreases accounting quality. The second is the expertise acquisition effect, i.e., whether investors become experts in foreign accounting, which depends on how costly it is to develop the expertise. Therefore, *ex ante* the net market effect of convergence is uncertain.

Tobin's Q, increased after the passage of EU regulations intended to converge financial reporting, particularly for firms with higher agency costs.

Alternatively, it is possible that investors in European firms would react negatively to movement towards IFRS if, for example, they believed that IFRS would decrease financial reporting quality. This could occur if investors believed that IFRS would fail to either adequately reflect regional differences in economies or accommodate countries' differing political and economic features that led to existing differences in domestic accounting standards.¹⁰ Investors might also believe that variation in the implementation and enforcement of IFRS could lead to an increase in opportunistic managerial discretion when applying IFRS. Ball (1995, 2006) and Daske et al. (2007), among others, point out that effective financial reporting convergence requires consistent implementation and enforcement of standards. Unlike the SEC in the US, there was no regulatory counterpart with enforcement authority that spanned the European member states to ensure consistent application of IFRS. Consistent with factors other than standards themselves affecting financial reporting quality, Ball et al. (2003) reports no detectable information quality difference between East Asian firms with high quality, i.e., common law-based, accounting standards and those with low quality, i.e., code law-based, accounting standards. There is also evidence that substantial information quality differences within Europe remain even after convergence efforts that preceded the 2005 IFRS adoption EU mandate (e.g., Tay and Parker 1990; Joos and Lang 1994). Investors might also have believed that any convergence benefits arising from adoption of IFRS would be less than the costs to implement and transition to the new set of standards.

¹⁰ For example, relative to domestic standards, IFRS generally relies on a greater use of fair values, which some believe is more susceptible to opportunistic managerial discretion than are modified historical cost-based amounts.

IV. DATA AND RESEARCH DESIGN

We infer investor perceptions relating to IFRS adoption by examining European firms' equity return reactions to our sixteen adoption events. We first provide evidence on the overall market reaction to these events. We then focus our tests on determining whether particular firm characteristics explain cross-sectional variation in firms' return reactions in a manner consistent with our predictions. Because the adoption of IFRS resulted from a process that evolved over several years, we draw our inferences from analyses of the market reactions associated with all sixteen events taken together, rather than with each event separately.

Our tests are based on an event-study research design, which relies on a degree of equity market efficiency in the sample countries that is sufficient to ensure the information related to each event is reflected in equity prices within the event window in an unbiased manner. In particular, the maintained hypothesis throughout our analysis is that equity prices reflect unbiased expectations of the costs and benefits of IFRS adoption conditional on available information. Although the size and liquidity of the European equity market suggests this is a tenable assumption, there is likely variation across markets within Europe during our sample period. If a sample country's equity market is not sufficiently efficient to reflect event information within the event window, our tests can lack power or be biased (e.g., Hirshleifer 2001).

Our tests also rely on both the correct identification of information events and there being no confounding news during the event windows.¹¹ Including non-events likely introduces noise and excluding relevant events likely reduces power; both can introduce bias. Our event selection procedures, described in Section II, are intended to minimize the likelihood of including non-

¹¹ See Chapter 4 of Campbell, Lo, and MacKinlay (1997) for a detailed discussion of the assumptions and limitations of an event-study research design.

events and excluding relevant events. Regarding potentially confounding news, we search the US and European editions of the *Wall Street Journal*, including “World Markets” articles, and the European edition of the *Financial Times* for non-IFRS related news during each event window. We observe other news within nearly all event windows. However, there is no discernible pattern of good (bad) news during event windows for events that we assess as increasing (decreasing) the likelihood of IFRS adoption. That is, we do not observe a systematic alternative news pattern that would bias our inferences.

Overall Market Reaction

Our tests of the overall market reaction to IFRS adoption in Europe focus on event returns for a value-weighted portfolio of the 3,265 European firms for which data are available for all sixteen events in Table 1.¹² Table 2 provides a classification of the sample by country. We obtain daily price data between 2002 and 2005 from Datastream through Thomson One Banker Analytic.

We base our tests on European firms’ three-day value-weighted market-adjusted returns centered on each of the sixteen event dates, $CMAR_e$, where $e = 1$ to 16. To capture any global economic effects occurring concurrent with our event dates, we market adjust the returns by subtracting the corresponding three-day return to the Dow Jones STOXX Global 1800 Index excluding the 600 European firms in the index (DJ STOXX 1800 ex Europe, hereafter). That is, we use the index of the 1,200 largest firms, based on market capitalization, domiciled in the Americas and Asia.¹³

¹² Relaxing the requirement that data are available for all sixteen events does not alter our inferences.

¹³ The Dow Jones STOXX Global 1800 Index (DJ STOXX 1800, hereafter) represents the largest 600 firms, based on free float market capitalization, from each of Europe, North and South America, and the Asia/Pacific region. The index’s stated objective is to “provide a broad yet investable representation of the world’s developed markets.” We tabulate results using the DJ STOXX 1800 ex Europe Index because this benchmark is less likely than the DJ

We construct portfolio event returns by value weighting each firm's return based on the firm's equity market value at the end of the most recent quarter prior to the event. We draw inferences using portfolio return statistics because portfolio estimates are robust to potential cross-sectional correlation (Sefcik and Thompson 1986); that is, the portfolio approach assumes perfect correlation between firms' returns in each event window, which results in a conservative test by limiting the power to detect statistical significance. Because we assess some events as increasing and some as decreasing the likelihood of IFRS adoption, we multiply the latter by minus one when our tests require aggregating returns for both types of events so that an aggregate positive return is consistent with our predictions.

We conduct three tests to assess the significance of the portfolio event returns. The first is a *t*-test of whether the mean of the sixteen event portfolio $CMAR_{eS}$ differs from zero. This test assumes that our market adjustment is the proper benchmark for the expected market return and, thus, the expected market-adjusted return equals zero. The standard deviation used in the test is derived from the distribution of the sixteen portfolio event returns. Consistent with Fama and MacBeth (1973), we assume portfolio returns associated with different events are uncorrelated.

The second is a *t*-test for whether the mean of the sixteen event portfolio $CMAR_{eS}$ differs from the mean of a distribution of similarly constructed non-event portfolio returns. This test assumes unequal variances for the event and non-event return distributions. We conduct this test because it admits the possibility that returns of European firms differ systematically from returns of firms in other regions. That is, the test does not assume that our market adjustment fully adjusts for the market return. To the extent returns of European firms do not differ systematically from other firms, this test will result in loss of power because it will introduce

STOXX 1800 Index to remove the effect we seek to document. Untabulated findings reveal that market adjusting returns using the DJ STOXX 1800 Index does not affect our inferences.

estimation noise. To form the distribution of non-event returns, we use returns for European firms for all days in our event years, 2002 to 2005, that do not overlap with our event windows. We calculate the 300 three-day portfolio returns, ensuring non-overlapping windows, and subtract the corresponding three-day return to the DJ STOXX 1800 ex Europe Index.¹⁴

The third test calculates the probability that the mean of the sixteen event portfolio $CMAR_{eS}$ exceeds the mean of sixteen similarly constructed randomly selected non-event portfolio returns. This test assumes the distribution of these non-event returns is the same as the distribution of event returns. It does not rely on any other distributional assumptions. However, to the extent the randomly selected non-event portfolio returns do not reflect the population of portfolio returns, there could be noise or bias in this test. To implement this test, we randomly select sixteen non-event portfolio returns from non-event dates that mimic the year-by-year distribution of our sample events. That is, we select three, four, six, and three non-event portfolio returns from 2002, 2003, 2004, and 2005, respectively. We then designate one of the non-event portfolio returns from 2003 and two from 2004 as being associated with events that decrease the likelihood of IFRS adoption. We then compare the standardized mean of the non-event portfolio returns to the standardized mean of the sixteen event portfolio $CMAR_{eS}$.¹⁵ We repeat this procedure 500 times to construct a simulated p -value for the probability that the standardized mean non-event portfolio return is greater than the standardized mean portfolio $CMAR_e$.¹⁶

¹⁴ There are approximately 75 non-event three-day windows in each of the four sample years, which results in 300 non-event return windows. To ensure that our non-event returns do not overlap with each other, we select every fourth trading day as the beginning of the three-day return window. Our inferences are unaffected by altering the starting point for this trading day selection.

¹⁵ We standardize means by dividing the mean return by the standard error of the sixteen event return distribution.

¹⁶ This procedure effectively tests how often our event distribution t -statistic is larger than a t -statistic estimated from a similarly constructed distribution of non-event dates. Bootstrap p -values indicate the likelihood of obtaining a similar magnitude statistical rejection of the null hypothesis on non-event dates. See, for example, Hein and Westfall (2004).

Cross-Sectional Analysis

We base our primary inferences on tests of whether firm characteristics explain cross-sectional variation in the market reaction to IFRS adoption events. This analysis assumes that investors assess the expected costs and benefits of IFRS adoption, including those related to accounting information quality, and implementation and transition. To obtain our inferences, we estimate the following equation:

$$CMAR_{j,e} = \beta_0 + \beta_1 \text{InfoQualFactor}_{j,e} + \beta_2 \text{Bank}_{j,e} + \beta_3 \text{InfoQualFactor}_{j,e} * \text{Bank}_{j,e} \\ + \beta_4 \text{Turnover}_{j,e} + \beta_5 \text{CloselyHeld}_{j,e} + \beta_6 \text{Herf}_{j,e} + \beta_7 \text{Code}_{j,e} + \beta_8 \text{Big4}_{j,e} + \varepsilon_{j,e}. \quad (1)$$

As in our portfolio return tests, when estimating equation (1) we multiply by minus one returns associated with events we assess as decreasing the likelihood of IFRS adoption.

Our proxy for the firm's pre-adoption information quality is *InfoQualFactor*, which is the first principal component derived from four variables selected to reflect information quality.¹⁷ The four variables are *ADR*, an indicator variable that equals one if a firm cross-lists in the US using American Depository Receipts (ADR) during the event year, and zero otherwise; *Standards Applied*, an indicator variable that equals one if the firm applies US standards or International Accounting Standards (IAS) during the event year, and zero if the firm applied domestic standards;¹⁸ *Exchanges*, the number of exchanges on which the firm is listed during the event year; and *Size*, the natural logarithm of the firm's prior end of year market value of equity. We expect ADR firms to have higher quality pre-adoption information because these firms are subject to US securities regulation and enforcement, are required during our sample period to reconcile domestic standards-based net income and equity book value to those based on US

¹⁷ *InfoQualFactor* is estimated using varimax orthogonal rotation. The first and second principal component eigenvalues are 1.75 and 0.99, respectively.

¹⁸ Belgium, the Czech Republic, Denmark, Finland, Germany, the Netherlands, and Switzerland permitted firms a choice of accounting standards prior to mandatory IFRS adoption.

standards, and are typically larger and more widely followed by analysts.¹⁹ We expect that firms applying US standards or IAS, firms listed on multiple exchanges, and firms that have larger equity market values to have higher quality pre-adoption information. To ease interpretation, we multiply factor scores by minus one so that higher values of *InfoQualFactor* correspond to lower quality information. If investors perceive the benefits to IFRS adoption are higher for firms with lower quality pre-adoption information, then we expect β_1 is positive.

To provide insight into whether the event market reactions reflect perceptions regarding IFRS generally or IAS 39 in particular, we include in equation (1) *Bank*, which is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, i.e., depository institutions and non-depository credit institutions, and zero otherwise. We include *Bank* because IAS 39 figured prominently in banks' resistance to EU IFRS adoption. Investors in banks might react more positively than investors in other firms if they perceive informational benefits associated with IAS 39, such as those associated with financial statement recognition of previously unrecognized derivative financial instruments, leading to a positive predicted sign for β_2 . However, investors in banks might react more negatively if they perceive that banks would incur more IFRS-related transition costs, such as those associated with extensive systems changes to account for large portfolios of financial instruments and hedging activities or raising the attention of banking regulators if they report more volatile earnings based on IFRS than based on their domestic standards. This would lead to a negative predicted sign for β_2 . Thus, we do not predict the sign of β_2 . Equation (1) also includes the interaction variable *InfoQualFactor*Bank*, which is intended to capture any incremental market reaction for those

¹⁹ We identify ADR firm years from the Bank of New York Complete Depository Receipt record (http://160.254.123.37/dr_directory.jsp), which indicates both the type and date of the ADR listing. We use only Level II or Level III ADRs, not Level I. This is because during our sample period firms with Level II and Level III ADRs were required to provide domestic-to-US standards-based reconciliations and were subject to more stringent requirements than firms with Level I ADRs.

banks with lower quality pre-adoption information as reflected in *InfoQualFactor*. For reasons discussed above, we do not predict the sign of β_3 .

Equation (1) also includes three proxies for pre-adoption information asymmetry between the firm and investors. The first is *Turnover*, which is an indicator variable that equals one if the firm's ratio of average number of daily shares traded to average total number of shares outstanding for the year is greater than the sample median, and zero otherwise. The second is *CloselyHeld*, which is the percentage of shares held by insiders, as provided by Worldscope. The third is *Herf*, which is the Herfindahl index, measured as the sum of squared market shares, i.e., percentage of total industry sales, for all firms in the firm's primary two-digit SIC code. Thus, *Herf* ranges from zero to one, with higher values indicating that within-industry sales are concentrated in fewer firms. We expect that firms with lower turnover, with greater insider ownership, and that have less industry competition have more information asymmetry. If investors expect IFRS adoption to reduce information asymmetry, then they will react more positively to increases in the likelihood of IFRS adoption for firms with greater pre-adoption information asymmetry. This would be consistent with investors perceiving a reduction in the firm's future cost of capital. Thus, we expect β_4 is negative, and β_5 and β_6 are positive. However, if investors perceive that IFRS adoption will require firms with dominant industry market share to disclose proprietary information, then we expect β_6 is negative.

Finally, equation (1) includes two proxies for enforcement and implementation of accounting standards. The first is *Code*, which is an indicator variable that equals one if a firm is domiciled in a code law country, and zero otherwise.²⁰ Investors may expect that financial reporting standards are less stringently enforced in code law countries (Ball et al. 2000, 2003). Therefore, firms in code law countries may retain greater flexibility in the application of IFRS.

²⁰ All of our sample countries except the UK and Ireland are classified as code law countries.

If this is the case, we expect β_7 is negative. The second is *Big4*, which is an indicator variable that equals one if the firm’s auditor during the fiscal year is one of the four largest, as reported by Worldscope, and zero otherwise. Prior research finds that larger audit firms provide higher quality audits (DeAngelo 1981), and that investors perceive and price quality differences associated with stronger monitors (e.g., Hogan 1997; Muller and Riedl 2002). Thus, investors may expect larger audit firms to provide more stringent enforcement and have more resources available to facilitate IFRS transition. If this is the case, we expect β_8 is positive.

To account for potential cross-sectional correlation among the residuals from equation (1), we calculate two-way clustered standard errors based on two-digit industry and country (Rogers 1993; Petersen 2007).²¹ We cluster along these two dimensions because it is reasonable to assume that financial reporting practices and changes therein are more homogeneous within industries and countries than across industries and countries.

V. RESULTS

Overall Market Reaction

Table 3 presents the portfolio returns results. For each of our sixteen events, we report the raw return to the portfolio of 3,265 European firms (column labeled “Market Reaction Europe”); the raw return to the portfolio of the 1,200 largest market capitalization firms domiciled outside of Europe (column labeled “Market Reaction Rest of World”); and the difference between these returns, which is the market-adjusted European return (column labeled “Difference”). Table 3 presents the individual event portfolio returns with their predicted and actual signs; none of the individual event portfolio returns is significantly different from zero.

²¹ All of our inferences are unaffected by clustering on either two-digit industry or country.

To compute the mean of the sixteen event returns, at the bottom of the table, we multiply by minus one returns associated with events we assess as decreasing the likelihood of IFRS adoption. Thus, we predict that the mean of the portfolio event returns is positive. We find that the mean return associated with the sixteen events for the European portfolio is -0.0052 , compared to -0.0086 for the rest of the world portfolio. The difference of 0.0034 is positive, as predicted, and significantly different from zero ($t\text{-statistic}_{vs0} = 2.627$) and significantly different from the mean difference for the non-event returns ($t\text{-statistic}_{vs300} = 1.980$). Further, bootstrap estimation reveals there is less than a one percent chance of randomly drawing sixteen non-event returns with a larger standardized mean than that for our sixteen events ($p\text{-value}_{bootstrap} = 0.008$).²²

We also conduct these tests separately on the thirteen events that we assess as increasing the likelihood of IFRS adoption, and the three events that we assess as decreasing this likelihood. Disaggregating events in this fashion reduces the chance that our event returns reflect spurious market reactions to non-IFRS news because such non-IFRS news not only would have to coincide with our event dates, but also would have to be of the same sign as we predict for our event. Untabulated results tend to support our inferences. In particular, for the thirteen events increasing adoption likelihood, untabulated results reveal a mean positive market-adjusted reaction of 0.0030 . $t\text{-statistic}_{vs0}$ (1.896) and $p\text{-value}_{bootstrap}$ (0.054) at least marginally support the inference of a positive reaction to these thirteen events. $t\text{-statistic}_{vs300}$ (1.450), however, does not support this inference. For the three events decreasing adoption likelihood, untabulated results reveal a mean market-adjusted reaction of -0.0053 that is negative, as predicted, and

²² Results are similar for equal-weighted portfolio returns.

significantly different from zero based on all three statistics ($t\text{-statistic}_{vs0} = -4.988$; $t\text{-statistic}_{vs300} = -3.760$; $p\text{-value}_{bootstrap} = 0.008$).

Cross-Sectional Analysis

Table 4, Panel A, presents descriptive statistics for the variables used in equation (1). We estimate equation (1) using observations for which data are available for all sixteen events and for all 300 non-events ($N = 31,296$ firm-event observations for 1,956 firms).²³ Panel A reveals that 5.27% of the sample firms are banks and an average of 41.4% of firms' outstanding shares are held by insiders. Within-industry sales are relatively dispersed across firms ($Herf = 0.035$); 61.25% of sample firms are domiciled in code law countries; and 74.18% of firms are audited by one of the four largest auditing firms. The panel also reveals that almost 11% of firms have ADR listings, 43% previously applied international or US GAAP, and most firms list shares on only one exchange. Table 4, Panel B, presents Pearson correlations between the variables. Consistent with our expectations, Panel B reveals that *CMAR* is significantly positively correlated with *InfoQualFactor*, *InfoQualFactor*Bank*, and *CloselyHeld*, and significantly negatively correlated with *Turnover*, *Code*, and *Size*. The correlations between *CMAR* and *Bank*, *Herf*, and *Big4* are not significantly different from zero.

Table 5 presents regression summary statistics from equation (1), both excluding and including *Size* as a control variable. The table also presents two test statistics for each coefficient estimate. The first (in parentheses) is a t -statistic calculated using double-clustered standard errors based on industry and country. The second (in brackets) is a t -statistic associated with a

²³ Inferences are not affected when we estimate equation (1) using observations for which data are available for only all sixteen events ($N = 32,848$ firm-event observations for 2,053 firms).

test of whether event date coefficient estimates differ from non-event date coefficient estimates.²⁴

Table 5 reveals that the coefficient on *InfoQualFactor*, β_1 , is positive and significantly different from zero, as predicted (coefficient = 0.0017, t -statistic = 5.81). This indicates that market participants reacted more positively to IFRS adoption for firms with lower quality pre-adoption information, consistent with investors in these firms expecting greater improvements in information quality. Although the coefficient on *Bank*, β_2 , is not significantly different from zero (coefficient = 0.0002, t -statistic = 0.25), the coefficient on *InfoQualFactor*Bank*, β_3 , is positive and significantly different from zero (coefficient = 0.0017, t -statistic = 2.24).²⁵ This is consistent with investors in banks with lower pre-adoption information quality expecting net benefits associated with IFRS adoption.

Table 5 also reveals that the coefficient on *Turnover*, β_4 , is negative and significantly different from zero (coefficient = -0.0023, t -statistic = -3.29) and the coefficient on *CloselyHeld*, β_5 , is positive and significantly different from zero (coefficient = 0.0031, t -statistic = 2.57).

These findings are consistent with predictions that investors in firms with higher pre-adoption information asymmetry expected information asymmetry improvements from adoption of IFRS.

Table 5 also reveals that the coefficient on *Code*, β_7 , is negative and significantly different from zero (coefficient = -0.0019, t -statistic = -4.11). This finding is consistent with predictions that investors in firms domiciled in code law countries expected lower IFRS adoption benefits

²⁴ Specifically, coefficient difference t -statistics (in brackets) are estimated for the same set of 1,956 firms using a stacked estimation of equation (1) for the sixteen event dates and for the 300 non-event dates.

²⁵ Untabulated findings from an analysis in which we replaced *InfoQualFactor*Bank* with *Size*Bank* reveal a significantly negative coefficient on the latter interaction variable of -0.0013 (t -statistic = -7.51), which is consistent with larger banks having an attenuated reaction to IFRS adoption. That is, smaller banks, which are more likely to have lower quality pre-adoption information, have a more positive reaction to IFRS adoption. Inferences relating to the other variables are the same as those obtained from Table 5.

because of enforcement concerns. The coefficients on *Herf*, β_6 , and *Big4*, β_8 , are not significantly different from zero (coefficients = 0.0051 and 0.0000, *t*-statistics = 0.65 and 0.08).

We obtain identical inferences when we compare event coefficient estimates with non-event coefficient estimates (*t-statistic*_{vs300}). This indicates that our inferences are unlikely to reflect systematic associations between the firm characteristics and market returns that might be observed on non-event dates. The second column of Table 5 also reveals that our inferences are not affected when *Size* is included as a control variable.

Market Expectations Regarding Convergence Benefits

Evidence thus far indicates that investors reacted positively to IFRS adoption events related to expectations of improvement in both information quality and information asymmetry. We now provide evidence on whether investor reactions also relate to expectations of convergence benefits.

To implement this analysis, we estimate equation (1), but using dichotomous explanatory variables as follows. We define *LowInfoQualFactor* as an indicator variable equal to one if the firm's *InfoQualFactor* is above the sample median (that is, the firm has lower quality pre-adoption information); *LowTurnover* as an indicator variable equal to one if the firm has below median share turnover; *HighCloselyHeld* as an indicator variable equal to one if the firm has above median insider share ownership; *HighHerf* as an indicator variable equal to one if the firm has above median industry sales concentration distribution; *Code* as an indicator variable equal to one if the firm is domiciled in a code law country; *NonBig4* as an indicator variable equal to one if the firm does not have a Big 4 auditor; and *SmallFirm* as an indicator variable equal to one if the firm has below median firm size. Each variable equals zero otherwise.

We define the variables in this way so that the intercept reflects the mean reaction for high quality pre-adoption information firms. That is, the intercept reflects the mean reaction for those firms with higher quality information, higher turnover, lower percentage of closely held shares, lower industry sales concentration, domiciled in common law countries, using a Big 4 auditor, and that are larger. If investors in these firms expect IFRS adoption to provide little improvement in information quality for these firms, then any observed reaction to IFRS adoption events more likely reflects expected convergence benefits. We do not include bank variables in this estimation because we do not have predictions for industry-specific variation in expected convergence benefits.

Table 6 presents the findings. Consistent with investors expecting convergence benefits, Table 6 reveals a positive and significant market reaction for firms with high quality information (intercept = 0.0048, t -statistic = 7.57). Inferences relating to the other variables in Table 6 are consistent with those we obtain from Table 5, and are not affected by including size (*SmallFirm*) as a control variable.

VI. SENSITIVITY ANALYSES

Alternative Pre-Adoption Information Quality Proxies

To assess the robustness of our inferences with respect to *InfoQualFactor*, we estimate equation (1) separately for each variable used to derive the factor. Columns 1 through 4 of Table 7 present the results using *ADR*, *Standards Applied*, *Exchanges*, and *Size*, respectively.

Consistent with Table 5, we multiply each proxy by minus one to allow us to interpret higher values as indicating lower quality pre-adoption information. For two of the variables, *Standards Applied* and *Size*, Table 7 reveals findings consistent with those in Table 5 (*Standards Applied* coefficient = 0.0041, t -statistic = 6.09; *Size* coefficient = 0.0004, t -statistic = 2.72). However, for

the other two variables, the coefficients are not significantly different from zero (*ADR* coefficient = 0.0013, *t*-statistic = 1.50; *Exchanges* coefficient = 0.0005, *t*-statistic = 1.61). Table 7 also reveals that the coefficients on *Bank* and *InfoQualProxy*Bank* are positive and significantly different from zero for *Standards Applied*, *Exchanges*, and *Size*, but not for *ADR*.²⁶ Inferences relating to the other variables are the same as those obtained from Table 5.

Evidence in Table 7 highlights the difficulty in isolating a single underlying variable that sufficiently captures pre-adoption information quality. Creating a factor by using the four variables together to characterize a firm's information quality, as in the estimation presented in Table 5, appears to improve our ability to capture this construct and, thus, increase the power of our test.

Alternative Enforcement Environment Proxies

Our primary cross-sectional analyses rely on the variable *Code* to assess whether the reaction to IFRS adoption differs for firms domiciled in code law and common law countries. We interpret *Code* as capturing the effect of weaker enforcement on expected benefits associated with IFRS adoption because the estimation equation includes controls for other firm characteristics, including the quality of pre-adoption information. Nonetheless, it is possible that *Code* also captures other firm characteristics, including some related to the firm's pre-adoption information quality. Thus, to assess the robustness of our inferences related to enforcement, we re-estimate equation (1) using three alternative enforcement proxies.

²⁶ The lack of significance for the *ADR*Bank* coefficient could result from the small number of observations underlying this coefficient estimation; only 12 banks in the sample have ADR listings.

The alternative proxies are *Rule of Law*, *Control of Corruption*, which we obtain from Kaufmann et al. (2007), and the average of these two variables, *Average Enforcement*.²⁷ *Rule of Law* is an annual country-specific measure of contract enforcement quality, and police and court system quality. *Control of Corruption* is an annual country-specific measure of the extent to which public power is exercised for private gain and the degree of capture of the state by private interests. We multiply the Kaufmann et al. (2007) variables by minus one so that larger values indicate weaker enforcement environments, analogous to the way we define *Code*. Consistent with enforcement being weaker in code law countries, untabulated findings reveal that the correlation between *Average Enforcement* and *Code* is positive, 33.3%, and significantly different from zero.

Table 8 presents the findings and reveals results consistent with those in Table 5. Specifically, the coefficients on all three enforcement variables are negative and marginally significantly different from zero: *Rule of Law* (coefficient = -0.0017 , t -statistic = -1.84), *Control of Corruption* (coefficient = -0.0013 , t -statistic = -1.70), and *Average Enforcement* (coefficient = -0.0015 , t -statistic = -1.76). Inferences relating to the other variables are similar to those obtained from Table 5. Collectively, the findings in Table 8 support the inference that the market reaction is less positive for firms domiciled in jurisdictions likely to have weaker enforcement.

Enforcement Interaction Effects

A firm's enforcement environment may affect the relation between IFRS adoption event returns and the variables in equation (1). For example, the extent to which investors expect information asymmetry improvements from IFRS adoption may vary depending on their

²⁷ The Kaufmann et al. (2007) variables vary over time and align better in calendar time with our study than do the non-time-varying measures provided by La Porta et al. (1998).

expectations relating to enforcement of the standards. Because *Code* is our primary proxy for the enforcement environment, we estimate equation (1) separately for firms domiciled in code law and common law countries. Untabulated tests for differences in coefficients between the two estimations, based on estimating stacked regressions, reveal no differences in coefficients for the two types of firms.

VII. CONCLUSION

This study investigates the equity market reaction to sixteen events associated with the adoption of IFRS in Europe. IFRS adoption resulted in a broad cross-section of firms domiciled in countries with a variety of domestic accounting standards changing to a common set of standards at the same time. The prospects of IFRS adoption led investors in European firms to assess the implications of potential changes in firms' information environments and convergence associated with this change in financial reporting standards. Thus, events leading to IFRS adoption in Europe provide an opportunity to assess investors' expectations about the net benefits or net costs of IFRS adoption.

We first test for an overall market reaction to the IFRS adoption events. We find that investors in European firms reacted positively to the adoption of IFRS, as reflected both in the aggregate market reaction for all events and in a positive reaction to thirteen events we assess as increasing the likelihood of IFRS adoption and a negative reaction to three events we assess as decreasing this likelihood. These findings are consistent with investors perceiving that the benefits associated with IFRS adoption will outweigh the costs.

We base our primary inferences on tests for cross-sectional differences in the market reaction to the IFRS adoption events. Regarding expected changes in information environment, we find a more positive reaction for European firms with lower pre-adoption information quality

and higher pre-adoption information asymmetry. These findings are consistent with investors expecting IFRS to improve the information environment for these firms. We find an incremental positive reaction for banks with lower pre-adoption information quality, which is consistent with investors expecting improvements in information quality – including any associated with adoption of the controversial IAS 39 – for these firms. We also find that investors react less positively for firms domiciled in code law countries, which are likely to have weaker enforcement of accounting standards. Regarding expected convergence benefits, we find a positive reaction to IFRS adoption events even for firms with high quality pre-adoption information environments. To the extent investors expect IFRS adoption to only minimally affect the information environments of these firms, this finding is consistent with investors expecting net benefits associated with convergence from IFRS adoption.

Overall, our findings are consistent with investors expecting the benefits associated with IFRS adoption in Europe to exceed the expected costs. Our findings indicate that investors expected net benefits associated with increases in information quality, decreases in information asymmetry, more rigorous enforcement of the standards, and convergence. We leave it to future research to determine whether these expectations were fulfilled.

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TABLE 1
Events and Predicted Effects on Likelihood of European Adoption of IFRS

Event Date	Description	Assessed Effect on likelihood of IFRS adoption	Predicted market reaction if IFRS _{benefits} > IFRS _{costs} (IFRS _{benefits} < IFRS _{costs})
March 12, 2002	European Parliament passes resolution requiring all EU listed companies to use IFRS by 2005	Increase	+ (-)
May 14, 2002	EFRAG issues draft recommendation to endorse all extant IFRS	Increase	+ (-)
June 19, 2002	EFRAG issues final recommendation to endorse all extant IFRS	Increase	+ (-)
July 4, 2003	Chirac sends letter to Prodi expressing concerns about IAS 39 and its potential negative effect on Europe	Decrease	- (+)
July 9, 2003	Bolkestein sends letter to Tweedie supporting goal of adoption	Increase	+ (-)
July 16, 2003	ECOFIN and ARC support adoption of IFRS	Increase	+ (-)
September 29, 2003	EC endorses all extant IFRS, except IAS 32 and IAS 39	Increase	+ (-)
February 3, 2004	Bolkestein pledges to postpone endorsement of IAS 32 and IAS 39 until issues are resolved; sets up consultative group to facilitate resolution	Increase	+ (-)
March 30, 2004	HSBC announces intentions to implement IAS 39 in full	Increase	+ (-)
June 4, 2004	EFRAG issues draft recommendation to endorse IAS 32 and IAS 39	Increase	+ (-)
July 8, 2004	EFRAG issues final recommendation to endorse IAS 32 and IAS 39	Increase	+ (-)
October 1, 2004	ARC recommends endorsement of IAS 39, but recommends provisions relating to the fair value option and portfolio hedging of demand deposits be carved out	Decrease	- (+)
November 19, 2004	EC endorses IAS 39 with both carve-out provisions	Decrease	- (+)
June 16, 2005	IASB issues revised IAS 39 with new fair value option	Increase	+ (-)

July 8, 2005	ARC recommends endorsement of revised fair value option, thereby eliminating one of the carve-outs	Increase	+ (-)
November 15, 2005	EC endorses revised fair value option, thereby eliminating one of the carve-outs	Increase	+ (-)

This table presents the sixteen events, our assessment of their effect on the likelihood of the European adoption of IFRS as issued by the IASB, and the predicted market reaction to each event. In the last column, $IFRS_{benefits} > IFRS_{costs}$ refers to the predicted market reaction if expected benefits associated with IFRS adoption exceed expected costs. $IFRS_{benefits} < IFRS_{costs}$ refers to the predicted market reaction if expected benefits associated with IFRS adoption are lower than expected costs.

Key persons/organizations referred to in the event descriptions are defined as follows.

- ARC (Accounting Regulatory Committee) is a public-sector body that opines on EC proposals regarding international accounting standards, and is comprised of representatives from each member state of the European Union (EU), chaired by the EC.
- Bolkestein (Frits Bolkestein), a commissioner of the EC, is responsible for internal markets, taxation, and customs union.
- Chirac (Jacques Chirac) is the President of France.
- EC (European Commission) was created to represent the European interest common to all Member States of the EU, and has the right of initiative in the legislative process, i.e., it proposes the legislation on which the European Parliament and the Council decide to enact.
- ECOFIN (European and Financial Affairs Council) is comprised of the Economics and Finance ministers of the member states, and covers EU policy in several areas, including financial markets.
- EFRAG (European Financial Reporting Advisory Group) is a private-sector body created by the accounting profession within Europe, and advises the EC on the technical assessment of IASB-issued financial reporting standards.
- IASB (International Accounting Standards Board) is an independent, privately funded financial reporting standard setter charged with creating International Financial Reporting Standards.
- Prodi (Romano Prodi) is the President of the EC.
- Tweedie (Sir David Tweedie) is the Chairman of the IASB.

TABLE 2
Sample Composition by Country

Country	Firms	Total Obs
Austria	39	624
Belgium	65	1,040
Czech Republic	5	80
Denmark	80	1,280
Finland	84	1,344
France	424	6,784
Germany	518	8,288
Greece	150	2,400
Ireland	32	512
Italy	202	3,232
Netherlands	109	1,744
Norway	74	1,184
Poland	45	720
Portugal	38	608
Spain	94	1,504
Sweden	187	2,992
Switzerland	149	2,384
UK	970	15,520
Total	3,265	52,240

This table presents the sample composition by country. The sample includes all European firms with available data for all sixteen events in 2002 – 2005 listed in Table 1.

TABLE 3
Overall Market Reaction to Events Affecting the Likelihood of IFRS Adoption in Europe

Event Date	Description	Predicted Sign	Market Reaction Europe	Market Reaction Rest of World	Difference
March 12, 2002	European Parliament passes resolution requiring all EU listed companies to use IFRS by 2005	+	-0.0116	-0.0136	0.0020
May 14, 2002	EFRAG issues draft recommendation to endorse all extant IFRS	+	0.0199	0.0307	-0.0108
June 19, 2002	EFRAG issues final recommendation to endorse all extant IFRS	+	-0.0403	-0.0441	0.0038
July 4, 2003	Chirac sends letter to Prodi expressing concerns about IAS 39 and its potential negative effect on Europe	-	0.0249	0.0317	-0.0068
July 9, 2003	Bolkestein sends letter to Tweedie supporting adoption	+	-0.0110	-0.0163	0.0053
July 16, 2003	ECOFIN and ARC support adoption of IFRS	+	-0.0132	-0.0163	0.0031
September 29, 2003	EC endorses all extant IFRS, except IAS 32 and IAS 39	+	-0.0210	-0.0191	-0.0019
February 3, 2004	Bolkestein pledges to postpone endorsement of IAS 32 and IAS 39 until issues are resolved; sets up consultative group to facilitate resolution	+	-0.0026	-0.0123	0.0097
March 30, 2004	HSBC announces intentions to implement IAS 39 in full	+	0.0090	0.0012	0.0078
June 4, 2004	EFRAG issues draft recommendation to endorse IAS 32 and IAS 39	+	0.0181	0.0112	0.0069
July 8, 2004	EFRAG issues final recommendation to endorse IAS 32 and IAS 39	+	-0.0006	-0.0098	0.0092
October 1, 2004	ARC recommends endorsement of IAS 39, but recommends provisions relating to the fair value option and portfolio hedging of demand deposits be carved out	-	0.0213	0.0272	-0.0059
November 19, 2004	EC endorses IAS 39 with both carve-out provisions	-	-0.0096	-0.0063	-0.0033
June 16, 2005	IASB issues revised IAS 39 with new fair value option	+	0.0048	-0.0008	0.0056
July 8, 2005	ARC recommends endorsement of revised fair value option, thereby eliminating one of the carve-outs	+	0.0067	0.0050	0.0017
November 15,	EC endorses revised fair value option, thereby eliminating one of the	+	-0.0040	-0.0005	-0.0035

2005	carve-outs				
	Mean of Portfolio Event Returns	+	-0.0052	-0.0086	0.0034
	t -statistic _{vs0}				2.627
	t -statistic _{vs300}				1.980
	p -value _{bootstrap}				0.008

This table presents three-day portfolio returns centered on the sixteen events identified as affecting the likelihood of IFRS adoption in Europe. *Market Reaction Europe* is the three-day value-weighted return to the 3,265 European firm portfolio, centered on the event date. *Market Reaction Rest of World* is the three-day value-weighted return to the 1,200 largest capitalized firms in the Americas and Asia/Pacific regions (DJ STOXX 1800 ex Europe Index), centered on the event date. Predicted sign is based on the sign for the overall market reaction. *Mean of Portfolio Event Returns* is computed as the mean of the individual date returns, where returns from events with a negative predicted sign are first multiplied by negative one. t -statistic_{vs0} assesses whether the mean three-day event return differs from zero. t -statistic_{vs300} assesses whether the mean three-day event return differs from the mean three-day return for 300 non-overlapping non-events, chosen across the sample period 2002–2005. p -value_{bootstrap} is the proportion of 500 draws for which the standardized mean three-day return across 16 randomly selected non-events exceeds the standardized mean three-day event return. Each draw of randomly selected non-events reflects the year-by-year distribution of events.

TABLE 4
Descriptive Statistics

Panel A: Distributions

Variable	Mean	25%	50%	75%	Std
Experimental Variables:					
<i>CMAR</i>	0.0065	-0.0117	0.0059	0.0249	0.0389
<i>InfoQualFactor</i>	0.0002	0.3704	0.5020	0.5613	1.0001
<i>Bank</i>	0.0527	0.0000	0.0000	0.0000	0.2234
<i>InfoQualFactor*Bank</i>	0.0090	0.0000	0.0000	0.0000	0.2216
<i>Turnover</i>	0.5009	0.0000	1.0000	1.0000	0.5000
<i>CloselyHeld</i>	0.4143	0.2009	0.4122	0.6116	0.2572
<i>Herf</i>	0.0344	0.0114	0.0210	0.0422	0.0381
<i>Code</i>	0.6125	0.0000	1.0000	1.0000	0.4872
<i>Big4</i>	0.7418	0.0000	1.0000	1.0000	0.4376
<i>Size</i>	5.3352	3.8271	5.1880	6.7497	2.1347
Descriptive Variables:					
<i>ADR</i>	0.1074	0.0000	0.0000	0.0000	0.3096
<i>Standards Applied</i>	0.4316	0.0000	0.0000	0.0000	0.4316
<i>Exchanges</i>	1.3405	1.0000	1.0000	1.0000	0.7973

Panel B: Pearson correlations

	<i>CMAR</i>	<i>InfoQualFactor</i>	<i>Bank</i>	<i>InfoQualFactor*Bank</i>	<i>Turnover</i>	<i>CloselyHeld</i>	<i>Herf</i>	<i>Code</i>	<i>Big4</i>
<i>InfoQualFactor</i>	0.050								
<i>Bank</i>	0.003	0.040							
<i>InfoQualFactor*Bank</i>	0.020	0.222	0.173						
<i>Turnover</i>	-0.028	0.089	-0.034	-0.020					
<i>CloselyHeld</i>	0.026	-0.042	-0.019	-0.019	-0.494				
<i>Herf</i>	0.006	-0.013	-0.087	-0.026	0.014	0.012			
<i>Code</i>	-0.021	-0.296	0.070	0.003	-0.317	0.308	-0.102		
<i>Big4</i>	-0.001	-0.013	0.103	0.162	0.162	-0.169	-0.034	0.061	
<i>Size</i>	-0.036	-0.071	0.200	0.023	0.203	-0.199	-0.023	0.213	0.400

This table presents descriptive statistics for the variables used in the cross-sectional analyses. Panel A presents distributions, and Panel B presents Pearson correlations. In both panels, $N = 31,296$. *CMAR* is the firm's cumulative market-adjusted return, measured as the three-day return centered on the event date minus the three-day return to the DJ STOXX 1800 ex Europe Index.

InfoQualFactor is the quality of the firm's pre-adoption information environment, measured as the highest eigenvalue factor derived from principal components analysis of the variables *ADR*, *Standards Applied*, *Exchanges*, and *Size*. *InfoQualFactor* is multiplied by negative one to ease interpretation, where higher values of *InfoQualFactor* indicate lower quality pre-adoption information. *ADR* is an indicator variable that equals one if a firm cross-lists in the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable equal to one if the firm applies US standards or International Accounting Standards during the event year, and zero if the firm applies domestic standards. *Exchanges* is the number of exchanges in which the firm lists during the event year. *Size* is the log of the firm's prior end of year market value of equity. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise. *Turnover* is an indicator variable equal to one if the firm's mean daily percentage shares traded during the year is above the median for all firms, and zero otherwise. *CloselyHeld* is the percentage of the firm's shares outstanding held by insiders at the end of the fiscal year. *Herf* is the Herfindahl Index, measured as the sum of each firm's squared percentage market-share, calculated at the two-digit industry level. *Code* is an indicator variable equal to one if the firm is domiciled in a country with a code-based legal system (all countries except the UK and Ireland), and zero otherwise. *Big4* is an indicator variable equal to one if the firm was audited by one of the four largest accounting firms, and zero otherwise. In Panel B, bolded values indicate significance at the 5% level for two-tailed tests.

TABLE 5
Cross-Sectional Analysis

Variable	Predicted Sign	CMAR (<i>t</i>-statistic) [<i>t</i>-statistic_{vs300}]	CMAR (<i>t</i>-statistic) [<i>t</i>-statistic_{vs300}]
<i>Intercept</i>	+	0.0073 (7.64) [8.33]	0.0088 (8.56) [6.15]
<i>InfoQualFactor</i>	+	0.0017 (5.81) [4.37]	0.0017 (5.92) [5.86]
<i>Bank</i>	+/-	0.0002 (0.25) [0.20]	0.0008 (1.16) [0.37]
<i>InfoQualFactor*Bank</i>	+/-	0.0017 (2.24) [2.15]	0.0017 (2.28) [2.17]
<i>Turnover</i>	-	-0.0023 (-3.29) [-4.92]	-0.0020 (-2.86) [-4.52]
<i>CloselyHeld</i>	+	0.0031 (2.57) [1.78]	0.0025 (2.10) [1.72]
<i>Herf</i>	+	0.0051 (0.65) [0.57]	0.0058 (0.66) [0.56]
<i>Code</i>	-	-0.0019 (-4.11) [-5.32]	-0.0013 (-2.43) [-4.46]
<i>Big4</i>	+	0.0000 (0.08) [0.00]	0.0007 (1.62) [0.24]
<i>Size</i>	-		-0.0005 (-3.15) [-0.05]
<i>Firm-events</i>		31,296	31,296
<i>Firms</i>		1,956	1,956
<i>R²</i>		3.11%	3.15%

This table presents results from cross-sectional analyses examining the market reaction for 16 events affecting the likelihood of IFRS adoption in Europe. The estimation is an OLS regression of the following form:

$$CMAR_{j,e} = \beta_0 + \beta_1 InfoQualFactor_{j,e} + \beta_2 Bank_{j,e} + \beta_3 InfoQualFactor_{j,e} * Bank_{j,e} + \beta_4 Turnover_{j,e} + \beta_5 CloselyHeld_{j,e} + \beta_6 Herf_{j,e} + \beta_7 Code_{j,e} + \beta_8 Big4_{j,e} + \rho_{j,e}$$

CMAR is the firm's cumulative market-adjusted return, measured as the three-day return centered on the event date minus the three-day return to the DJ STOXX 1800 ex Europe Index. *InfoQualFactor* is the quality of the firm's pre-adoption information environment, measured as the highest eigenvalue factor derived from principal components analysis of the variables *ADR*, *Standards Applied*, *Exchanges*, and *Size*. *InfoQualFactor* is multiplied by negative one to ease interpretation, where higher values of *InfoQualFactor* indicate lower quality pre-adoption information. *ADR* is an indicator variable that equals one if a firm cross-lists in the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable equal to one if the firm applies US standards or International Accounting Standards during the event year, and zero if the firm applies domestic standards. *Exchanges* is the number of exchanges in which the firm lists during the event year. *Size* is the log of the firm's prior end of year market value of equity. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise. *Turnover* is an indicator variable equal to one if the firm's mean daily percentage shares traded during the year is above the median for all firms, and zero otherwise. *CloselyHeld* is the percentage of the firm's shares outstanding held by insiders at the end of the fiscal year. *Herf* is the Herfindahl Index, measured as the sum of each firm's squared percentage market-share, calculated at the two-digit industry level. *Code* is an indicator variable equal to one if the firm is domiciled in a country with a code-based legal system (all countries except the UK and Ireland), and zero otherwise. *Big4* is an indicator variable equal to one if the firm was audited by one of the four largest accounting firms, and zero otherwise.

t-statistic is in parenthesis and is the regression coefficient scaled by the coefficient standard error corrected with two-digit SIC code and country double-clustering (Petersen 2007). *t*-statistic_{vs300} is in brackets and is derived from comparing the coefficient estimated in a regression of 1,956 firms across the 16 event dates to the coefficient estimated in a regression of 1,956 firms' 300 non-overlapping non-event dates.

TABLE 6
Market Expectations Regarding Convergence Benefits

Variable	Predicted Sign	CMAR (t-statistic)	CMAR (t-statistic)
<i>Intercept</i>	+	0.0048 (7.57)	0.0037 (5.30)
<i>LowInfoQualFactor</i>	+	0.0019 (2.22)	0.0025 (3.51)
<i>LowTurnover</i>	+	0.0026 (3.70)	0.0024 (3.29)
<i>HighCloselyHeld</i>	+	0.0017 (2.91)	0.0015 (2.68)
<i>HighHerf</i>	+	0.0006 (0.64)	0.0006 (0.61)
<i>Code</i>	-	-0.0030 (-5.61)	-0.0026 (-4.18)
<i>NonBig4</i>	+	0.0003 (0.69)	0.0002 (0.34)
<i>SmallFirm</i>	+		0.0019 (2.65)
<i>Firm-events</i>		31,296	31,296
<i>Firms</i>		1,956	1,956
<i>R²</i>		2.97%	3.01%

This table presents results from cross-sectional analyses examining the market reaction for 16 events affecting the likelihood of IFRS adoption in Europe. The estimation is an OLS regression of the following form:

$$CMAR_{j,e} = \gamma_0 + \gamma_1 LowInfoQualFactor_{j,e} + \gamma_2 LowTurnover_{j,e} + \gamma_3 HighCloselyHeld_{j,e} + \gamma_4 HighHerf_{j,e} + \gamma_5 Code_{j,e} + \gamma_6 NonBig4_{j,e} + \tau_{j,e}.$$

CMAR is the firm's cumulative market-adjusted return, measured as the three-day return centered on the event date minus the three-day return to the DJ STOXX 1800 ex Europe Index. *LowInfoQualFactor* is a dichotomous variable that equals one if *InfoQualFactor* is at or above the distribution median (indicating low pre-adoption information quality), and equals zero otherwise. *InfoQualFactor* is the quality of the firm's pre-adoption information environment, measured as the highest eigenvalue factor derived from principal components analysis of the variables *ADR*, *Standards Applied*, *Exchanges*, and *Size*. *InfoQualFactor* is multiplied by negative one to ease interpretation, where higher values of *InfoQualFactor* indicate lower quality

pre-adoption information. *ADR* is an indicator variable that equals one if a firm cross-lists in the US using American Depository Receipts (ADR) during the event year, and zero otherwise. *Standards Applied* is an indicator variable equal to one if the firm applies US standards or International Accounting Standards during the event year, and zero if the firm applied domestic standards. *Exchanges* is the number of exchanges in which the firm lists during the event year. *Size* is the log of the firm's prior end of year market value of equity. *LowTurnover* is an indicator variable equal to one if the firm's mean daily percentage shares traded during the year is below the median for all firms, and zero otherwise. *HighCloselyHeld* is a dichotomous variable that equals one if the percentage of the firm's shares outstanding held by insiders at the end of the fiscal year is at or above the distribution median, and zero otherwise. *HighHerf* is a dichotomous variable that equals one if the sum the firm's squared percentage market-share is at or above the distribution median of the Herfindahl index, calculated at the two-digit industry level, and zero otherwise. *Code* is an indicator variable equal to one if the firm is domiciled in a country with a code-based legal system (all countries except the UK and Ireland), and zero otherwise. *NonBig4* is an indicator variable equal to one if the firm was not audited by one of the four largest accounting firms, and zero otherwise. *SmallFirm* is a dichotomous variable that equals one if *Size* is below the distribution median, and zero otherwise.

t-statistic is in parenthesis and is the regression coefficient scaled by the coefficient standard error corrected with two-digit SIC code and country double-clustering (Petersen 2007).

TABLE 7
Alternative Information Quality Proxies

Variable	Predicted Sign	Proxy for Pre-Adoption Information Quality			
		<i>ADR</i>	<i>Standards Applied</i>	<i>Exchanges</i>	<i>Size</i>
<i>Intercept</i>	+	0.0079 (7.27)	0.0081 (8.22)	0.0083 (7.75)	0.0092 (6.49)
<i>InfoQualProxy</i>	+	0.0013 (1.50)	0.0041 (6.09)	0.0005 (1.61)	0.0004 (2.72)
<i>Bank</i>	+/-	0.0009 (1.26)	0.0015 (2.07)	0.0029 (3.34)	0.0081 (4.82)
<i>InfoQualProxy*Bank</i>	+/-	-0.0001 (-0.02)	0.0047 (2.65)	0.0014 (3.12)	0.0009 (3.84)
<i>Turnover</i>	-	-0.0022 (-3.19)	-0.0023 (-3.30)	-0.0023 (-3.37)	-0.0019 (-2.88)
<i>CloselyHeld</i>	+	0.0033 (2.43)	0.0029 (2.48)	0.0034 (2.62)	0.0029 (1.98)
<i>Herf</i>	+	0.0032 (0.38)	0.0049 (0.62)	0.0027 (0.33)	0.0034 (0.36)
<i>Code</i>	-	-0.0029 (-5.05)	-0.0017 (-3.46)	-0.0028 (-5.21)	-0.0024 (-3.41)
<i>Big4</i>	+	0.0001 (0.27)	0.0001 (0.32)	0.0001 (0.20)	0.0007 (1.44)
<i>Firm-days</i>		31,296	31,296	31,296	31,296
<i>Firms</i>		1,956	1,956	1,956	1,956
<i>R²</i>		2.92%	3.13%	2.93%	2.97%

This table presents results from cross-sectional analyses examining the market reaction for 16 events affecting the likelihood of IFRS adoption in Europe. The estimation is an OLS regression of the following form:

$$CMAR_{j,e} = \delta_0 + \delta_1 InfoQualProxy_{j,e} + \delta_2 Bank_{j,e} + \delta_3 InfoQualProxy_{j,e} * Bank_{j,e} + \delta_4 Turnover_{j,e} + \delta_5 CloselyHeld_{j,e} + \delta_6 Herf_{j,e} + \delta_7 Code_{j,e} + \delta_8 Big4_{j,e} + \nu_{j,e}.$$

CMAR is the firm's cumulative market-adjusted return, measured as the three-day return centered on the event date minus the three-day return to the DJ STOXX1800 ex Europe Index. *InfoQualProxy* is the proxy for the quality of the firm's pre-adoption information environment, alternatively measured as *ADR*, *Standards Applied*, *Exchanges*, and *Size*. Each proxy is multiplied by negative one to ease interpretation (implying higher values indicate lower quality pre-adoption information). *ADR* is an indicator variable that equals one if a firm cross-lists in

the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable equal to one if the firm applies US standards or International Accounting Standards during the event year, and zero if the firm applies domestic standards. *Exchanges* is the number of exchanges in which the firm lists during the event year. *Size* is the log of the firm's prior end of year market value of equity. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise. *Turnover* is an indicator variable equal to one if the firm's mean daily percentage shares traded during the year is above the median for all firms, and zero otherwise. *CloselyHeld* is the percentage of the firm's shares outstanding held by insiders at the end of the fiscal year. *Herf* is the Herfindahl Index, measured as the sum of each firm's squared percentage market-share, calculated at the two-digit industry level. *Code* is an indicator variable equal to one if the firm is domiciled in a country with a code-based legal system (all countries except the UK and Ireland), and zero otherwise. *Big4* is an indicator variable equal to one if the firm was audited by one of the four largest accounting firms, and zero otherwise.

t-statistic is in parenthesis and is the regression coefficient scaled by the coefficient standard error corrected with two-digit SIC code and country double-clustering (Petersen 2007).

TABLE 8
Alternative Enforcement Environment Proxies

Variable	Proxy for Enforcement Environment (<i>Enf_Environ</i>)			
	Predicted Sign	Rule of Law	Control of Corruption	Average Enforcement
<i>Intercept</i>	+	0.0034 (1.86)	0.0038 (2.48)	0.0036 (2.17)
<i>InfoQualFactor</i>	+	0.0020 (7.31)	0.0020 (7.17)	0.0020 (7.23)
<i>Bank</i>	+/-	0.0003 (0.40)	0.0003 (0.41)	0.0003 (0.41)
<i>InfoQualFactor*Bank</i>	+/-	0.0014 (1.82)	0.0014 (1.85)	0.0014 (1.84)
<i>Turnover</i>	-	-0.0019 (-2.69)	-0.0019 (-2.75)	-0.0019 (-2.72)
<i>CloselyHeld</i>	+	0.0028 (2.38)	0.0028 (2.47)	0.0028 (2.44)
<i>Herf</i>	+	0.0071 (0.89)	0.0067 (0.85)	0.0069 (0.86)
<i>Enf_Environ</i>	-	-0.0017 (-1.84)	-0.0013 (-1.70)	-0.0015 (-1.76)
<i>Big4</i>	+	-0.0001 (-0.33)	-0.0002 (-0.34)	-0.0001 (-0.34)
<i>Firm-days</i>		31,296	31,296	31,296
<i>Firms</i>		1,956	1,956	1,956
<i>R</i> ²		3.09%	3.09%	3.09%

This table presents results from cross-sectional analyses examining the market reaction for 16 events affecting the likelihood of IFRS adoption in Europe. The estimation is an OLS regression of the following form:

$$CMAR_{j,e} = \theta_0 + \theta_1 InfoQualFactor_{j,e} + \theta_2 Bank_{j,e} + \theta_3 InfoQualFactor_{j,e} * Bank_{j,e} + \theta_4 Turnover_{j,e} + \theta_5 CloselyHeld_{j,e} + \theta_6 Herf_{j,e} + \theta_7 Enf_Environ_{j,e} + \theta_8 Big4_{j,e} + \omega_{j,e}$$

CMAR is the firm's cumulative market-adjusted return, measured as the three-day return centered on the event date minus the three-day return to the DJ STOXX 1800 ex Europe Index. *InfoQualFactor* is the quality of the firm's pre-adoption information environment, measured as the highest eigenvalue factor derived from principal components analysis of the variables *ADR*, *Standards Applied*, *Exchanges*, and *Size*. *InfoQualFactor* is multiplied by negative one to ease interpretation, where higher values of *InfoQualFactor* indicate lower quality pre-adoption

information. *ADR* is an indicator variable that equals one if a firm cross-lists in the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable equal to one if the firm applies US standards or International Accounting Standards during the event year, and zero if the firm applies domestic standards. *Exchanges* is the number of exchanges in which the firm lists during the event year. *Size* is the log of the firm's prior end of year market value of equity. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise. *Turnover* is an indicator variable equal to one if the firm's mean daily percentage shares traded during the year is above the median for all firms, and zero otherwise. *CloselyHeld* is the percentage of the firm's shares outstanding held by insiders at the end of the fiscal year. *Herf* is the Herfindahl Index, measured as the sum of each firm's squared percentage market-share, calculated at the two-digit industry level. *Enf_Environ* is one of three proxies for the firm's enforcement environment, derived annually at the country level from Kaufmann et al. (2007). To ease interpretation, the Kaufmann et al. (2007) measures are multiplied by negative one so that larger values indicate weaker enforcement. *Rule of Law* measures the quality of contract enforcement, the police, and the courts. *Control of Corruption* measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. *Average Enforcement* is the average of these two variables. *Big4* is an indicator variable equal to one if the firm was audited by one of the four largest accounting firms, and zero otherwise.

t-statistic is in parenthesis and is the regression coefficient scaled by the coefficient standard error corrected with two-digit SIC code and country double-clustering (Petersen 2007).