# Market Reaction to the Adoption of IFRS in Europe

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## 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 that investors reacted positively to events that we assess increased the likelihood of IFRS adoption and negatively to events that we assess decreased it. We also find that investor reaction was more positive for firms with lower quality pre-adoption information environments, with higher pre-adoption information asymmetry, and domiciled in common law countries. Tests comparing the market reaction for banks and non-banks suggest that the reaction we document reflects implications of IFRS adoption generally, not just those associated with the controversial International Accounting Standard 39. The findings also suggest that European equity investors expect net benefits from IFRS adoption associated with convergence and increased information quality.

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## 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 not only within Europe, but also

among Europe and the many other countries that require or permit application of IFRS.  Thus,

the debate was not only about the benefits and costs of IFRS adoption itself, but also the global

financial reporting convergence implications if IFRSs were modified as a result of the adoption

process.[2]  Modifying IFRSs 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 European investors 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 firm and

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[1] We examine market reactions in all stock markets in Europe.  Throughout, we refer to these markets collectively as the European stock market.
[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.

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 European investors 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 existing domestic accounting standards. Also, investors might have believed that potential variation in the implementation and enforcement of IFRS would lead to an increase in 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 to a portfolio of publicly traded European firms 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 obtain insight into whether the market reaction we document reflects expected benefits from convergence or from improved financial reporting quality, we partition the sample

based on the quality of firms' pre-IFRS adoption information environment. We find that investors in firms with higher quality pre-adoption information environments react positively to the increased likelihood of IFRS adoption. This finding suggests that investors expected net benefits associated with convergence of financial reporting standards because, presumably, IFRS adoption would provide little incremental information benefit for these firms. We also find that investors in firms with lower quality pre-adoption information environments reacted positively to IFRS adoption, and some evidence that this reaction was more positive than that for firms with higher quality pre-adoption information environments. These findings suggest that, to the extent expected net benefits of convergence are similar for both groups of firms, investors expected net benefits from improvements in information quality. Additional analysis reveals that there was essentially no difference in the market reaction to IFRS adoption for non-banks and banks. This is consistent with the aggregate market reaction reflecting changes in investors' perceptions about the likelihood of adoption of IFRS in general, rather than the likelihood of application of International Accounting Standard (IAS) 39, the controversial standard on financial instruments, in particular.

To assess whether investors reacted differently to IFRS adoption events depending on a firm's information asymmetry and accounting standards enforcement, as well as its pre-adoption information quality, we estimate the cross-sectional relation between firms' event returns and proxies for these characteristics. Our findings confirm that, on average, investors reacted positively to increases in IFRS adoption likelihood. Consistent with predictions based on the overall positive reaction, we find a more positive investor reaction for firms (1) with higher pre-adoption information asymmetry, (2) domiciled in common law countries where standards enforcement likely is more rigorous, and (3) with lower pre-adoption information quality.

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Sensitivity analyses further reveal that (1) the overall positive reaction to IFRS adoption occurred for firms in nearly all European countries, (2) the more positive reaction for firms with lower pre-adoption information quality and higher pre-adoption information asymmetry occurred primarily for firms domiciled in code law countries, and (3) the findings are robust to alternative returns benchmarks, proxies for information environment quality, and proxies for enforcement quality.

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, and Section V presents our empirical results. Section VI 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

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[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.

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 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 use of 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

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[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

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 qualifying criteria for hedge accounting – IAS 39's qualifying criteria are specific and restrictive.  Hedge accounting results in gains (losses) from financial instruments being recognized in profit or loss at the same time and to the extent that a designated hedging instrument incurs corresponding losses (gains).  Thus, hedge accounting reduces volatility in profit or loss resulting, e.g., from 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 economically 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 issued by 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

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value recognized directly in equity.  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.

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

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[7] Prior research finds little (Comprix et al. 2003) or limited (Pae et al. 2007) evidence of a market reaction to IFRS adoption events that precede 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. Regardless, 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, which would understate the market reaction to that event.

them; EFRAG will consider those changes and make its recommendation on them after the IASB 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 IFRSs.  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 IFRSs, 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 IFRSs, 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 IFRSs, 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. 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 fair value accounting in SFAS 115 (e.g., Beatty et al. 1996; Cornett et al. 1996) and stock-based compensation accounting in SFAS 123 (e.g., Dechow et al. 1996). However, unlike prior research, we investigate investor perceptions regarding an entire set of accounting standards, rather than a single standard likely to affect particular subsets of firms.

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 reporting relative to application of domestic standards, thereby enhancing financial reporting

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transparency, lowering information asymmetry and information risk and, thus, lowering cost of capital. Such expectations are supported by prior research. For example, Barth et al. (2007b) finds that application of International Accounting Standards (IAS), which comprises 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. (2007a), among others, find that higher financial reporting quality is associated with lower cost of capital. These studies are consistent with Easley and O'Hara (2004) and Aboody et al. (2004), which provide evidence that information risk is priced.

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 a reduced scope for managerial rent extraction associated with greater financial reporting transparency (e.g., Hope et al. 2006).

It is also possible that European investors 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.[8] 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 Tobin's Q, increased after the passage of EU regulations intended to converge financial reporting, particularly for firms with higher agency costs.

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[8] 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, the net market effect of convergence is, *ex ante*, uncertain.

Alternatively, it is possible that European investors would react negatively to movement towards IFRS if, for example, investors believed that IFRS would result in decreased financial reporting quality. This could occur if investors believed that IFRS would fail either to adequately reflect regional differences in economies or to accommodate countries' differing political and economic features that led to existing differences in domestic accounting standards.[9] 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. For example, in contrast to the US's SEC, there was no enforcement agency spanning the European member states to ensure consistent application of IFRS. Consistent with this, Ball et al. (2003) reports no detectable information quality difference between East Asian firms with high quality, i.e., common law, accounting standards and those with low quality, i.e., code law, accounting standards. There is also evidence that substantial reporting 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.

## IV. DATA AND RESEARCH DESIGN

We infer investor perceptions of IFRS adoption by examining European firms' aggregated equity return reactions to our sixteen adoption events. Specifically, we first examine the aggregate equity market reaction. We then examine whether the aggregate reaction reflects

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[9] 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 amounts.

expected changes in information quality or convergence. Finally, we determine whether cross-sectional firm characteristics explain variation in firm-level market reactions in a manner consistent with our predictions. Because the adoption of IFRS involved a process that evolved over several years, we base our inferences on the magnitude of the market reaction across the sixteen events, rather than on the magnitude of the reaction to each event separately.

Our reliance on an event-study design to obtain inferences assumes sufficient market efficiency in the sample countries to ensure that the information related to the sixteen events is reflected in equity prices within the event window. The size and liquidity of the European equity markets suggests this is a tenable assumption; however, there is variation across these markets. If a sample country does not have sufficient market efficiency, our tests will be biased against finding a significant reaction to our events because the entire reaction to the event might not occur within our event window. Our event-study design also assumes correct identification of information events and that there is no confounding news during our event windows.[10] Not correctly identifying events biases against finding a reaction to the event because inclusion of non-events introduces noise and omission of actual events reduces power. Our event selection procedures are explained in Section II. To identify 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 assessed as increasing (decreasing) the likelihood of IFRS adoption. That is, we do not observe a systematic alternative news pattern that would bias our inferences.

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

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Our tests focus on event returns for a portfolio of the 3,265 European firms for which data are available for all of the sixteen events in Table 1.[11] Table 2 provides a breakdown of the sample by country. We obtain daily price data between 2002 and 2005 from Datastream through Thomson One Banker Analytic.

The event returns on which we focus are the three-day value-weighted market-adjusted returns for the portfolio of European firms centered on each of the sixteen event dates, $CAR_e$, where $e$ = 1 to 16. We value weight each portfolio based on equity market value at the end of the most recent quarter prior to the event. We market adjust the portfolio returns by subtracting the corresponding three-day return to the Dow Jones STOXX Global 1800 Index.[12] Basing our inferences on the portfolio return for each event effectively treats each event as a single observation, i.e., the portfolio approach assumes perfect correlation of firms' returns in each event window. Although firms' event returns are aligned in calendar time and, thus, we expect them to be highly correlated (Sefcik and Thompson 1986), assuming perfect correlation of returns is conservative in that it biases against finding significant event returns. When aggregating returns for events that increase and events that decrease IFRS adoption likelihood,

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[11] Relaxing the requirement that data be available for all sixteen events does not alter our inferences. Our inferences also are unaffected if we use equal-weighted portfolio returns.

[12] The Dow Jones STOXX Global 1800 Index 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." [http://www.stoxx.com/incoming_data/factsheets/global1800_fs.pdf, cited April 2, 2006]. To assess the appropriateness of this as a market index, we compared the correlation of non-event portfolio returns for our European sample over our sample period and portfolio returns for the same sample for three alternative indices. A higher correlation indicates the index captures better general market returns for our sample. The correlation of 0.75 for the Dow Jones STOXX Global 1800 Index is the highest of the indices we consider. The correlation for the DJ STOXX Global 1800 excluding the 600 European firms is 0.55; we consider this as a benchmark because including European firms in the index could remove the effect we seek to test. The correlation for the S&P 500 is 0.53. Our inferences are unaffected by our choice of market index.

we multiply the returns for events that decrease IFRS adoption likelihood by negative one. Thus, we interpret a positive return as consistent with our predictions.

We conduct four tests to assess the significance of the event returns. The first is a $t$-test of whether the mean of the sixteen event $CAR_e$s 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 the standard deviation of the sixteen portfolio event returns. Consistent with Fama and MacBeth (1973), we assume the aggregate event returns are uncorrelated.

The second is a $t$-test for whether the mean of the sixteen $CAR_e$s differs from the mean of a distribution of similarly constructed non-event 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 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 Dow Jones STOXX Global 1800 Index.[13]

The third test calculates the probability that the mean of the sixteen $CAR_e$s exceeds the mean of sixteen similarly constructed randomly selected non-event returns. This test assumes

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[13] 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.

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 returns do not reflect the population of returns, there could be noise or bias in this test. To implement this test, we randomly select sixteen three-day non-event returns that mimic the year-by-year distribution of our sample events. That is, we select three, four, six, and three non-event returns from 2002, 2003, 2004, and 2005, and designate one of the non-event returns from 2003 and two from 2004 as being associated with events that decrease the likelihood of IFRS adoption and multiply these returns by minus one. We then compare the mean of the non-event returns to the mean of $CAR_e$. We repeat this procedure 500 times to simulate an empirical *p*-value for the probability that the mean non-event return is greater than the mean $CAR_e$.

The fourth test calculates the probability we would randomly observe the number of $CAR_e$ with signs consistent with predictions assuming that there is an equal probability of a positive or negative return for each event. Although this test does not rely on a specific parametric form for abnormal returns, it can be sensitive to skewness in the daily abnormal return distribution (see Section 4.7 of Campbell, et al. 1997).

**Information Quality or Convergence**

We next provide insight into whether the market reaction to IFRS adoption events is attributable to investor expectations regarding changes in information quality or convergence. To do so, we require a proxy for the quality of a firm's information environment prior to IFRS adoption. We employ five proxies for this construct, the primary being *ADR*, which is an indicator variable that equals one if a firm cross-lists in the US using American Depository

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Receipts during the event year, and zero otherwise.[14]  We expect ADR firms to have higher

quality pre-adoption information environments for three primary reasons.  First, during our

sample period, US securities regulation required ADR firms to reconcile domestic standards-

based net income and equity book value to those based on US standards, which provided

additional and, based on findings in prior research (e.g., Barth et al. 2007b), perhaps higher

quality accounting information.  Second, ADR firms are subject to US securities regulation and

enforcement, which some believe is stronger than that in many European countries.  Third, ADR

firms are typically larger and are more widely followed by analysts, which suggests that

investors likely have access to more or higher quality information about the firm.

Testing whether the market reaction to IFRS adoption events differs for ADR and non-

ADR firms provides insight into whether the net benefits or costs perceived by investors are

associated with convergence or changes in information quality, or both.  For ADR firms, prior

research finds little difference between proxies for accounting quality based on reconciled US

accounting amounts and those based on IAS accounting amounts (Barth et al. 2006).  This

finding suggests that investors could perceive that ADR firms' pre-adoption information quality

is comparable to their expected post-adoption quality.  If this is the case, then any market

reaction to IFRS adoption events for ADR firms should primarily reflect expected net benefits or

costs associated with convergence – not expected changes in accounting information quality.

Prior research also finds that the quality of IAS-based accounting amounts is greater than that of

non-US domestic standards-based accounting amounts (Barth et al. 2007b).  This finding

suggests that investors could perceive that non-ADR firms' pre-adoption information quality is

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[14] We identify ADR firms from the Bank of New York Complete Depository Receipt record
(http://160.254.123.37/dr_directory.jsp) as of September 15, 2006.  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.

lower than their expected post-adoption quality. If this is the case and if the net benefits or costs associated with convergence are similar for ADR and non-ADR firms, then any incremental market reaction to IFRS adoption events for non-ADR firms relative to ADR firms should reflect expected net benefits or costs associated with expected changes in information quality. We test these predictions by comparing event returns for ADR and non-ADR firms using the same tests outlined above for the combined sample.

To assess the robustness of our results, we use four alternative proxies for pre-adoption information quality. The first is *Standards Applied*, which is an indicator variable that equals one if the firm applies either US standards or IAS, as identified by Worldscope, during the event year and zero otherwise.[15] The second is *# of Exchanges*, which is an indicator variable that equals one if the firm lists its shares on more than two stock exchanges, and zero otherwise. The more exchanges on which a firm lists its shares, the more likely it faces disclosure requirements that are more stringent than those of its domestic exchange. The third is *Analyst Following*, which is an indicator variable that equals one (zero) if the firm is in the highest (lowest) quartile of analyst following, as reported by Worldscope, at the end of the year preceding the event date. The fourth is *Size*, which is an indicator variable that equals one (zero) if the firm is in the highest (lowest) tercile of equity market value at the end of the quarter preceding the event date. We expect that firms applying US standards or IAS, listing on more than two exchanges, in the highest quartile of analyst following, and in the highest size tercile of equity market value have higher quality pre-adoption information environments.

To provide insight into whether the event reactions reflect perceptions regarding IFRS generally or IAS 39 in particular, we partition the sample into banks and non-banks. This

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

partition is intuitive – IAS 39 figured prominently in banks' resistance to EU IFRS adoption.

Finding that the overall market reaction we observe is attributable to only banks would suggest

that investors focused more on the anticipated effects of IAS 39 than on the more general effects

of IFRS adoption.  Compared with investors in non-banks, investors in banks might react more

positively if they perceive informational benefits associated with IAS 39, such as those

associated with financial statement recognition of previously unrecognized derivative financial

instruments.  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.

**Cross-Sectional Analysis**

To provide evidence on the factors associated with cross-sectional variation in the market

reaction to IFRS adoption events, we estimate the following equation:

$$CAR_{j,e} = \beta_0 + \beta_1 \, Info\_Quality_{j,e} + \beta_2 \, Turnover_{j,e} + \beta_3 \, Closely\_Held_{j,e} + \beta_4 \, Herf_{j,e}$$
$$+ \beta_5 \, Code_{j,e} + \beta_6 \, Big4_{j,e} + \beta_7 \, Bank_{j,e} + \rho_{j,e} \qquad (1)$$

$CAR_{j,e}$ is firm $j$'s market-adjusted return centered on event $e$, calculated as the firm's three-day

return minus the corresponding three-day return to the Dow Jones STOXX Global 1800 Index.[16]

$Info\_Quality$ captures the firm's pre-adoption information quality, using one of the five proxies

defined above: *ADR*, *Standards Applied*, *# of Exchanges*, *Analyst Following*, or *Size*.  *Turnover*

is an indicator variable equal to one if the firm's ratio of average daily shares traded to average

total shares outstanding for the year is greater than the sample median, and zero otherwise.[17]

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[16] Defining $CAR_{j,e}$ to also include an adjustment for the firm's non-event returns does not affect our inferences.  Our inferences also are unaffected if we market adjust each sample firm's return by the return on the portfolio of firms in the FTSE Eurotop 300 that are domiciled in the same country as the sample firm.
[17] We use a dichotomous measure of *Turnover* because the continuous measure is highly right skewed and is highly correlated with *ADR*.  Replacing *Turnover* with the natural log of the continuous measure shifts statistical significance away from *ADR* and *Closely_Held* and towards the continuous turnover measure.  However, the statistical significance of the coefficients on the other variables is unaffected.

*Closely_Held* is the percentage of shares held by insiders, from Worldscope. *Herf* 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. *Herf* ranges from zero to

one, with higher values indicating that within-industry sales are concentrated in fewer firms.

*Code* is an indicator variable equal to one if a firm is domiciled in a code law country, and zero

otherwise.[18] *Big4* is an indicator variable equal to one if a firm's auditor is one of the four

largest, from Worldscope, and zero otherwise. *Bank* 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. To control for potential cross-sectional correlation, we

adjust the regression standard errors for two-digit industry clusters (Rogers 1993; Petersen

2007).[19] We cluster based on industry because financial reporting practices – in both accounting

standards and voluntary disclosure policies – tend to be homogeneous within industries, and a

change in overall financial reporting is likely to have a similar impact on firms within the same

industry.

We assume investors weigh the expected costs and benefits of how IFRS adoption will

affect accounting information quality, comparability of accounting information, and

implementation or transition costs. If investors perceive the benefits to IFRS adoption are lower

for firms with higher quality pre-adoption information environments, then we expect $\beta_1$ is

negative.

*Turnover*, *Closely_Held*, and *Herf* are proxies for pre-adoption information asymmetry

between the firm and investors; we expect that firms with less liquidity, with greater insider

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[18] All of our sample countries except the UK and Ireland are classified as code law countries.
[19] To further control for potential cross-correlation, we also adjust the standard errors using a two-way cluster on country and two-digit industry, and alternatively a two-way cluster on firm and two-digit industry. Our inferences are unaffected.

ownership, and that have less industry competition likely have greater information asymmetry. If investors expect that IFRS adoption will 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 and a resulting positive reaction, as discussed previously. Thus, we expect $\beta_2$ is negative, and $\beta_3$ and $\beta_4$ are positive. However, if investors perceive that IFRS adoption will require firms with dominant industry market share to disclose proprietary information, then we expect $\beta_4$ is negative.

Code and Big4 are our proxies for comparability, standards enforcement, and standards implementation. Regarding Code, 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. If this is the case, we expect $\beta_5$ is negative. Regarding Big4, 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. Both would increase the comparability of information by limiting opportunistic discretion by managers in the application of IFRS. If this is the case, we expect $\beta_6$ is positive.

Bank in equation (1) permits us to test whether there is a different market reaction to IFRS adoption events for banks. As explained above, investors might expect IFRS adoption to require substantial implementation costs for banks, or that it will result in a greater likelihood of violating contractual agreements such as regulatory capital requirements. Both are consistent

with investors perceiving direct cash flow effects associated with IFRS adoption.  If this is the case, then we expect $\beta_7$ is negative.  Also, as explained above, investors in banks might expect incremental informational benefits from adopting IAS 39, in which case we expect $\beta_7$ is positive.

## V.  EMPIRICAL RESULTS

### Reaction to the Adoption of IFRS in Europe

Table 3 presents our portfolio returns results.  Panel A presents results for all events aggregated together and reveals that investors in European firms expected, on average, the benefits of IFRS adoption to outweigh the costs.  In particular, Panel A reveals that the mean *CAR* for aggregated events (0.0028) is positive and significantly different from zero (*t-statistic$_{vs0}$* = 3.269) and significantly different from the mean of a sample of non-event returns (*t-statistic$_{vs300}$* = 2.550).  Panel A also reveals that the mean return for sixteen randomly selected non-event dates exceeds the mean return for the sixteen event dates in fewer than 7.8% of 500 random draw iterations (*p-value$_{vsBootstrap500}$* = 0.078), and the likelihood of the number of individual event returns having signs consistent with our predictions by chance is only 0.4% (*p-value$_{binomial}$* = 0.004).

Panel B presents results for the aggregation of the thirteen events increasing the likelihood of IFRS adoption and Panel C presents results for the aggregation of the three events decreasing this likelihood.  Disaggregating events into those that increase and decrease adoption likelihood complements the Panel A results by revealing whether the aggregated reaction results from not only an overall positive reaction for events that increase IFRS adoption likelihood, but also an overall negative reaction for events that decrease this likelihood.  Such evidence reduces the likelihood 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 events, but also would have to be of the same sign as we predict for our event.

For events that increase adoption likelihood, Panel B reveals that the mean *CAR* of 0.0025 is positive, as predicted based on the aggregated market reaction in Panel A, and significantly different from zero ($t$-$statistic_{vs0}$ = 2.374), significantly different from the mean non-event ($t$-$statistic_{vs300}$ = 1.900), and marginally more likely to be greater than the mean return associated with 500 random draw iterations ($p$-$value_{vsBootstrap500}$ = 0.100). Panel B also reveals that the likelihood of the number of individual event returns having signs consistent with our predictions by chance is only 1% ($p$-$value_{binomial}$ = 0.010). For events that decrease adoption likelihood, Panel C reveals that the mean *CAR* of –0.0044 is negative, as predicted, and significantly different from zero ($t$-$statistic_{vs0}$ = –6.017), significantly different from the mean of non-event returns ($t$-$statistic_{vs300}$ = –4.620), and marginally more likely to be less than the mean return associated with 500 random draw iterations ($p$-$value_{vsBootstrap500}$ = 0.085). All three of the individual event returns have signs consistent with our predictions.[20] That the magnitude of the mean reaction to the decrease likelihood events is greater than the mean of the reaction to the increase likelihood events is not surprising – there are thirteen increase likelihood events and only three decrease likelihood events.

Table 4 presents event returns for each event. It reveals that fourteen of the sixteen event returns have the predicted sign. Specifically, eleven of the thirteen events assessed as increasing the likelihood of IFRS adoption are positive, and all three of the returns for events assessed as decreasing the likelihood of IFRS adoption are negative. However, none of the events is individually significant at conventional levels. The event that exhibits the largest unpredicted

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[20] We do not report the likelihood of this happening by chance because it is mathematically impossible to obtain significance at the 5% level with only three observations.

reaction (May 14, 2002, of –0.0071) coincides with an announcement by the European Central Bank to increase interest rates, which may help to explain the observed negative return. Table 4 reveals that the sum of the sixteen event market reactions is 0.0184.[21]

Overall, Tables 3 and 4 reveal that investors view the adoption of IFRS positively, consistent with them expecting the benefits to IFRS adoption to exceed the costs.

**Information Quality or Convergence**

Table 5 presents results for aggregated market reactions to the sixteen events, after partitioning firms by pre-adoption information environment quality based on each of our five proxies. Regarding ADR firms versus non-ADR firms, Table 5 reveals that firms with lower quality pre-adoption information environments exhibit a positive reaction. In particular, it reveals that the mean return for non-ADR firms is 0.0041, which is positive and significantly different from zero ($t\text{-}statistic_{vs0} = 3.417$) and from the mean of a sample of 300 non-event returns ($t\text{-}statistic_{vs300} = 2.700$). In addition, the mean return for sixteen randomly selected non-event dates is greater than the mean return for the event dates in fewer than 2.5% of the 500 random draw iterations ($p\text{-}value_{vsBootstrap500} = 0.025$), and the likelihood of the number of individual event returns having signs consistent with our predictions by chance is only 0.2% ($p\text{-}value_{binomial} = 0.002$). For firms with higher quality pre-adoption information environments, the mean *CAR* for ADR firms is 0.0017, which is positive, but only marginally different from both zero and the mean of a sample of 300 non-events returns ($t\text{-}statistic_{vs0} = 1.466$; $t\text{-}statistic_{vs300} = 1.440$). In addition, the mean return for sixteen randomly selected non-event dates is greater than the mean return for the event dates in fewer than 9.5% of the 500 random draws ($p$-

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[21] This 1.84% market reaction might reflect a lower bound of expected net benefits associated with IFRS adoption, if our sample events are a subset of events capturing the entire adoption process, including those that may have preceded our sample period.

$value_{vsBootstrap500} = 0.095$). The likelihood of the number of individual event returns having signs consistent with our predictions by chance is 22.8% ($p\text{-}value_{binomial} = 0.228$).

Table 5 reveals similar inferences when we use the other four pre-adoption information environment quality proxies. Specifically, firms applying domestic standards ($CAR = 0.0031$), listing on two or fewer exchanges ($CAR = 0.0036$), in the bottom quartile of analyst following ($CAR = 0.0043$), and in the bottom tercile of size ($CAR = 0.0080$) all have positive and significant event returns. Firms applying US standards or IAS ($CAR = 0.0018$), firms in the top quartile of analyst following ($CAR = 0.0021$), and firms in the top tercile of size ($CAR = 0.0054$) all have positive reactions to the increased likelihood of IFRS adoption that are significant based on some statistics, but not all. Firms listing on three or more exchanges ($CAR = 0.0012$) have a positive reaction, but it is not significant based on any statistic we use to assess significance.

The findings relating to lower quality pre-adoption information environment firms are consistent with investors expecting net benefits from IFRS adoption associated with convergence or improvements in information quality, or both. If any informational benefits to IFRS adoption are few for higher quality pre-adoption information environment firms, the findings for these firms suggest that investors expect net benefits associated with convergence. To provide evidence on investors' expectations relating to convergence and information quality, we next test whether the returns for the two groups of firms differ. Table 5 reveals that the *CAR* for lower quality pre-adoption information environment firms is larger than that for higher quality pre-adoption information environment firms for all proxies. However, the differences generally are not significant.

Table 6 presents results for banks and non-banks, partitioned on whether they are ADR firms or non-ADR firms to control for pre-IFRS-adoption information environment quality.

Results are similar to those in Table 5. Specifically, we find that for non-ADR firms, the reaction to increased likelihood of IFRS adoption is significantly positive for non-banks ($CAR = 0.0042$) and marginally significantly positive for banks ($CAR = 0.0036$). The difference between banks and non-banks is positive but not significant ($CAR = 0.0006$). For ADR firms, the reaction to increased likelihood of IFRS adoption is marginally significantly positive for both non-banks ($CAR = 0.0016$) and banks ($CAR = 0.0019$). The difference between banks and non-banks is negative, but again not significant ($CAR = -0.0003$). Our inferences are similar based on untabulated analyses in which we aggregate ADR and non-ADR banks, aggregate separately events that we assess increase and decrease IFRS adoption likelihood, or consider only events subsequent to September 29, 2003, which relate mostly to IAS 39. Taken together, our findings indicate that the market reaction to changes in the likelihood of IFRS adoption was not limited to banks, consistent with the reaction reflecting perceptions regarding IFRS adoption in general rather than IAS 39 in particular.

**Cross-Sectional Analysis**

Table 7, 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. The sample size varies depending on the proxy used for pre-adoption information environment quality. Panel A reveals that 10.5% of firms cross-list in the US; 23.7% apply US standards or IAS; and 8.4% list on three or more exchanges. Panel A also shows that 42.1% of firms' outstanding shares are held by insiders; within-industry sales are relatively dispersed across firms ($Herf = 0.035$); 62.8% of sample firms are domiciled in code-law countries; 74.1% of firms are audited by one of the four largest auditing firms; and 5.9% of firms are banks. Table 7, Panel B presents Pearson correlations between the variables. Consistent with our expectations, Panel B

reveals that *CAR* is significantly negatively correlated with *ADR*, *Standards Applied*, *# of Exchanges*, *Analyst Following*, *Size*, *Turnover*, and *Code*, and is significantly positively correlated with *Closely_Held* and *Herf*. The correlations between *CAR* and both *Big4* and *Bank* are not significantly different from zero.

Table 8 presents regression summary statistics from estimating equation (1) using each of the five proxies for pre-adoption information environment quality. The first column presents results using our primary proxy, *ADR*. Consistent with our portfolio results in Table 3, the significantly positive intercept ($\beta_0 = 0.0070$, $p = 0.000$) indicates a significant positive mean return for IFRS adoption events. This indicates that, on average, investors expect net benefits associated with IFRS adoption. Consistent with our expectations based on this overall positive return, Table 8 also reveals that the reaction is significantly less positive for firms with higher pre-adoption information environment quality ($\beta_1 = -0.0016$, $p = 0.007$) and significantly more positive for firms with higher pre-adoption information asymmetry, as captured by *Turnover* ($\beta_2 = -0.0019$, $p = 0.000$) and *Closely_Held* ($\beta_3 = 0.0043$, $p = 0.006$). In addition, the coefficient on *Herf* is positive as predicted, but only marginally significantly different from zero ($\beta_4 = 0.0116$, $p = 0.093$). The table also reveals that the reaction is significantly lower for firms domiciled in countries with lower expected standards enforcement ($\beta_5 = -0.0028$, $p = 0.000$). It reveals that the reaction is significantly greater for banks ($\beta_7 = 0.0013$, $p = 0.048$), providing some evidence that investors perceived incremental net benefits associated with IFRS adoption for banks. However, the results provide no evidence that the market reaction is incrementally associated with the firm's auditor ($\beta_6 = 0.0001$, $p = 0.495$).

Table 8 also presents *p*-values obtained from a bootstrap estimation of equation (1). We do so to mitigate effects on our inferences associated with potential standard error bias from

cross-sectional correlation and to provide an alternative distribution to assess the significance of our findings.[22] To implement the bootstrap, we estimate equation (1) for each of 500 randomly selected non-event dates. From this, we obtain an empirical distribution of estimated coefficients based on the non-event *CAR*s. For variables we expect are positively (negatively) related to event returns, we calculate the probability of observing a non-event coefficient that is more positive (more negative) than our event coefficient. The inferences based on this significance test generally are consistent with those discussed above, although the coefficients on *ADR* and *Code* are only marginally significantly different from the non-event coefficients and the coefficient on *Bank* is not significantly different.

Table 8 also presents results for the other four proxies for the firm's pre-adoption information environment quality in the second column using *Standards Applied*, in the third column using *# of Exchanges*, in the fourth column using *Analyst Following*, and in the fifth column using *Size*. Results for all four proxies are consistent with those for *ADR*. Notably, firms having higher (lower) quality pre-adoption information environments have a less (more) positive reaction to IFRS adoption, consistent with lower pre-adoption information quality firms receiving greater informational benefits from IFRS adoption. The signs and significance levels of the estimated coefficients on the other variables are generally similar to those in the *ADR* estimation.

**Sensitivity Analyses**

Our primary cross-sectional analyses use *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

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[22] The bootstrap procedure controls for cross-sectional correlation in a manner similar to the approach in Fama and MacBeth (1973).

adoption because the regression includes controls for other firm characteristics, including the quality of the pre-adoption information environment. It is possible, however, that *Code* also captures other firm characteristics, including some effects relating to the firm's pre-adoption information quality. Thus, we reestimate equation (1) allowing all coefficients to vary for code-law and common-law firms.

Table 9, Panel A, presents the results and reveals three key insights. First, we find significant positive reactions to IFRS adoption for both code-law firms (*Intercept* = 0.0039, *p* = 0.000) and common-law firms (*Intercept* = 0.0069, *p* = 0.000), consistent with equity investors in both types of European countries perceiving net benefits from IFRS adoption. Second, consistent with the findings relating to *Code* in Table 8, the average reaction is smaller for code-law firms, although the difference is not significant (*p*-value = 0.111). Third, the attenuating (accentuating) effects associated with pre-adoption information quality (information asymmetry) reside principally in the code-law sample. Specifically, the market reaction to IFRS adoption is attenuated for ADR firms domiciled in code-law countries (*ADR* = –0.0019, *p* = 0.035), but not in common-law countries (–0.0008, *p* = 0.274). This finding is consistent with ADR status having an attenuating effect on net benefits associated with IFRS adoption arising from expected improvements in information quality, but only for firms that would otherwise apply code-law domestic standards.

Table 9 also reveals that the accentuating effect of information asymmetry is stronger in the code-law sample. Specifically, the coefficients on *Turnover* (–0.0026, *p* = 0.000) and *Herf* (0.0185, *p* = 0.025) are significantly different from zero for the code-law sample, but not for the common-law sample. This is consistent with IFRS adoption providing greater expected benefits for firms with higher information asymmetry, but more so if domiciled in code-law countries.

Taken together, these results provide evidence that the market perceives benefits to IFRS adoption associated with convergence, as reflected in the average positive reaction for firms in common-law countries, and improvements in information quality, as reflected in incremental effects for information quality and information asymmetry for firms in code-law countries.

We next permit the intercept in equation (1), which captures the average market reaction, to differ based on the firm's country's legal origin. Following LaPorta et al. (1998), we categorize countries into the following legal origins: English, French, German, Scandinavian, and Other. Table 9, Panel B, presents the findings and reveals significant positive reactions to IFRS adoption for firms in countries of all types of legal origin. Untabulated findings reveal that the *English Origin* intercept is significantly more positive (*p*-value = 0.01) than those for the other legal origins. Untabulated findings also reveal a significant positive reaction to IFRS adoption for sixteen of our eighteen sample countries; the reactions for the other two – Norway and the Czech Republic – are insignificantly different from zero. These findings indicate that the positive reaction to IFRS adoption was evident across Europe, and was not specific to a few countries.

Finally, because of potential noise in our *Code* variable as a proxy for enforcement of standards, we include in equation (1) the effectiveness of the judicial system, measured as the country-specific judicial system score provided by La Porta et al. (1998). Untabulated findings reveal that the coefficient is negative as predicted, but is not significantly different from zero (coefficient = –0.0003, *t*-statistic = –1.09). Inferences regarding the other variables in equation (1), including *Code*, are unaffected by including this additional variable.

## VI. 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 convergence and potential changes in information quality 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 perform three empirical analyses to assess equity investors' perceptions of IFRS adoption in Europe. First, we find that, on average, investors in European firms reacted positively to events that increased the likelihood of adoption of IFRS, and negatively to events that decreased it. Our results are generally consistent across individual events. These findings are consistent with equity investors expecting that the benefits associated with IFRS adoption will outweigh the costs.

Second, we partition firms based on pre-adoption information environment quality. We find positive aggregated event returns for firms with higher pre-adoption information quality and more positive returns for firms with lower pre-adoption information quality, although the differences generally are not significant. We interpret the positive returns for higher pre-adoption information quality firms as evidence that investors anticipate IFRS convergence benefits, to the extent the informational benefits associated with IFRS adoption for such firms are few. We interpret the more positive returns for lower pre-adoption information quality firms as suggesting that investors anticipate information quality benefits from IFRS adoption. We also

find that the reaction is similarly positive for banks and non-banks, which is consistent with the market reaction reflecting expected implications of IFRS adoption generally, rather than reflecting only expected implications of IAS 39.

Third, we conduct a cross-sectional analysis to test whether firm characteristics help explain the overall market reaction to IFRS adoption events. The findings reveal inferences consistent with those from our portfolio returns analyses. In particular, we find that, on average, investors expect net benefits associated with IFRS adoption. We find this for firms in most of our sample countries, which indicates that the effect we document is not driven by any particular countries. We also find that investors perceive greater net benefits for firms with lower quality pre-adoption information environments, which is consistent with investors expecting that adoption of IFRS will improve information quality. In addition, we find that investors perceive greater net benefits to IFRS adoption for firms with more insider ownership and lower liquidity, which is consistent with investors expecting that IFRS adoption will reduce information asymmetry. Finally, we find that investors expect lower net benefits for firms domiciled in code-law countries, which is consistent with investors having concerns about implementation or enforcement of IFRS in those countries.

Our findings indicate that investors expected the benefits associated with IFRS adoption in Europe to exceed the expected costs, where benefits are associated with convergence and increased accounting information quality. Our findings also indicate that investors expected net benefits associated with increases in information quality, decreases in information asymmetry, and more rigorous enforcement of the standards. 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 and Market Reaction**

| Event Date | Description | Effect on IFRS adoption likelihood | 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 | Increase | + (−) |

| | fair value option, thereby eliminating one of the carve-outs | | |
|---|---|---|---|
| November 15, 2005 | EC endorses revised fair value option, thereby eliminating one of the carve-outs | Increase | + (−) |

This table presents the sixteen events, 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**
**Market Reaction to Events Affecting Likelihood of IFRS Adoption in Europe**

| Description | Statistics | **Predicted sign if** $IFRS_{benefits} > IFRS_{costs}$ ($IFRS_{benefits} < IFRS_{costs}$) |
|---|---|---|
| **Panel A: All sixteen events aggregated** | | |
| *CAR* | 0.0028 | + (−) |
| *t-statistic$_{vs0}$* | 3.269 | |
| *t-statistic$_{vs300}$* | 2.550 | |
| *p-value$_{vsBootstrap500}$* | 0.078 | |
| *p-value$_{binomial}$* | 0.004 | |
| **Panel B: Thirteen events increasing the likelihood of IFRS adoption** | | |
| *CAR* | 0.0025 | + (−) |
| *t-statistic$_{vs0}$* | 2.374 | |
| *t-statistic$_{vs300}$* | 1.900 | |
| *p-value$_{vsBootstrap500}$* | 0.100 | |
| *p-value$_{binomial}$* | 0.010 | |
| **Panel C: Three events decreasing the likelihood of IFRS adoption** | | |
| *CAR* | −0.0044 | − (+) |
| *t-statistic$_{vs0}$* | −6.017 | |
| *t-statistic$_{vs300}$* | −4.620 | |
| *p-value$_{vsBootstrap500}$* | 0.085 | |

This table presents market-adjusted value-weighted portfolio returns to events affecting the likelihood of IFRS adoption in Europe. If investors perceive the expected benefits to IFRS adoption will exceed the expected costs, i.e., $IFRS_{benefits} > IFRS_{costs}$, then we expect an on average positive (negative) reaction to events that increase (decrease) the likelihood of IFRS adoption. Alternatively, if investors perceive the expected benefits will be less than the expected costs, i.e., $IFRS_{benefits} < IFRS_{costs}$, then we expect to observe an on average negative (positive) reaction to events that increase (decrease) the likelihood of IFRS adoption.

Panel A presents results aggregating all sixteen events. *CAR* is the mean three-day market-adjusted value-weighted portfolio return across all events, with the return centered on the event. If an event decreases the likelihood of IFRS adoption in Europe, *CAR* is multiplied by negative one before computing the cross-event mean. Panels B and C present results aggregating events by their effect on IFRS adoption likelihood: that is, *CAR* is the mean of events aggregated by whether they increase (thirteen events in Panel B) or decrease (three events in Panel C) the likelihood of IFRS adoption. In all panels, the portfolio consists of 3,265 European firms for each event.

*t-statistic$_{vs0}$* assesses whether *CAR* differs from zero. *t-statistic$_{vs300}$* assesses whether the mean *CAR* differs from the mean *CAR* for 300 non-overlapping non-events, chosen across the sample period 2002–2005. *p-value$_{vsBootstrap500}$* is the proportion of 500 draws for which the mean *CAR* across 16, 13, or 3 randomly selected non-events (for Panels A, B, and C, respectively) exceeds the corresponding mean *CAR* across the events. Each draw of randomly selected non-events reflects the year-by-year distribution of events. *p-value$_{binomial}$* presents the probability of observing the pattern of market returns across events assuming equal probability of positive or negative returns for each event. Because there are only three events decreasing adoption likelihood, we do not present this latter statistic in Panel C.

**TABLE 4**
**Reaction to the Adoption of IFRS in Europe – Individual Events**

| Event Date | Description | Predicted sign | *CAR* |
|---|---|:---:|---:|
| March 12, 2002 | European Parliament passes resolution requiring all EU listed companies to use IFRS by 2005 | + | 0.0015 |
| May 14, 2002 | EFRAG issues draft recommendation to endorse all extant IFRS | + | −0.0071 |
| June 19, 2002 | EFRAG issues final recommendation to endorse all extant IFRS | + | 0.0025 |
| July 4, 2003 | Chirac sends letter to Prodi expressing concerns about IAS 39 and its potential negative effect on Europe | − | −0.0059 |
| July 9, 2003 | Bolkestein sends letter to Tweedie supporting adoption | + | 0.0051 |
| July 16, 2003 | ECOFIN and ARC support adoption of IFRS | + | 0.0010 |
| September 29, 2003 | EC endorses all extant IFRS, except IAS 32 and IAS 39 | + | 0.0006 |
| 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 | + | 0.0073 |
| March 30, 2004 | HSBC announces intentions to implement IAS 39 in full | + | 0.0045 |
| June 4, 2004 | EFRAG issues draft recommendation to endorse IAS 32 and IAS 39 | + | 0.0055 |
| July 8, 2004 | EFRAG issues final recommendation to endorse IAS 32 and IAS 39 | + | 0.0060 |
| 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 | − | −0.0039 |
| November 19, 2004 | EC endorses IAS 39 with both carve-out provisions | − | −0.0036 |
| June 16, 2005 | IASB issues revised IAS 39 with new fair value option | + | 0.0034 |
| July 8, 2005 | ARC recommends endorsement of revised fair value option, thereby eliminating one of the carve-outs | + | 0.0024 |
| November 15, 2005 | EC endorses revised fair value option, thereby eliminating one of the carve-outs | + | −0.0009 |
| Aggregate Return | | + | 0.0184 |

This table presents the market reaction for the sixteen events affecting the likelihood of IFRS adoption in Europe. *CAR* is the three-day market-adjusted value-weighted portfolio return centered on the event date. Predicted sign is based on sign of overall market reaction in Table 3.

# TABLE 5
## Information Quality or Convergence

| Proxy | Lower Quality | Higher Quality | Difference Predicted | Difference |
|---|---|---|---|---|
| *ADR Status* | Non-ADR | ADR | | |
| CAR | 0.0041 | 0.0017 | + | 0.0024 |
| $t\text{-statistic}_{vs0}$ | 3.417 | 1.466 | | 1.519 |
| $t\text{-statistic}_{vs300}$ | 2.700 | 1.440 | | 1.150 |
| $p\text{-value}_{vsBootstrap500}$ | 0.025 | 0.095 | | 0.040 |
| $p\text{-value}_{binomial}$ | 0.002 | 0.228 | | 0.105 |
| $N$ to construct portfolio | 3,004 | 251 | | |
| | | | | |
| *Standards Applied* | Domestic Standards | US Standards / IAS | | |
| CAR | 0.0031 | 0.0018 | + | 0.0013 |
| $t\text{-statistic}_{vs0}$ | 3.050 | 1.677 | | 1.113 |
| $t\text{-statistic}_{vs300}$ | 2.350 | 1.730 | | 0.610 |
| $p\text{-value}_{vsBootstrap500}$ | 0.039 | 0.090 | | 0.135 |
| $p\text{-value}_{binomial}$ | 0.010 | 0.228 | | 0.402 |
| $N$ to construct portfolio | 2,484 | 772 | | |
| | | | | |
| *# of Exchanges* | ≤ 2 Exchanges | ≥ 3 Exchanges | | |
| CAR | 0.0036 | 0.0012 | + | 0.0024 |
| $t\text{-statistic}_{vs0}$ | 2.843 | 0.899 | | 1.276 |
| $t\text{-statistic}_{vs300}$ | 2.300 | 1.000 | | 1.040 |
| $p\text{-value}_{vsBootstrap500}$ | 0.039 | 0.127 | | 0.075 |
| $p\text{-value}_{binomial}$ | 0.002 | 0.402 | | 0.105 |
| $N$ to construct portfolio | 2,764 | 252 | | |
| | | | | |
| *Analyst Following* | Bottom Quartile | Top Quartile | | |
| CAR | 0.0043 | 0.0021 | + | 0.0022 |
| $t\text{-statistic}_{vs0}$ | 2.554 | 2.332 | | 1.459 |
| $t\text{-statistic}_{vs300}$ | 2.21 | 1.960 | | 1.280 |
| $p\text{-value}_{vsBootstrap500}$ | 0.034 | 0.080 | | 0.200 |
| $p\text{-value}_{binomial}$ | 0.03 | 0.105 | | 0.105 |
| $N$ to construct portfolio | 391 | 558 | | |
| | | | | |
| *Size* | Bottom Tercile | Top Tercile | | |
| CAR | 0.0080 | 0.0054 | + | 0.0027 |
| $t\text{-statistic}_{vs0}$ | 2.289 | 2.514 | | 1.533 |
| $t\text{-statistic}_{vs300}$ | 1.250 | 1.510 | | 0.370 |
| $p\text{-value}_{vsBootstrap500}$ | 0.010 | 0.020 | | 0.125 |
| $p\text{-value}_{binomial}$ | 0.038 | 0.010 | | 0.105 |
| $N$ to construct portfolio | 1,074 | 1,074 | | |

This table presents evidence on whether the market reaction to IFRS adoption in Europe reflects expected improvement in information quality or convergence by comparing market-adjusted value-weighted portfolio returns to adoption events for firms expected to have higher quality pre-adoption information environments and those expected to have lower quality pre-adoption

information environments. *Lower Quality* (*Higher Quality*) refers to market reactions for the following partitions of firms across five proxies for pre-adoption information environment. *ADR* is an indicator variable that equals one if a firm cross-listed in the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable that equals one if the firm applies either US or International Accounting Standards, as identified by Worldscope, during the event year and zero otherwise. *# of Exchanges* is an indicator variable that equals one if the firm lists its shares on more than two stock exchanges, and zero otherwise. *Analyst Following* is an indicator variable that equals one (zero) if the firm is in the highest (lowest) quartile of analyst following, as reported by Worldscope, at the end of the year preceding the event date. *Size* is an indicator variable that equals one (zero) if the firm is in the highest (lowest) tercile of equity market value at the end of the quarter preceding the event date.

*CAR* is the mean across events of the three-day market-adjusted value-weighted portfolio event return, with each return centered on the event date. If an event decreases the likelihood of IFRS adoption in Europe, *CAR* is multiplied by negative one before computing the cross-event mean. The portfolio includes all firms within the indicated group.

*t-statistic$_{vs0}$* assesses whether *CAR* differs from zero. *t-statistic$_{vs300}$* assesses whether the mean *CAR,* calculated across the sixteen events, differs from the mean *CAR* for 300 non-overlapping non-events, chosen from 2002–2005. *p-value$_{vsBootstrap500}$* is the proportion of 500 draws for which the mean *CAR* across sixteen randomly selected non-events exceeds the corresponding mean *CAR* across the sixteen events. Each draw of randomly selected non-events reflects the year-by-year distribution of events. *p-value$_{binomial}$* is the probability of observing the pattern of market returns across the sixteen events assuming equal probability of positive or negative returns for each event.

**TABLE 6**
**Is the Market Reaction Attributable to IFRS or IAS 39?**
**Evidence from Non-Banks and Banks**

|  | Non-ADR | ADR |
|---|---|---|
| **Non-Banks** | | |
| $CAR$ | 0.0042 | 0.0016 |
| $t\text{-}statistic_{vs0}$ | 3.579 | 1.333 |
| $t\text{-}statistic_{vs300}$ | 2.870 | 1.230 |
| $p\text{-}value_{vsBootstrap500}$ | 0.146 | 0.442 |
| $p\text{-}value_{binomial}$ | 0.002 | 0.105 |
| $N$ to construct portfolio | 2,816 | 257 |
| **Banks** | | |
| $CAR$ | 0.0036 | 0.0019 |
| $t\text{-}statistic_{vs0}$ | 2.055 | 1.428 |
| $t\text{-}statistic_{vs300}$ | 1.590 | 1.020 |
| $p\text{-}value_{vsBootstrap500}$ | 0.258 | 0.328 |
| $p\text{-}value_{binomial}$ | 0.105 | 0.105 |
| $N$ to construct portfolio | 160 | 22 |
| **Difference** | | |
| $CAR$ | 0.0006 | −0.0003 |
| $t\text{-}statistic_{vs0}$ | 0.425 | −0.200 |
| $t\text{-}statistic_{vs300}$ | 0.420 | −0.043 |
| $p\text{-}value_{vsBootstrap500}$ | 0.135 | 0.383 |
| $p\text{-}value_{binomial}$ | 0.401 | 0.600 |

This table presents the market reaction for non-banks and banks to events affecting IFRS adoption in Europe. Each group of firms is also partitioned on ADR status to capture differences in pre-adoption information environment quality. *CAR* is the mean across events of the three-day market-adjusted value-weighted portfolio event return, centered on the event date. If an event decreases the likelihood of IFRS adoption in Europe, *CAR* is multiplied by negative one before computing the cross-event mean. The portfolio includes all firms within the indicated group. *ADR* are firms cross-listed in the US. *Banks* are firms with a primary two-digit SIC code of 60 or 61. *N* is the number of firms in the portfolio, averaged across the sixteen events.

*t-statistic_{vs0}* assesses whether *CAR* differs from zero. *t-statistic_{vs300}* assesses whether the mean *CAR,* calculated across the sixteen events, differs from the mean *CAR* for 300 non-overlapping non-events, chosen from 2002–2005. *p-value_{vsBootstrap500}* is the proportion of 500 draws for which the mean *CAR* across sixteen randomly selected non-events exceeds the corresponding mean *CAR* across the sixteen events. Each draw of randomly selected non-events reflects the year-by-year distribution of events. *p-value_{binomial}* is the probability of observing the pattern of market returns across the sixteen events assuming equal probability of positive or negative returns for each event.

# TABLE 7
## Descriptive Statistics for Variables used in the Cross-Sectional Analysis

**Panel A: Distributions**

| Variable | N | Mean | Min | Median | Max | Std |
|---|---|---|---|---|---|---|
| $CAR_{j,e}^{increasing}$ | 35,136 | 0.006 | −1.009 | 0.005 | 1.795 | 0.047 |
| $CAR_{j,e}^{decreasing}$ | 35,136 | −0.007 | −0.475 | −0.010 | 0.453 | 0.046 |
| ADR | 35,136 | 0.105 | 0.000 | 0.000 | 1.000 | 0.306 |
| Standards Applied | 35,136 | 0.237 | 0.000 | 0.000 | 1.000 | 0.425 |
| # of Exchanges | 33,377 | 0.084 | 0.000 | 0.000 | 1.000 | 0.277 |
| Analyst Following | 11,193 | 0.675 | 0.000 | 1.000 | 1.000 | 0.468 |
| Size | 22,806 | 0.334 | 0.000 | 0.000 | 1.000 | 0.472 |
| Turnover | 35,136 | 0.500 | 0.000 | 1.000 | 1.000 | 0.500 |
| Closely_Held | 35,136 | 0.421 | 0.000 | 0.423 | 1.000 | 0.259 |
| Herf | 35,136 | 0.035 | 0.006 | 0.021 | 0.333 | 0.038 |
| Code | 35,136 | 0.628 | 0.000 | 1.000 | 1.000 | 0.483 |
| Big4 | 35,136 | 0.741 | 0.000 | 1.000 | 1.000 | 0.438 |
| Bank | 35,136 | 0.059 | 0.000 | 0.000 | 1.000 | 0.235 |

**Panel B: Pearson correlations**

| | $CAR_{j,e}$ | ADR | Standards Applied | # of Exchanges | Analyst Following | Size | Turnover | Closely_ Held | Herf | Code | Big4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ADR | −0.018 | | | | | | | | | | |
| Standards Applied | −0.038 | 0.089 | | | | | | | | | |
| # of Exchanges | −0.014 | 0.184 | 0.252 | | | | | | | | |
| Analyst Following | −0.049 | 0.307 | 0.160 | 0.195 | | | | | | | |
| Size | −0.028 | 0.268 | 0.137 | 0.165 | 0.796 | | | | | | |
| Turnover | −0.025 | 0.168 | −0.079 | −0.071 | 0.299 | 0.166 | | | | | |
| Closely_Held | 0.027 | −0.179 | 0.030 | 0.005 | −0.278 | −0.170 | −0.500 | | | | |
| Herf | 0.012 | −0.008 | 0.001 | −0.057 | −0.022 | −0.037 | 0.009 | 0.016 | | | |
| Code | −0.015 | −0.008 | 0.312 | 0.191 | 0.173 | 0.263 | −0.324 | 0.316 | −0.102 | | |
| Big4 | −0.009 | 0.121 | 0.043 | 0.071 | 0.281 | 0.497 | 0.155 | −0.171 | −0.273 | 0.054 | |
| Bank | 0.004 | 0.016 | −0.035 | 0.046 | 0.039 | 0.161 | −0.052 | −0.003 | −0.099 | 0.084 | 0.108 |

This table presents descriptive statistics for the variables used in the multivariate analyses examining cross-sectional variation in the market reaction to IFRS adoption in Europe. Panel A provides distributional statistics. Panel B provides Pearson correlations, with bolded values indicating significance at the less than 5% level. All statistics in Panel B are based on $N = 35,136$ (2,196 firms times sixteen events), except correlations involving the following variables: *# of Exchanges* ($N = 33,377$); *Analyst Following* ($N = 11,193$); and *Size* ($N = 22,806$).

$CAR_{j,e}$ is the firm's abnormal return, measured as the firm's three-day market-adjusted return centered on the event date, minus the three-day return to the DJ STOXX Global 1800 Index. Panel A presents descriptive statistics separately for the thirteen events that we assess as increasing the likelihood of IFRS adoption ($CAR_{j,e}^{increasing}$) and the three events that we assess as decreasing this likelihood ($CAR_{j,e}^{decreasing}$). *ADR* is an indicator variable that equals one if a firm cross-listed in the US using American Depository Receipts during the event year, and zero otherwise. *Standards Applied* is an indicator variable that equals one if the firm applies either US standards or International Accounting Standards, as identified by Worldscope, during the event year and zero otherwise. *# of Exchanges* is an indicator variable that equals one if the firm lists its shares on more than two stock exchanges, and zero otherwise. *Analyst Following* is an indicator variable that equals one (zero) if the firm is in the highest (lowest) quartile of analyst following, as reported by Worldscope, at the end of the year preceding the event date. *Size* is an indicator variable that equals one (zero) if the firm is in the highest (lowest) tercile of equity market value at the end of the quarter preceding the event date. *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. *Closely_Held* 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, and zero otherwise. For our sample, all countries except the UK and Ireland are designated as code law. *Big4* is an indicator variable equal to one if the firm is audited by one of the four largest accounting firms, and zero otherwise. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise.

## Table 8
## Cross-Sectional Analysis

| Variable | Predicted Sign | Coefficient (p-value) [p-value_Bootstrap] | | | | |
|---|---|---|---|---|---|---|
| | | Proxy for *Info_Quality*: | | | | |
| | | *ADR* | *Standards Applied* | *# of Exchanges* | *Analyst Following* | *Size* |
| | | (1) | (2) | (3) | (4) | (5) |
| *Intercept* | + | 0.0070 (0.000) [0.015] | 0.0072 (0.000) [0.018] | 0.0070 (0.000) [0.023] | 0.0061 (0.002) [0.064] | 0.0061 (0.000) [0.009] |
| *Info_Quality* | – | −0.0016 (0.007) [0.100] | −0.0038 (0.000) [0.065] | −0.0017 (0.002) [0.056] | −0.0028 (0.002) [0.149] | −0.0020 (0.023) [0.176] |
| *Turnover* | – | −0.0019 (0.000) [0.050] | −0.0021 (0.000) [0.043] | −0.0021 (0.000) [0.048] | −0.0014 (0.057) [0.066] | −0.0024 (0.000) [0.039] |
| *Closely_Held* | + | 0.0043 (0.006) [0.026] | 0.0040 (0.007) [0.033] | 0.0042 (0.006) [0.028] | 0.0054 (0.019) [0.016] | 0.0034 (0.047) [0.073] |
| *Herf* | + | 0.0116 (0.093) [0.210] | 0.0129 (0.062) [0.192] | 0.0113 (0.108) [0.212] | 0.0202 (0.057) [0.131] | 0.0075 (0.256) [0.234] |
| *Code* | – | −0.0028 (0.000) [0.061] | −0.0017 (0.001) [0.097] | −0.0027 (0.000) [0.050] | −0.0024 (0.010) [0.093] | −0.0024 (0.001) [0.082] |
| *Big4* | + | 0.0001 (0.495) [0.250] | 0.0000 (0.499) [0.241] | 0.0000 (0.477) [0.219] | 0.0007 (0.236) [0.204] | 0.0010 (0.089) [0.120] |
| *Bank* | +/− | 0.0013 (0.048) [0.144] | 0.0008 (0.194) [0.222] | 0.0011 (0.100) [0.152] | 0.0009 (0.368) [0.312] | 0.0010 (0.229) [0.202] |
| *N* | | 35,136 | 35,136 | 33,377 | 11,193 | 22,806 |
| Adjusted-$R^2$ | | 0.0013 | 0.0029 | 0.0018 | 0.0042 | 0.0020 |

This table presents descriptive statistics and results for multivariate analyses examining cross-sectional variation in the market reaction to IFRS adoption in Europe. All statistics are based the following multivariate regression:

$$CAR_{j,e} = \beta_0 + \beta_1 \ Info \ Quality_{j,e} + \beta_2 \ Turnover_{j,e} + \beta_3 \ Closely\_Held_{j,e} + \beta_4 \ Herf_{j,e}$$
$$+ \beta_5 \ Code_{j,e} + \beta_6 \ Big4_{j,e} + \beta_7 \ Bank_{j,e} + \rho_{j,e}$$

$CAR_{j,e}$ is the firm's abnormal return, measured as the firm's three-day market-adjusted return centered on the event date, minus the three-day return to the DJ STOXX Global 1800 Index. *Info_Quality* captures the quality of the firm's pre-adoption information environment, and is measured using five alternative proxies. First, *ADR* is an indicator variable that equals one if a firm cross-listed in the US using American Depository Receipts during the event year, and zero otherwise. Second, *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 otherwise, i.e, if the firm applies domestic standards. Third, *# of Exchanges* is an indicator variable equal to one if the firm lists on three or more exchanges, and zero otherwise, i.e., lists on two or fewer exchanges. Fourth, *Analyst Following* is an indicator variable equal to one if the firm is in the highest annual quartile of analyst following among the sample firms, and zero if the firm is in the lowest annual analyst quartile. Fifth, *Size* is an indicator variable equal to one if the firm is within the highest tercile of ending prior year market value of equity among sample firms, and zero if the firm is within the lowest tercile. *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. *Closely_Held* 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, and zero otherwise. For our sample, all countries except the UK and Ireland are designated as code law. *Big4* is an indicator variable equal to one if the firm is audited by one of the four largest accounting firms, and zero otherwise. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise.

We present coefficients, associated *p*-values in parentheses, and *p*-values from a bootstrap analysis in brackets. For the bootstrap analysis, for coefficients with positive sign predictions, *p-value_Bootstrap* is the probability of observing a non-event coefficient estimate greater than the event date coefficient when equation (1) is estimated across sixteen non-event dates randomly drawn 500 times. For coefficients with negative sign predictions, *p-value_Bootstrap* is the probability of observing a non-event coefficient estimate less than the event date coefficient when equation (1) is estimated across sixteen non-event dates randomly drawn 500 times. Standard errors are clustered by two-digit SIC code (Petersen 2007).

## Table 9
## Sensitivity Analyses

**Panel A. Code-law and common-law country partition**

| Variable | Predicted Sign | Coefficient (*p*-value) | | Difference (*p*-value) |
|---|---|---|---|---|
| | | **Code** | **Common** | |
| *Intercept* | + | 0.0039 (0.000) | 0.0069 (0.000) | −0.0030 (0.111) |
| *ADR* | − | −0.0019 (0.035) | −0.0008 (0.274) | −0.0011 (0.521) |
| *Turnover* | − | −0.0026 (0.000) | −0.0007 (0.251) | −0.0019 (0.133) |
| *Closely_Held* | + | 0.0046 (0.001) | 0.0035 (0.044) | 0.0011 (0.671) |
| *Herf* | + | 0.0185 (0.025) | 0.0049 (0.292) | 0.0136 (0.306) |
| *Big4* | + | 0.0002 (0.395) | −0.0005 (0.360) | 0.0007 (0.578) |
| *Bank* | +/− | 0.0015 (0.226) | 0.0005 (0.819) | 0.0010 (0.714) |
| Adjusted-$R^2$ | | | 0.0196 | |

**Panel B. Average reaction by legal origin**

| Variable | Predicted Sign | Coefficient (*p*-value) |
|---|---|---|
| *Eng_Origin* | + | 0.0072 (0.000) |
| *French_Origin* | + | 0.0050 (0.000) |
| *German_Origin* | + | 0.0030 (0.039) |
| *Scand_Origin* | + | 0.0046 (0.002) |
| *Other_Origin* | + | 0.0041 (0.004) |
| *ADR* | − | −0.0015 (0.016) |
| *Turnover* | − | −0.0022 (0.000) |
| *Closely_Held* | + | 0.0042 (0.005) |
| *Herf* | + | 0.0112 (0.095) |
| *Big4* | + | −0.0001 (0.468) |
| *Bank* | +/− | 0.0012 (0.062) |
| Adjusted-$R^2$ | | 0.0200 |

This table presents results for sensitivity analyses examining multivariate cross-sectional variation in the market reaction to IFRS adoption in Europe. Panel A presents separate results for a fully interacted model contrasting association across firms that are domiciled in code law versus common law countries. Panel B presents results decomposing the intercept into possible types of legal origin. Both panels use $N = 35,136$; both panels also use country/legal origin definitions from LaPorta et al. (1997, 1998). The dependent variable is $CAR_{j,e}$, or the firm's abnormal return, measured as the firm's three-day market-adjusted return centered on the event date, minus the three-day return to the DJ STOXX Global 1800 Index. *ADR* is an indicator variable that equals one if a firm cross-listed in the US using American Depository Receipts during the event year, 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. *Closely_Held* 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. *Big4* is an indicator variable equal to one if the firm is audited by one of the four largest accounting firms, and zero otherwise. *Bank* is an indicator variable equal to one if the firm's primary two-digit SIC code is 60 or 61, and zero otherwise. In Panel B, *Eng_Origin* is an indicator variable equal to one if the firm is domiciled in a country having an English legal origin, and zero otherwise. *French_Origin* is an indicator variable equal to one if the firm is domiciled in a country having a French legal origin, and zero otherwise. *German_Origin* is an indicator variable equal to one if the firm is domiciled in a country having a German legal origin and zero otherwise. *Scand_Origin* is an indicator variable equal to one if the firm is domiciled in a country having a Scandinavian legal origin, and zero otherwise. *Other_Origin* is an indicator variable equal to one if the firm is domiciled in a country having a legal origin not within the above categories, and zero otherwise. We present coefficients with the associated *p*-values in parentheses. Standard errors are clustered by two-digit SIC code (Petersen 2007).