



# **What Makes the Bonding Stick? A Natural Experiment Involving the U.S. Supreme Court and Cross-Listed Firms**

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# What Makes the Bonding Stick? A Natural Experiment Involving the U.S. Supreme Court and Cross-Listed Firms

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On March 29, 2010, the U.S. Supreme Court signaled its intention to geographically limit the reach of the U.S. securities antifraud regime and thus differentially exclude U.S.-listed foreign firms from the ambit of formal U.S. antifraud enforcement. We use this legal surprise as a natural experiment to test the legal bonding hypothesis. This event nonetheless was met with positive or indifferent market reactions based on matched samples, Brown-Warner, and portfolio analyses. These results challenge the value of at least the U.S. civil liability regime, as currently designed, as a legal bonding mechanism in such firms.

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## 1. Introduction

It is a truth universally acknowledged, that a foreign firm in possession of a good fortune, must be in want of a U.S. listing. This paraphrase on Jane Austen's witticism<sup>1</sup> appears consistent with a substantial literature documenting positive outcomes that visit firms, especially ones with good growth opportunities, that list on a U.S. exchange.<sup>2</sup> Yet the mechanisms that could engender such improvements consequent to a U.S. cross-listing remain debatable. In particular, it is unclear whether *legal bonding* - i.e., subjecting the foreign firm to U.S. legal institutions (Stulz (1999), Coffee (1999)) - may be responsible for these beneficial outcomes.<sup>3</sup> Potential endogeneity of cross-listing and unobserved firm heterogeneity poses a challenge to identifying the impact of legal bonding (see Karolyi (2012)). It is particularly difficult to empirically disentangle the legal bonding hypothesis from a different but similarly-aligned *reputational bonding* hypothesis, which highlights reputation building as a mechanism for committing to lawfulness, disclosure, and good governance (Siegel (2005)), and from the opposite *avoiding hypothesis*, which emphasizes agency concerns that may deter from such commitment (Licht (2003)). Identifying a causal role for legal bonding thus may necessitate a natural experiment, but to our knowledge, only Siegel (2005) thus far has advanced a theory and implemented this methodology to identify the importance of reputational bonding over legal bonding. Using a surprising legal development ushered by the U.S. Supreme Court to test the legal bonding

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<sup>1</sup> Compare to Austen's (1813:1) opening of *Pride and Prejudice*: "It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife." Note, among other things, the double meaning of "want".

<sup>2</sup> For a comprehensive survey see Karolyi (2006). Karolyi (2012) provides a review of cross-listing and bonding. See, in particular, Lel and Miller (2008) (top management turnover), King and Segal (2009) (investor recognition), Hail and Leuz (2009) (cost of capital), Ball, Hail, and Vasvari (2009) (price of debt), Frésard and Salva (2010) (value of excess cash).

<sup>3</sup> See Licht (1998) for a general theory. See, e.g., Bushee and Leuz (2005), with regard to mandatory disclosure by over-the-counter bulletin-board firms, and Doidge, Karolyi, and Stulz (2010) as well as Fernandes, Lel, and Miller (2010) with regard to opting out of stringent disclosure. We abstract from further discussion of SOX because it is highly controversial in terms of the benefits it might have brought about for firms and markets. See Li (2013).

hypothesis and, more broadly, to assess the value of U.S. legal enforcement institutions for cross-listed firms, we find evidence that calls the legal bonding hypothesis into question.

Successful bonding depends crucially on enforcement. Conventional wisdom from Bentham (1789) to Becker (1968) and beyond implies that vigorous enforcement should increase compliance. Without enforcement, assets that are vulnerable to opportunistic behavior should decrease in value and traders in such assets will take steps to hedge against it. The efficacy of legal enforcement in promoting non-opportunistic behavior hinges on public authorities that investigate breaches and mete out punishment and a civil liability system that awards damages. Countries, however, vary in the legal apparatus they deploy to enforce the law, especially with respect to investor rights (e.g., La Porta, Lopez-de-Silanes, and Shleifer (2006), Jackson and Roe (2009)). Firms may seek to improve on their home countries' institutions by listing on markets with better enforcement institutions, using the latter as institutional substitutes.

Several hundred foreign private issuers ("FPIs") from countries the world over list their equities on U.S. stock exchanges. These firms consequently become subject to the legal regimes of both their home country and of the United States. Under a large body of legal cases developed for over 40 years, all investors could bring or join securities fraud class actions in U.S. courts, regardless of where they traded. In the case of *Morrison v. National Australia Bank Ltd.* (2010) ("*Morrison*"), however, the U.S. Supreme Court surprisingly discarded this entire jurisprudence, as it ruled that civil liability for securities fraud applies only to securities listed on an American market and to securities transactions effected in the United States. The Court's general stance emerged during oral argument on March 29, 2010. U.S.-listed FPIs were to be shielded from civil claims by investors, including American ones, who traded on their home

markets, which is where the majority of trading takes place.<sup>4</sup> Twenty-six pension funds thus wrote in a comment to the SEC: “Stated plainly, *Morrison* and its progeny have stripped U.S. investors of nearly all of the private rights and protections against fraud by foreign issuers previously afforded by federal securities laws. It cannot be overstated that, under *Morrison*, companies listed on a foreign exchange can commit financial fraud within United States borders but investors have virtually no private recourse in United States courts.” (Smith et. al. (2012)). Although the case dealt most immediately with civil liability, its legal posture extends to public enforcement, as the Securities and Exchange Commission (“SEC”) acknowledged and courts later approved. Firms’ incentives to obey the securities laws now have been narrowed only to home-country enforcement, voluntary compliance, including for reputational purposes, and a differentially reduced civil liability due only to U.S. trades.

Such a surprising, massive change in the law of securities fraud is nearly unprecedented.<sup>5</sup> This renders this case uniquely suitable to conducting a natural experiment for identifying causality in this complex setting, which also provides exceptionally rich data on the behavior of sophisticated actors both during and after the event. This paper examines whether actors reacted to *Morrison* consistently with the notion that the U.S. antifraud regime - in particular, the class-action-based civil liability regime as it is currently designed - plays a beneficial bonding role.

We conduct the investigation at two levels of analysis – of firms and of investors, and at two time spans - a narrow event window and a period of several months. At the firm level, we look for changes in firms’ market value that may reflect a higher likelihood of dishonest

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<sup>4</sup> We compared the value traded of FPIs in the United States to value traded abroad and found that foreign exchanges accounted on average for 57% of value traded in the first three months of 2010. This suggests that foreign markets can be attractive places to execute trades in cross-listed companies, even for investors based in the United States. Comments from pension funds submitted to the SEC post-*Morrison* further support this claim.

<sup>5</sup> Legislative reforms are preceded by a lengthy process of public comment and hearings and court decisions of such magnitude are exceedingly rare. See Cox and Thomas (2009) for a survey. Choi (2004) reviews the evidence on the enactment of the Private Securities Litigation Reform Act, 1995.

behavior. We first examine the stock returns in a comprehensive sample of U.S.-listed FPIs, primarily around the date of oral argument before the Supreme Court, in both the U.S. and home markets. In numerous specifications and using matched samples, Brown and Warner (1985), and portfolio methodologies, we fail to find negative market reactions as the legal bonding theory implies. Instead we find significantly positive or insignificant abnormal returns. Abnormal returns were particularly positive for firms with above-median non-U.S. capitalization - namely, firms that were most extensively *excluded* from the ambit of the U.S. regime. Strikingly, abnormal returns exhibit significant negative relations with certain measures of home-country institutional quality (and no relations with others). That is, the weaker those institutions are in the companies' home markets the more *positively* markets reacted to the exclusion of non-U.S. transactions in their shares from the U.S. regime.

In order to overcome limitations of narrow-window event studies, we examine changes in the bid-ask spread, as a measure of adverse selection risk, between January and August 2010. We fail to find evidence that markets imputed a higher such risk subsequent to the legal event. Moreover, little if any post-event change in this measure appears to be related to the home country institutional quality, in contrast to the view of the U.S. civil liability system as a substitute legal bonding institution.

At the investor level of analysis, we examine whether investors' trading behavior reflects adjustments to the new legal regime, which from their vantage point now provides only U.S.-located transactions the option to join a securities fraud class action and collect some of the settlement amount. Analyses of price and return differentials and of trading volumes across markets during 2010 suggest that subsequent to the oral argument event, investors did not change their trading patterns in order to take advantage of the umbrella of U.S. enforcement.

This study suggests that when the Court signaled its intention to dispense with class-action-based civil liability, and possibly with public enforcement, investors responded positively or with indifference - i.e., anything but disappointment. Responses were more positive the greater the likely exclusion from the U.S. regime. While this finding is remarkably stable, its interpretation is more open-ended. The evidence in fact entwines two separate findings and implications. First, the non-negative reaction questions the role of the current U.S. civil liability regime as a valuable legal bonding mechanism. This does not mean that the law is unimportant. Together with market participants' indifference to the applicability of U.S. enforcement, the findings underscore the importance of firms' home-country public enforcement institutions. This may call upon policy-makers in both developed and emerging economies to reassess the institutional mechanisms that could support compliance by firms and corporate governance reform more broadly. It is one thing to mimic the U.S. by enacting similar rules; it is quite another thing to replicate the U.S. capital market should non-legal features of the latter be responsible for compliance.

Second, the unexpected (though less stable) positive reaction at the firm level of analysis and the muted reaction in terms of investors' trading behavior might shed light on using U.S.-style class actions as a private enforcement mechanism against securities fraud more broadly. That is, while our natural experiment focuses on cross-listed FPIs, these firms may be viewed as a clean laboratory for assessing the efficacy of such enforcement with regard to firms in general. The results highlight the importance of further inquiry into the merits of the current U.S. civil liability regime on U.S. firms as well.

The paper proceeds as follows. Part 2 lays down the theory and hypothesis and reviews related literature. Part 3 explicates the institutional setting, the proceedings in *Morrison*, and its aftermath. Part 4 describes the data. Part 5 presents the results. Part 6 concludes.

## **2. Theory and Hypothesis**

### *2.1. Bonding and Institutions*

The legal bonding hypothesis holds that by cross-listing their securities on better-regulated markets – specifically, in the United States – non-U.S. firms may substitute or supplement their deficient home-country institutions with the superior institutions of the U.S. While theoretically sound and practically appealing, the legal bonding hypothesis coincides with additional, equally plausible theories on the factors that may motivate firms’ cross-listing decisions. Expanding on the general theory of reputation as a credible commitment device (Diamond (1991), Klein and Leffler (1981); see Karpoff (2012) for a survey), Siegel (2005) theorizes and empirically shows that cross-listed firms may invest in reputational assets in lieu of weakly enforced laws that allow some insiders to flout the rules while leaving shareholders to bear the costs. That insiders make the cross-listing decision and thus may prefer avoiding stringent regulation over bonding to it further complicates the analysis (Licht (2003)). These hypotheses are not mutually exclusive. Stulz (2009: 349) thus avers: “some firms will choose stronger securities laws than those of the country in which they are located and some firms will do the opposite.”

The main objective of bonding by cross-listing is better disclosure. Although firms may have some incentive to make voluntary disclosure (Beyer et al. (2010); Hollander, Pronk, and Roellfsen (2010)), securities regulation regimes rely on deterrence to curb fraud. In connection with legal bonding Coffee (2002: 1788) argued that the market appreciates civil liability as “a



powerful engine of private enforcement (e.g., the contingent fee-motivated plaintiffs bar) [that] stands ready to enforce U.S. legal rules.” Both public and private enforcement mechanisms appear to be important. Jackson and Roe (2009) show that the scope of regulatory staff and budget affects financial market outcomes. La Porta, Lopez-de-Silanes, and Shleifer (2006) point to rules on disclosure and on civil litigation as the rules that “work” in securities laws (but not class actions or contingent fees).

A legal system that is well-designed in terms of investor rights and is well-functioning in actually enforcing these rights (e.g., Johnson et al. (2000); see La Porta, Lopez-de-Silanes, and Shleifer (2008) for a summary) may provide actors with means for making such commitment. In the absence of such an institutional environment, good-type agents may find it difficult to distinguish themselves from the opportunistic crowd. To garner market participants’ trust, these actors alternatively may invest in reputation building (Carlin, Dorobantu, and Viswanathan (2010)). Unless, however, they can find an institutional substitute. In Djankov et al. (2003), countries are located on different points on an institutional possibility frontier. Exogenous factors such as historical heritage, endowments, and culture may hinder a country from pushing its frontier. Individual actors may wish to exceed their home-country frontier and exploit another country’s better frontier. One way to achieve this is by subjecting oneself to the other country’s enforcement regime.

Scholars, however, have been questioning the merits of secondary market civil liability - namely, using securities fraud class actions as an enforcement mechanism.<sup>6</sup> Legally, an issuer or insiders who divulge misleading information to the market do not receive a direct financial

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<sup>6</sup> See, e.g., Alexander (1996), Coffee (2006), Jackson and Roe (2009), Mahoney (1992; 2009), Seligman (2004). Coffee thus seems to be of two minds with regard to civil liability. See also Coffee (2007). Fox (2009) argues that an issuer not publicly offering securities at the time of a fraud should have no liability. Langevoort (2008) opines that “a case can be made for some pull back in terms of [FPIs’] antifraud liability exposure in private actions.”

benefit from any two investors who trade securities in prices affected by this information. For any transaction in the secondary market, one investor's loss is the counterparty's gain (known as "circularity"). Public shareholders may end up paying for insiders' misdeeds, while attorneys pocket just about half of the direct costs paid by the firm (Caskey (2013)). Siegel's (2005) field work on cross-listed firms confirmed that virtually all cases end in settlement and that shareholders often only received the value of the insurance. Insiders who committed the fraud while being covered by insurance rarely had to pay anything directly. That insurers provide additional products to the firms might be the reason that multiple generations of managers at the same companies repeatedly violated the securities laws (see also Baker and Griffith (2011)).<sup>7</sup>

Policy-makers, too, differ over the preferred approach to legal enforcement. Specifically, implementing civil liability through a U.S.-style class action mechanism is controversial. In the United States, A 1995 legal reform to the civil liability regime yielded mixed results, such that the general desirability of class-action based antifraud liability remains debatable (see Cox and Thomas (2009) for a review). Several other countries during the last decade have adopted some type of class actions, and a small number among them have adopted the full "American-style" class action (Hensler (2011)). Governments that responded to *Morrison* cited different approaches to implementing civil liability for securities fraud. The British Government voiced fundamental disagreement "as to the desirability and appropriateness of even having a private right of action against an issuer for securities fraud", citing the circularity problem and high costs (SEC (2012: 24)).

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<sup>7</sup> These problems are exacerbated by a related factor, that lies beyond the scope of this paper, having to do with the general stance toward relieving corporate insiders from personal liability. Modern corporate law in many countries tends to tolerate providing insiders with insurance for and even exemptions from non-intentional breaches of their fiduciary duties, notwithstanding the consequent blunting of deterrence. Note, however, that in addition to monetary penalties, transgressions may entail reputational penalties (see Karpoff (2012)).

## 2.2. *Related Empirical Literature*

Whether the U.S. legal regime works to support bonding or deter from it is ambiguous (see Doidge, Karolyi, Lins, Miller, and Stulz (2009), Doidge, Karolyi, and Stulz (2010)). Much of the evidence is consistent with both legal bonding and reputational bonding (see, e.g., Frésard and Salva (2010), Ammer, Holland, Smith, and Warnock (2008), King and Segal (2009)). As already noted, Siegel (2005) has advanced a theory and tested with a natural experiment to identify the importance of reputational bonding over legal bonding. Recent research on voluntary disclosure provides evidence consistent with reputational bonding.<sup>8</sup> Doidge et al. (2009: 428) argue, in contrast, that “direct U.S. securities laws and enforcement are more important constraints in the extraction of private benefits than is the scrutiny of financial analysts” (i.e., reputation) (see also Fernandes, Lel, and Miller (2010) and Doidge, Karolyi, and Stulz (2010)).<sup>9</sup> Moreover, some work reflects disenchantment with cross-listing as a value-increasing transaction (e.g., Gozzi, Levine, and Scmukler (2008), Sarkissian and Schill (2008)). In an illuminating review of the bonding theory, Karolyi (2012: 524) tentatively observes: “A proper verdict about the bonding hypothesis, especially of its purer ‘legal’ form, has not yet been fully rendered. I think a more complete understanding of the enforcement mechanisms around the world, their financial needs as inputs and the full scope of legal outcomes is still needed.”

A good deal of empirical work shows that corporate misconduct entails adverse consequences for firms and their leaders to the extent that the transgression involved significant stakeholders such as financial misrepresentation to investors or consumer fraud (e.g., Karpoff,

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<sup>8</sup> See Shi, Magnan, and Kim (2012); Hope, Kang, and Kim (2013). These studies are noteworthy because they consider earnings guidance. Unlike other voluntary disclosures that could nonetheless be in breach of U.S. anti-fraud laws, this type of forward-looking disclosure is essentially exempt from anti-fraud liability under safe-harbor provisions of the Private Securities Litigation Reform Act of 1995 and therefore cannot serve for legal bonding.

<sup>9</sup> In a study that appeared after a preliminary version of this paper came out, Gagnon and Karolyi (2011) fail to find in their sample a significant change in firms’ market value on the oral argument event in *Morrison*, in contrast to what the legal bonding hypothesis implies.

Lee, and Martin (2008), Armour, Mayer, and Polo (2011); see Karpoff (2012) for a survey).

Public enforcement action by the SEC or the British regulator appears pivotal in triggering these effects. In the case of financial reporting violations, partialling out plausible legal costs still leaves a substantial decrease in share value following the discovery of misreporting. This decrease represents a reputational loss in that investors and firm counterparties “simply are protecting their own interests by requiring a premium to do business with firms that are less trustworthy than they previously believed.” (Karpoff (2012: 14)).

Within the literature on corporate disclosure several studies discuss the role of public and private enforcement mechanisms as necessary components in every disclosure regime in order to overcome insiders’ inclination to hide or delay bad news because they may fear getting sued (Skinner (1994)). Much of the empirical literature does not distinguish between public and private enforcement (but see La Porta et al. (2006)). Daske, Hail, Leuz, and Verdi (2008) argue that capital market benefits to more transparent firms accrue only to firms from countries where the rule of law prevails. Christiansen, Hail, and Leuz (2011), too, find that the beneficial effects of market abuse and transparency regulation depend on implementation and enforcement (see also Bushman and Piotroski (2006), DeFond, Hung, and Trezevant (2007)).

Finally, this study draws on the research of relations between market trading and corporate governance (see Healy and Palepu (2001) for a survey). We are especially interested in the bid-ask spread as a measure of adverse selection risk due to disclosure quality. Prior research has shown that the spread narrows for firms that are subject to higher disclosure requirements and to better corporate governance in general (Leuz and Verrecchia (2000), Chung, Elder, and Kim (2010)) and for firms that are based in countries with better institutions (e.g., Chung (2006), Eleswarapu and Venkataraman (2006)).

### 2.3. Hypothesis

To summarize the research questions, the legal bonding hypothesis implies that markets should react negatively to blunting the threat of enforcement as it erodes the credibility of firms' disclosures. This hypothesis implies that by denying a U.S. civil liability cause of action from foreign securities transactions and potentially undermining the SEC's international authority the U.S. Supreme Court severed the ties that bond FPIs vis-à-vis their non-U.S. investors. One therefore expects the event to exert a negative effect proportionate to the share of non-U.S. investors within firms' shareholder basis. This hypothesis further implies that the weaker the firm's home country institutional environment the greater will be the loss due to the virtual elimination of these enforcement mechanisms. In addition, we expect that the weaker deterrence effect will cause the spread to widen, and more strongly so for firms with weak institutions.

### 3. Legal liability before and after *Morrison*

The central pillar of the U.S. antifraud regime in the secondary market is Section 10(b) of the Securities and Exchange Act of 1934 ("SEA"), which prohibits securities fraud, and SEC Rule 10b-5, which implements it. The SEA does not explicitly provide for civil liability and it is silent with regard to its extraterritorial reach. The U.S. Supreme Court nonetheless had held that civil liability for securities fraud is clearly implied by §10(b) and later adopted the fraud-on-the-market doctrine. This paved the way for numerous investors to be grouped in a single class action.<sup>10</sup> Most other countries do not recognize this doctrine and class actions are much less expansive, which significantly limits the exposure to civil liability outside the United States. U.S. district courts since the 1960s have developed tests for applying U.S. securities law when

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<sup>10</sup> However, in 1994, the Supreme Court ruled that a private cause of action is not implied with regard to aiding and abetting, thus making market intermediaries such as accountants and lawyers subject only to SEC enforcement.

foreign elements are involved, known as the “conduct test” and “effects test”. Both tests are fact-intensive and as such inevitably somewhat vague but they have become well-established in all the federal circuits (see Buxbaum (2007) for a review).

The SEC has always insisted that it can assert its jurisdiction extraterritorially under the conduct and effects tests but in practice adopted a more reserved stance. The SEC repeatedly promulgated more lenient regulations for FPIs and provided exemptions from certain corporate governance requirements (Licht (2003), Li (2013), Shnitser (2010)). The SEC also has employed a relatively light punishment approach with regard to FPIs and their insiders (Siegel (2005)). Shnitser (2010) observes that relative to domestic U.S. issuers, FPIs have benefited not only from a laxer set of rules but also from a more forgiving public enforcement agency. Put otherwise, the rumors of the SEC’s threat of public enforcement have been greatly exaggerated.

Against this backdrop, *Morrison* involved an Australian bank with common shares trading in Australia and in several other countries and ADRs trading in the U.S. The fraud took place in a wholly-owned Florida subsidiary but was communicated to the market by the bank. The media began to discuss the impending hearing already on Friday, March 26, 2010. In the widely-followed Conglomerate blog, Buxbaum (2010) emphasized that “the question the case presents is a more general one: how to define the scope of application of U.S. securities law in cases with foreign elements” (see also (Denniston (2010a)). Describing the case as “one of the most keenly-awaited of the year”, the Times of London said: “The Supreme Court will on Monday hear a case that threatens to scare foreign companies from investing in America by hugely expanding overseas investors’ rights to bring multi-million dollar securities actions in the US.” A blogger on the *Wall Street Journal* Blogs wrote: “We can’t remember a case about

jurisdiction that's generated such feverish interest as the one to be argued Monday at the U.S. Supreme Court" (Jones, 2010).

Oral argument before the Supreme Court took place between 11:07 am-12:06 pm on March 29, 2010. As the session unfolded, it became apparent that the justices were keen on curbing foreign access to U.S. courts. Particularly surprising was an unexpected coalition of views among the justices showing hostility toward the established conduct and effects tests and support for an entirely new approach.<sup>11</sup> Shortly after the oral argument concluded, at 12:28 pm, the leading SCOTUSblog posted an analysis titled "Curb on securities suits?" that said: "U.S. Supreme Court on Monday explored ways to sharply limit or perhaps even forbid private securities fraud lawsuits in U.S. courts that might intrude on foreign governments' powers to police their own stock markets. Little sentiment was expressed on the bench in favor of allowing foreign investors to come to America..." (Denniston, 2010b). At 1:37 pm, the Associated Press published its report saying: "The Supreme Court indicated Monday it could prohibit foreign investors from using U.S. securities law and American courts to sue a foreign bank for fraud." (Sherman, 2010). This report appeared later on that day in major channels such as Fox News and the Wall Street Journal. The justices' stance was surprising indeed. As the news reports show, rather than examining ways to clarify a 40-year worth of precedent on the conduct and effects tests, as the parties' arguments suggested, the justices instead indicated that it may be replaced with a flat prohibition on foreign investors' use of the U.S. legal system with regard to foreign firms.

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<sup>11</sup> Justice Breyer and Justice Kennedy entertained a theory of a purely territorial, exchange-based test (Morrison Transcript (2010), pp. 5-9), while Justice Ginsburg from the more liberal wing noted that the case "has 'Australia' written all over it" (p. 5). Justice Scalia explicitly stated: "We don't want the determination of whether there has been a misrepresentation on the Australian exchange and whether Australian purchasers relied upon that misrepresentation to be determined by an American court" (p. 16). Chief Justice Roberts complained that "there are a lot of moving parts in that [conduct] test. You know, significant conduct, material, you require it to have a direct causal relationship. Doesn't the complication of that kind of defeat the whole purpose?" (p. 41). Associated Press reported soon after the session, "none of the justices appeared to accept the investors' argument." (Sherman, 2010).

The Court's written opinion in *Morrison* vindicated the media's assessments. The majority opinion discarded the conduct and effects tests and replaced them with a new "transaction test," under which the law applies only to transactions in securities listed on an American stock exchange and to securities transactions in the United States. The Court thus scrapped a major body of law, which was part and parcel of the general U.S. jurisprudence on extraterritoriality. The Court's "sledgehammer approach" (Davidoff, 2012) was even referred to as "shocking" (Geevarghese, 2011). The decision was publicized on June 24, 2010. Within less than 24 hours, on June 25, 2010, a conference committee approved the final version of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("DFA"). This version included two sections (§§ 929P and 929Y) providing that U.S. courts will have jurisdiction regarding public enforcement of the Securities Acts by the SEC and the Department of Justice based on the conduct and effects test. With regard to civil liability Congress only instructed the SEC to conduct a study on the desirability of using these two tests, thus leaving the ruling in *Morrison* intact. FPIs thus remained shielded from civil antifraud liability under U.S. law with regard to foreign trades. Buckberg and Gulker (2011) observe that filings against FPI subsequent to *Morrison* remained within historical ranges, yet with the exclusion of foreign-trades investors and the fall of expected litigation costs, U.S. cross-listing should become less deterring. In a study of U.S. securities class actions against non-U.S. companies as of mid-2012, Patton (2012: 32) documents stability in the number of filings post-*Morrison* but finds that the "average settlement recently has been far lower", which "may be attributable in part to the *Morrison* decision, which is likely to reduce the size of some settlements, by restricting claims to those in connection with US trading."



Although the case before the Court involved civil liability, much of the legal argument revolved around general principles of statutory interpretation and international comity. These principles are equally applicable to public enforcement, such that people who followed the case could infer that the limitation of extraterritorial reach of U.S. law could extend to public enforcement as well. The SEC, for one, clearly made this inference. The legislative history and language of the June 25 amendments to the DFA show that the SEC was concerned about the likelihood that the Supreme Court had limited its international enforcement authority (Painter (2011)). The SEC later officially acknowledged that *Morrison* affected its public enforcement authority abroad. (SEC (2010a: 5)). In its enforcement proceedings against Goldman Sachs's Fabrice Tourre, the SEC argued that "Congress effectively overruled *Morrison*," which had "repudiated" the prior law (SEC (2010b: 10)). The SEC, however, did not claim that this provision was retroactive and thus conceded *Morrison*'s applicability to public enforcement – a position that the court approved. The upshot is that extraterritorial fraudulent conduct that took place prior to June 24, 2010 had been excluded from the ambit the SEC's authority.

## **4. Data**

### *4.1. Dependent Variable*

Our sample of FPIs contains foreign companies with cross listings on U.S. stock exchanges. We also consider foreign companies trading on OTC markets. We identify our sample FPIs using numerous sources. The primary sources were the SEC and the websites of the various exchanges, COMPUSTAT North America, the CRSP Monthly Stock File, the CUSIP Master File, and the depository services directories of BNY Mellon, JP Morgan Chase, and Citigroup. Information on which exchanges the firms list on, and whether they have a listing in a

foreign market, was also verified using Capital IQ's screening tools. In addition to those principal sources, the other sources consulted are detailed in the appendix to this paper.

We identify the set of cross-listed FPIs with SEC compliance at the end of 2009 along with their country of incorporation from the SEC website. A total of 676 FPIs were listed in the U.S. on December 31, 2009. We hand-match the list of cross-listed FPIs with CRSP, Compustat, Worldscope, and Capital IQ to obtain various identifiers for our sample FPIs. We require that FPIs have listings in both the U.S. and home markets because the *Morrison* decision refers to transactions effected outside the U.S. We also require that sample FPIs have non-missing returns on at least one of the event days to maintain consistency in the cross-sectional regressions. We further require that sample FPIs have at least 50 valid returns over the estimation period between January 1, 2008 and December 31, 2009, with at least 20 valid returns after November 16, 2009. We examine the U.S. and home market returns separately, so firms do not need to meet these requirements simultaneously in both markets in order to be included in the analysis. A firm whose U.S. listing meets the above requirements, but whose home listing does not, would be included in the U.S. analysis and excluded from the analysis of returns on the foreign exchange. These requirements result in a sample of 578 cross-listed FPIs with home market return data and 583 cross-listed FPIs with U.S. market return data. The difference between the U.S. and home samples is due to data availability. U.S. daily returns data come from CRSP and home market daily returns data from S&P Capital IQ, which is also the source of bond returns data.<sup>12</sup> Data on intraday 15-minute interval returns come from the New York Stock Exchange's Trade and Quote

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<sup>12</sup> Additionally, we matched FPIs to their home market issues in Datastream. The data from S&P Capital IQ include more non-missing, non-zero returns as well as more information on daily volume. The Capital IQ data also include dividend adjusted prices to five decimal points, while Datastream's return index variable is available to the nearest thousandth. The means of the return distributions are identical to four decimal places, and the standard deviations differ in the thousandth place. Capital IQ data were used for all home market results presented in the tables.

(TAQ) database. Our sample includes firms that are no longer traded but were covered by these data vendors.

Our sample is structured to address the legal event indicated by the Supreme Court - namely, denying access to the U.S. civil liability system with regard to foreign trades in U.S.-listed foreign firms. The sample thus consists of foreign firms on the 2009 SEC compliance list that were also traded on a national securities exchange. Unlike Gagnon and Karolyi (2011), we exclude foreign issuers not on the SEC list that exclusively trade over the counter. This is consistent with the sample the SEC (2012) itself identified as relevant in *Morrison*. While in theory fraud in these securities is prohibited as in any other security, in practice there is hardly any enforcement regarding them. For the sake of completeness, however, we repeat the analyses in a sample that includes those OTC firms and obtain similar results.

A lesser-known fact about U.S.-listed foreign firms is that not all of them qualify as foreign private issuers for regulatory purposes. The SEC's definition of a foreign private issuer excludes firms that are technically foreign but essentially American, i.e., firms incorporated outside the United States, in which the majority of voting rights are held by American shareholders and one of the following criteria is also met: the majority of the top management is American; the majority of assets is located in the U.S.; the business of the firm is managed primarily from in the U.S (SEC Rule 405 and Rule 3b-4). We obtain the roster of firms that are foreign according to the banks' websites but are regarded as domestic firms by the SEC. We compare the rosters of cross-listed FPIs from the banks' websites and from the SEC. Any cross-listed FPI that is not on the SEC roster but is on the roster of the banks' websites is classified into this category of "foreign domestic". We further verify the foreign domestic status of these firms through EDGAR database and Thomson Analytics. Finally, while many foreign firms enter U.S.

securities markets using ADRs or other depositary facilities issued by depositary banks, a subset of 273 foreign firms use “direct listing”, namely, they list the same shares or stocks that are listed in their home market. Such direct listing is common among Canadian and Israeli issuers and a small number of firms from other countries. We identify the direct listings from the above-mentioned sources.

The benchmark choice is a major methodological issue in event studies of cross-listed firms (Karolyi (2012)). Our primary market benchmark is the S&P 500 index, as it has the advantage of not including any foreign firms. For robustness tests we construct FPI-free versions of the MSCI Europe, MSCI World, and FTSE World indexes. For each of these benchmarks we take the list of its constituent securities from March 25, 2010 and remove sample firms, which are affected by the Supreme Court decision.

#### 4.2. *Explanatory and Control Variables*

We use firms’ market capitalization outside the U.S. as a proxy for the capital that (transactions in which) became shielded from liability due to *Morrison*. *Non-U.S.-Market Capitalization* is one minus the ratio of the market value of equity in the form of cross-listed securities in the U.S. divided by company market value. To obtain reliable data on this item we began with CRSP, Compustat, and public data from NYSE, NASDAQ, and AMEX. We then incorporated data provided to us directly by NASDAQ and company annual reports and consulted Capital IQ with regard to Chinese firms. Remaining ambiguities were reconciled through individual phone calls. We obtain accounting data from Compustat and Worldscope.

From prior literature and international organizations we obtain data on countries’ institutional factors as follows. From the World Bank’s Governance Indicators we obtain the *Rule of Law* index, which captures countries’ legality and general protection of property rights. We also use the Polity IV index of *constraints on the executive* as an alternative measure of

property rights protection. We use the indexes of legal rules on civil liability (*private litigation*) and on *disclosure* in securities regulation laws drawn from La Porta *et al.* (2006), namely, the securities rules that these authors identify as ones that “work” against insiders. To identify the countries that have adopted U.S.-style *class action* we draw on Hensler (2011), who uses information from the Global Class Actions Exchange at Stanford University. A measure of shareholder protection known as the *anti-director-rights index* (“ADRI”) comes from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008). Refining and improving on a prior index of the latter three authors, the ADRI focuses on countries’ company laws. Spamann (2010) discusses alternative codings for the legal provisions included in the ADRI so we also obtain his versions of this prominent index. In addition, we consider Djankov *et al.*’s (2008) anti-self-dealing index (“ASDI”) of formal shareholder protection that emphasizes legal process. From Jackson and Roe (2009) we obtain data on *public enforcement* of securities laws as measured by the weighted sizes of the budget and of the staff of the regulatory agency.

We also control for several firm-level characteristics using data from Compustat. *Tobin’s q* is  $(\text{market value of equity} + \text{total assets} - \text{common equity}) / \text{total assets}$ . *Fixed Asset Intensity* is property, plant, and equipment as a percentage of total assets. *Log (total assets)* the natural logarithm of total assets, controls for firm size. *Return on Equity* is net income as a percentage of common equity. *Capital expenditure* is capital expenditure as a percentage of total assets. *Sales growth* is one-year sales growth and controls for growth opportunities. *Leverage* is short-term debt as a percentage of total assets. With data from the Stanford Securities Class Action Clearinghouse we identify all the FPIs in our sample (115 in total) that have been thus sued since 1996 and the number of such lawsuits. For the analysis of price/return differentials we rely on price data provided by Capital IQ for both the U.S. security and the home country security. We

then limit the sample to days in which both securities have available prices. To avoid spurious effects from wrongly coded data (especially for ADR bundling ratios) we winsorize price data on the extreme ends of the distribution in price differences. For the analysis of trading volume we identify all of a company's active equities in Capital IQ and categorize them by exchange into foreign- versus U.S.-exchange groups. We then download a daily time series of volume for all days from Capital IQ, and sum the volume by group and month. The analysis of bid-ask spreads also relies on daily data from Capital IQ, which we winsorize at the 99.5<sup>th</sup> percentile.

#### *4.3. Summary Statistics*

Panel A of Table 1 reports the number of sample U.S.-listed FPIs by country. These firms are from 48 countries, based on the SEC's designation of incorporation countries (which determines their applicable corporate law), and are diverse in several respects. The countries with the most FPIs are Canada (168 FPIs), Cayman Islands (63), Israel (46), and the United Kingdom (32). Data from Capital IQ suggests, however, that only about 14 firms are headquartered in tax havens. Sample FPIs are geographically diverse and are also somewhat diverse in their legal origin. English legal origin has the greatest number of sample FPIs, with 321 FPIs from 15 countries. Panel B reports a respective country distribution of firms for home market analysis. Panel C reports the summary statistics for the variables used in our cross-sectional regressions. We report the number of observations with non-missing value for a specific variable. We also report the mean, median, standard deviation, and the 5<sup>th</sup> and 95<sup>th</sup> percentiles of these variables across all sample FPIs.

## **5. Results**

The empirical analysis consists of two parts. At the firm level of analysis, we first test markets' reaction to the oral argument event. Since no event study methodology is free of

limitations, we use several methodologies currently in use in the literature. Next, we examine whether abnormal returns relate to institutional factors. We then consider firm-level effects in a broad time window of several months. At the investor level of analysis, we examine whether market participants adjusted their trading behavior to the legal change that would provide an advantage to trading on U.S. exchanges. We thus consider differential price and return changes and changes in relative trading volumes.

### *5.1. Abnormal Returns around the Focal Event*

We begin with a matched sample approach to examine whether abnormal returns of U.S.-listed FPIs in fact differ from returns of as-similar-as-possible foreign firms not listed in the U.S. and thus unaffected by the legal event. Using matched samples is gaining traction in finance studies as it enjoys several advantages. In particular, by using a control group this method avoids the need to estimate “normal” returns, which, in turn, depends on having an appropriate market benchmark - a thorny issue in the present context.

Table 2 presents results for several sequential matching procedures as well as different nearest-neighbor matches based on propensity score matching. For each sample firm, we identify the foreign, non-cross-listed, publicly-traded peer firm that is closest in terms of market capitalization, book-to-market ratio, or total assets. We draw peer firms domiciled in the same country and operating within the same industry as the sample FPI. To accommodate for differences in trading hours on markets around the world, we report for the full sample of FPIs and for a sample consisting only of FPIs located in North or South America. For Western-Hemisphere FPIs we show results for both U.S.- and home-market returns. The results are consistent throughout and support the inference that markets tended to react positively to the imminent legal change. The size of these abnormal returns is substantial, ranging between 0.6-

1.1 percent. Similar analyses with a sample that also includes OTC and “foreign domestic” firms yield similar results, with even somewhat higher excess returns (available in an appendix).

Next, we present traditional Brown-Warner analyses of abnormal returns. Table 3 reports abnormal U.S. returns using market model, market adjusted, and mean adjusted returns. In light of Fama and French (2000), the panel also reports in tandem results for which the independence assumption is dropped. We make special efforts to address the issue of appropriate benchmarks. To this end, we use versions of four different benchmarks (S&P 500, MSCI Europe, MSCI World, and FTSE World). Each of these benchmarks is adjusted by excluding sample firms from it - a task that is made difficult because information about the constituent firms of these indices is not readily available. The results are consistent across different combinations of tests, benchmarks, samples, and markets: U.S.-listed foreign firms experienced insignificant or even positive abnormal returns on the oral argument event, in contrast to the theoretical prediction. The abnormal returns vary in size but many of the significantly positive returns are about 0.5 percent and several are well above one percent. Table 3 thus suggests that market participants did not consider the legal developments as negative for FPIs.<sup>13</sup>

Table 4 tests markets’ assessments of the legal event using a portfolio analysis approach. We consider U.S. returns of both value-weighted and equal-weighted portfolios, using the four indexes as benchmarks. We used the sample FPIs to create a daily portfolio. We regress the portfolio returns on intercept, relevant benchmark returns, and an indicator that is 1 for March 29 and zero otherwise. We report the coefficient estimates of the indicator and t-statistics. We also

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<sup>13</sup> Using particular benchmarks such as S&P 500, MSCI Europe, and several other sections of MSCI, we separately investigated sub-samples of ADRs and direct listings on different individual days, focusing in particular the oral argument date since information on this event is unlikely to leak. The results are consistent in that we observe either significantly positive or insignificant abnormal returns especially on that date (available in an appendix). Consistent results obtain in a sample that also includes OTC and “foreign domestic” firms. To address the cross-correlation of returns in the most rigorous way we also implemented Greenwood’s (2005) methodology (not shown). The results were consistent in that in no case do we observe a negative market reaction as expected from the institutional substitute/legal bonding hypothesis.



examine subsamples without a 25 percent return restriction, excluding tax haven companies, and focusing on firms from emerging markets. This method presents difficulties for using robust standard errors, however, due to the narrow event relative to the estimation period (see Long and Ervin (2000)). We therefore tabulate portfolio approach results with both non-robust and robust standard errors. One may observe that with non-robust standard errors, the abnormal returns are insignificant, although we do not find a negative market reaction. Results for a 3-day event window are qualitatively similar (not shown).

In summary thus far, whether one prefers to focus on the significant or the insignificant market reactions, a most conservative interpretation of the results suggests that U.S.-listed foreign firms did not decline in value when the news about the Supreme Court's surprising approach broke out. Such market reaction cannot be taken lightly if one believes that legal liability - in particular, civil liability for securities fraud - is responsible for any beneficial bonding effect that the literature has documented. Even a "non-result" interpretation of the present findings cannot be reconciled with the "purer 'legal' form" of the bonding hypothesis. This is all the more noteworthy because, as we explain, the *Morrison* court signaled its willingness to discard forty years of jurisprudence on the geographical scope of U.S. law and block foreign claims from litigating in the U.S.. If such a dramatic event does not make for an appropriate test of legal bonding, little else ever will.

To illustrate the market reaction to the legal event and the role of non-U.S. market capitalization, Figure 1 shows the scatter plot of event period cumulative abnormal returns along an axis of non-U.S. market capitalization of individual FPIs. Because the location of the transaction is the linchpin of *Morrison*, FPIs with more transactions likely to take place outside the U.S. would be more strongly affected by the new legal rule. One may note the relative

number of positive observations and in particular their concentration in the range above the median of 0.82 non-U.S. market capitalization. We address this feature in more detail below. Figure 2 provides another vantage-point by showing the median abnormal return for each day during the event by level of non-US market capitalization. The returns of firms with the highest non-US market capitalization grew over the three-day window, whereas those of firms in the other group began to decline after March 29.

Figure 3 shows the U.S. cumulative stock returns of cross-listed FPIs during 15-minute intervals of the trading hours on March 29, 2010, distinguishing subsamples of FPIs with above- and below-median non-U.S. market capitalization.<sup>14</sup> Cumulative returns of these two subgroups were moving in lockstep until 12:30 pm, after which time returns of the above-median subgroup began to increase. The below-median subgroup remained largely stable until about 3:00 pm, when its returns began to increase but did not close the gap from the other group. This pattern is consistent with market participants quickly impounding the reports from the Supreme Court as good news for FPIs with especially high ratios of capital only listed outside the United States.

We also considered the event when the Supreme Court announced it would hear the case (writ of certiorari), on November 30, 2009, and found insignificant abnormal returns. With regard to the event in which the written decision was publicized, on June 24, 2010, tests in an early stage of this study suggested a positive market reaction. An in-depth analysis of the event itself unfortunately suggests that it does not lend itself to conducting a reliable event study. In terms of news value for market participants, the written decision provided relatively little. Already in the oral argument, justices from the conservative and the more liberal wings signaled an intention to limit the reach of the U.S. anti-fraud regime abroad. The majority's language in

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<sup>14</sup> Neither during the oral argument nor in the written opinion did the Supreme Court specify how the location of the transaction is to be determined. Subsequent court decisions that implemented *Morrison* indeed held that the location of the transaction is determined by the exchange on which it is executed.

the decision did not stray from the course charted during oral argument. The bane of this event, however, comes from the circumstances surrounding it - primarily its close proximity to the DFA, with its momentous implications for the capital market, which was discussed in Congress at the same time and was concluded within less than 24 hours. Worse yet, the provisions added to the DFA with regard to extraterritorial reach of public enforcement were anything but clear (Painter (2011)). Finally, for the oral argument we checked that there were no major news events or currency movements around it and in fact confirmed that currency movements do not drive our results. The same cannot be said about the publication event. In addition to the DFA, banking sector and world economic news was published around that date, thus tainting the time window. Hence the focus on the oral argument event. Finally, in neither the oral argument nor the written opinion did the Court delve into the more remote and arcane aspects of foreign domestics and OTC compliant firms. We nevertheless repeated the analyses with samples that also include those firms as well as samples that exclude tax havens and obtained similar results.

Ball et al. (2009) argue that by cross-listing equity in the U.S. foreign firms may be able to lower their cost of debt, *inter alia*, thanks to lower information costs due to the U.S. disclosure regime and class actions. In a test of bond returns around the oral argument event, we observe a significant increase but this increase is not robust (not shown). Bond returns, too, thus do not reveal a negative reaction, contrary to what the legal bonding hypothesis implies.

## 5.2. *Institutions and the Value of Enforcement*

We now turn to examining how different factors may have affected markets' reactions to the legal developments. As Kothari and Warner (2007: 19) point out, such cross-sectional tests "are relevant even when the mean stock price effect of an event is zero." Table 5 reports the results of cross-sectional regressions where firm-level and country-level variables are used to explain variation in the abnormal returns of individual FPIs during the oral argument event. The

table presents piecewise linear specifications that distinguish three brackets of the share of firms' equity capital that is listed on exchanges outside the U.S. as a proxy for the likely share of non-U.S. transactions. We consider several variables that capture different facets of the institutional environment in firms' home countries. These variables, which feature prominently in the literature, move from broader aspects of legality and protection of property rights, to corporate governance and investor protection, to specific aspects of securities regulation. We control for GDP per capita to avoid spurious effects from the level of national wealth and economic development. To avoid collinearity problems we enter the institutional variables seriatim.

The finding that stands out is that abnormal returns tended to be *higher* in firms with above-median non-U.S. capitalization (of 0.82-1.00) – namely, firms that were affected the most by the exclusion from U.S. enforcement. Most of the institutional and firm-level factors do not show significant relations to abnormal returns. The exceptions among institutional factors - measures of general property rights protection and home-country public enforcement - exhibit a negative sign, contrary to the view of U.S. enforcement as a valuable bonding mechanism.

Capital markets were largely agnostic to the partial abolition of U.S. antifraud liability regardless of firm-level factors such as quality, size, profitability, or growth. Moreover, in separate regressions using the basic specification as in Table 5, we enter a dummy variable taking a value of 1 for FPIs that have been sued in securities class actions or, alternatively, an index counting the number of lawsuits against the FPIs, which may better account for recidivistic firms. While this is not conclusive evidence for wrongdoing, procedural rules since 1995 significantly limit the incidence of frivolous suits. Such a checkered history thus may be treated as *prima facie* evidence for firm-level governance quality (see also Gande and Miller (2011)). These variables exhibit insignificant signs in both tests, however (not shown). Thus, even for

firms, in which investors have in fact sought redress through the U.S. civil liability system, markets did not respond differently to the loss of this legal protection. This evidence, too, is hard to reconcile with the legal bonding hypothesis.<sup>15</sup> This evidence is more consistent with the notion that U.S. civil liability as currently designed was either irrelevant or burdensome.

The findings presented thus far originate from the legal event's time window. Beyond inherent limitations of the event study approach, which we mitigate by using several methodologies and numerous specifications, some might question how quickly can market participants comprehend and adjust to the new legal regime. To assess governance-related effects of the legal event over a long time span, we consider changes in the bid-ask spread in the home market. The spread serves as a measure of adverse selection risk due to inferior expected disclosure. A wider spread would indicate that the likely weaker enforcement may have blunted the incentives for full disclosure.

Table 6 examines home market bid-ask spread data for the eight-month period between January 1, 2010 and August 31, 2010. We winsorize the observations in the 99.5th percentiles to avoid extreme values due to coding discrepancies. The main variable of interest is a post-event dummy taking 1 for the four months after the oral argument and 0 otherwise. We control for brackets of non-U.S. market capitalization and for the home-country institutional factors as discussed above. To account for event-related effects of institutions on the spread we enter interaction terms with the post-event dummy. Spreads are significantly narrower the greater the firm's non-U.S. capitalization, as expected, since "liquidity attracts liquidity" and because the home market may lead in price formation. Surprisingly, spreads are generally greater for firms from countries with US-style class action procedures, irrespective of the event, as if such class

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<sup>15</sup> We also experimented with other firm-level factors but these were not significant and did not change the results reported above. These results are available upon request.

actions were counterproductive in mitigating agency problems. Beyond this, however, spreads exhibit virtually no sensitivity to the event itself nor to institutional quality (similar results obtain for U.S. spreads; not shown). This evidence suggests that the substantial dilution of deterrence did not cause investors to hedge more vigorously against potentially greater incidence of fraud.

### 5.3. *Investors' Vantage-Point*

This section examines the reaction of market participants to the focal event from investors' vantage-point. Recall that *Morrison* denied investors in non-U.S. transactions the right to sue in U.S. class actions in case of fraud. While the securities traded on U.S. and non-U.S. markets are financially equivalent, trading in the U.S. provides investors a "fraud insurance" of sorts - an extra option value of participating in damages payments should the transaction be tainted by fraud. Investors may respond to this discriminatory effect by paying a premium on U.S.-traded ADRs compared with foreign-traded shares (of equivalent equity capital amount), which would reflect this option value. Investors may also shift at least some of their transactions to U.S. exchanges in order to be entitled to this option. These mechanisms illuminate investors' personal assessment of legal enforcement yet they relate only tangentially to the firm's corporate governance and hence, to bonding. This is because bonding affects the firm, whereas the current mechanisms discriminate between otherwise identical investors.

We begin with the observation that U.S.-traded FPI equities command a premium of about 0.9 percent on average over similar equities traded on the home market. Figure 4 shows this premium for 30 business days before and after the oral argument event, adjusted for ADR bundling ratios, currency differences, splits, dividends, etc. We ask whether the oral argument event caused investors to increase this premium to reflect the extra option value that was to become attached only to U.S.-traded securities. Panel A of Table 7 presents regressions, in which the dependent variable is the difference in the U.S. and home market prices as a

percentage of the home market price between January 1, 2010 and August 31, 2010.<sup>16</sup> We employ specifications similar to those used in the regressions in Table 6, which include a post-event dummy, non-U.S. capitalization, institutions, and interaction terms. Contrary to our own expectations, the post-event dummy shows that the premium for U.S.-located transactions did not change significantly after the oral argument, all else being equal.<sup>17</sup> The U.S.-location premium in general similarly does not exhibit significant relations with institutional quality, suggesting that the differential change in the institutional environment was not followed by concomitant differential pricing.

Next, we briefly consider Gagnon and Karolyi's (2011) finding of post-event changes in return differentials between firms' U.S.-listed securities and their respective home-market-listed shares.<sup>18</sup> In Panel B, we attempt to replicate in our sample these authors' finding. We run a similar regression of the return on a portfolio of return differentials of ADRs and direct listers on the return on a benchmark index and a dummy variable as an indicator for the event days, using non-robust standard errors, yet we fail to observe a significant deviation. Panel C uses bootstrapping to estimate the empirical distribution of the difference in returns between markets and compares the event period mean return difference to that distribution. The mean difference in returns during the event, using two time-windows, is not unusual.

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<sup>16</sup> This dependent variable measures the premium of the U.S. shares. If the decision in *Morrison* bestowed valuable rights exclusively on the U.S.-traded securities, then there should be a permanent increase in the price premia of the U.S. shares post-*Morrison*. Alternative measures, such as the difference between U.S. and home market returns during the event, do not capture the value of the class action option on the U.S. shares because differences in returns are transitory, but the rights uniquely granted to purchasers of shares in the United States were permanent. Nevertheless, we examine the difference in returns during the event in panel C of table 7 and fail to find evidence that the difference was unusual compared to other one- and three-day windows.

<sup>17</sup> Note that this shrinking of the relative premium is not due to a likely reduction in the overall pool of potential plaintiffs, since the latter, as a firm-level effect, would be captured in respective proxies for firm-level governance.

<sup>18</sup> Note that while we use daily price percentage (premium), which we find easy to interpret intuitively, these authors consider daily return differentials and in fact mention two slightly different definitions for this variable.

Whether or not there was any change in the premium for U.S.-located transactions, investors might have voted with their feet by shifting at least some of the trading volume to the U.S. market with a view to secure their right to sue should fraud be discovered. In Table 8 we regress the share of total trading volume that occurs on U.S. markets, again using specifications similar to those used in Tables 6 and 7. The post-event dummy does not provide a stable indication that investors somehow changed their preferences for trading venues in response to the event (see also Bartlett (2012) for consistent findings for institutional investors). The same holds for the interaction terms of this dummy with institutional factors except for the rule of law and constraints on the executive, which actually suggest some post-event migration of trading from countries with *better* property rights institutions.

## **6. Conclusion**

This study examines the reactions to a legal development that signaled an abrupt curtailment of the civil liability regime to which U.S.-listed foreign firms are subject and undermined the SEC's international authority with regard to these firms. We exploit this event as a natural experiment regarding the role of enforcement institutions in promoting compliance by firms through legal bonding.

We fail to find evidence that the legal change ushered by the *Morrison* court somehow harmed these firms or disgruntled individual investors. In fact, we observe market reactions that are either positive or insignificant. It is particularly noteworthy that positive reactions correlated with a proxy for the differential degree to which FPIs were to be relieved from U.S. enforcement. We also fail to find evidence that from their individual perspective, investors changed their trading behavior to secure the putative benefits of securities fraud class actions. These results challenge the proposition that the U.S. legal enforcement mechanisms may serve as a substitute



bonding mechanism to compensate for deficiencies in home-country institutions. It could be the case that investors consider the disclosure duties under U.S. laws as valuable standards.

However, investors' concerns about compliance with these duties do not appear to depend on U.S. legal enforcement, especially not through class actions. Foreign firms' commitment to legal compliance thus may hinge on alternative, informal mechanisms, most plausibly on reputation-based trust (e.g., Siegel (2005), Carlin, Dorobantu, and Viswanathan (2009)). Legal enforcement could support the maintenance of such reputation (Karpoff (2012)) but not by way of civil liability-based deterrence.

A cynic might quip that the only parties who appear interested in the U.S. antifraud regime are insurers and lawyers. We do not subscribe to this view, nor to the idea that enforcement in general is unimportant. Subject to the obvious need for more in-depth analysis, the reactions we observe do not mean that civil liability in general *should* be abolished, let alone public enforcement. Private enforcement of securities laws may be beneficial if designed to exert effective deterrence - namely, a mechanism that would not allow the actual perpetrators to avoid virtually all liability.

The broad pattern of the current results nonetheless lends support to criticisms of the U.S. secondary market civil liability as it is currently structured. Which component of this regime may be particularly problematic - whether it is the fraud-on-the-market doctrine, or class action rules, or another legal institution dealing with insiders' liability - warrants further research. Current deficiencies, by which insiders accused of misconduct rarely pay out of pocket to compensate outside investors, are troubling. A legal system providing weak enforcement but entailing considerable costs may just not have been worthwhile. A better designed liability system that actually delivers targeted deterrence and compensation to aggrieved investors may be

required for legal bonding to have teeth. Our findings provide yet more impetus for searching for such mechanisms - perhaps by reforming insurance arrangements such that transgressing insiders would personally face more significant consequences and a public enforcement system that is far more vigilant and willing to impose civil penalties, in addition to criminal sanctions (compare, respectively, Baker and Griffith (2011) and Christiansen, Hail, and Leuz (2011)).

Without that, reputational bonding, albeit an imperfect mechanism, can still explain any positive bonding benefits to firms. Emerging economies that sought to piggy-back on U.S. legal bonding may need to reinvest in strengthening their own public enforcement at home.

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## Tables and Figures

**Table 1. Summary Statistics**

This table reports summary statistics of our sample. Panel A reports the distribution of cross-listed FPIs by country as defined by the SEC. Panel B reports the distribution by country as defined by the SEC of firms included in the analyses of home market returns. Panel C reports the distributions of country- and firm-level variables of cross-listed foreign private issuers (FPIs).  $N$  is the number of cross-listed FPIs in Panels A, B, and C.  $N$  varies for different variables in Panel C due to data availability. We require that the sample securities trade at least 500 shares per day on average during the event. In Panel C, *Non-U.S. Market Cap* is the market value of equity of the FPI outside the U.S. divided by company market value at the end of February 2010. *Capital Expenditure* is capital expenditure as a percentage of total assets. *Current Leverage* is short-term debt as a percentage of total assets. *Fixed Assets Ratio* is property, plant, and equipment as a percentage of total assets. *Sales Growth* is the change in annual revenues. *Tobin's Q* is (market value of equity + total assets - common equity) / total assets. *Log (Total Assets)* is the logarithm of total assets. *Ownership Concentration* is the data item of closely held shares from Worldscope. *Rule of Law* from the World Bank is a measure of confidence that people abide by rules and the quality of enforcement. *Constraint Exec* is the XCONST variable from the Polity IV Project and measures constraints imposed on executive decision-making by institutions. This variable is identical to the EXCONST variable from the same source. *Disclosure* is an index of securities law disclosure rules and *Private Litigation* is an index of securities litigation rules, both from La Porta et al. (2006). *Anti-Director Rights* is an index of shareholder protection laws, and *Anti-Self-Dealing Rights* is an index of self-dealing regulation, both from Djankov et al. (2008). *Public Enforcement* is the weighted size of staff of the securities regulation agency from Jackson and Roe (2009). *Rule of Law* is an index of legality from the World Bank Governance Indicators. Country-level source data in Panel B vary in sample size according to the number of countries in the original data source as well as the number of countries with SEC-compliant FPIs.

Panel A. Country Distribution for U.S. Market Analysis					
Country	N	Country	N	Country	N
Antigua and Barbuda	1	Greece	3	Norway	1
Argentina	13	Hong Kong	4	Panama	2
Australia	9	Hungary	1	Papua New Guinea	1
Belgium	2	India	13	Peru	1
Bermuda	17	Indonesia	2	Philippines	1
Brazil	14	Ireland	8	Portugal	1
British Virgin Islands	13	Israel	46	Russia	4
Canada	168	Italy	4	Singapore	1
Cayman Islands	63	Japan	21	South Africa	6
Chile	12	Liberia	1	South Korea	9
China	12	Luxembourg	5	Spain	5
Colombia	1	Marshall Islands	15	Sweden	1
Denmark	2	Mexico	21	Switzerland	6
Finland	1	Netherlands	15	Taiwan	6
France	9	Netherlands Antilles	1	Turkey	1
Germany	7	New Zealand	1	United Kingdom	32
				Total	583



Panel B. Country Distribution for Home Market Analysis

Country	N	Country	N	Country	N
Argentina	10	Greece	3	Papua New Guinea	1
Australia	8	Hong Kong	4	Peru	1
Belgium	2	Hungary	1	Philippines	1
Bermuda	4	India	12	Portugal	1
Brazil	15	Indonesia	1	South Africa	6
British Virgin Islands	3	Ireland	5	South Korea	7
Canada	148	Israel	2	Spain	4
Cayman Islands	12	Italy	3	Sweden	1
Chile	12	Japan	20	Switzerland	5
China	11	Luxembourg	4	Taiwan	6
Colombia	1	Marshall Islands	1	Turkey	1
Denmark	2	Mexico	13	United Kingdom	28
Finland	1	Netherlands	11		
France	8	New Zealand	1		
Germany	7	Norway	1		
				Total	388

Panel C. Variable Distributions

Variable	N	Mean	Median	Standard Deviation	5th Percentile	95th Percentile
<b>Firm-Level Variables</b>						
Non-U.S. Market Cap	445	0.59	0.76	0.38	0.00	0.99
Sales Growth	540	0.10	-0.06	1.84	-0.49	0.59
Capital Expenditure	575	0.06	0.04	0.07	0.00	0.18
Return on Equity	563	0.14	0.11	1.36	-0.42	0.59
Fixed Assets Ratio	581	0.35	0.27	0.30	0.00	0.87
Log(Total Assets)	581	13.92	14.21	3.65	6.18	19.10
Tobin's Q	580	1.68	1.01	5.72	0.21	3.83
Leverage	563	0.47	0.48	0.27	0.07	0.94
<b>Country-Level Variables</b>						
Rule of Law	47	0.75	0.92	0.97	-0.78	1.92
Constraints on Executive	40	6.43	7	1.03	3.5	7
Disclosure	35	6.24	5.8	1.88	3.3	9.2
Private Litigation	35	0.52	0.66	0.24	0.11	1
Anti-Director Rights	40	3.39	3.5	1.09	1.5	5
Public Enforcement	19	12.14	6.17	14.74	0.43	59.59

**Table 2. Abnormal Returns of Cross-Listed FPIs Using Matched Samples**

This table reports the percentage abnormal returns of cross-listed FPIs for the March 29 event using a foreign, non-cross-listed peer company for each sample firm. For the sequential matching approach, we identify the publicly-traded peer firm for each sample FPI that is closest in terms of market capitalization, book-to-market ratio, or total assets. We draw peer firms domiciled in the same country and operating within the same industry as the sample FPI. The nearest-neighbor propensity score approach relies on a probit model that calculates the probability of a firm being in the sample FPI group based on market capitalization, book-to-market ratio, and total assets. The peer firm then becomes the foreign company without a cross-listing that is closest to the sample FPI in terms of propensity score. In all columns we calculate market model returns for the sample FPIs using the peer firm as a benchmark, and *t*-statistics assuming independence as described by Brown and Warner (1985). Column (1) presents results for all sample FPIs, while columns (2) and (3) limit the analysis to firms located in North and South America. The coefficients represent the mean abnormal return of sample FPIs over the peer firm. Returns are positive and economically significant, contrary to the legal bonding hypothesis. We require that the sample securities trade at least 500 shares per day on average during the event. The data are from January 2008 through August 2010.

	All FPIs		Western Hemisphere FPIs			
	U.S. Returns		U.S. Returns		Home Returns	
	(1)	(2)	(3)	(4)	(5)	(6)
	Ret.	t-stat	Ret.	t-stat	Ret.	t-stat
<b>Sequential Matching</b>						
<b>Matching by: Country, 2-digit GICS Industry, and</b>						
Market Capitalization	0.70 ***	4.02	0.62 **	2.10	0.89 ***	2.78
Book-to-Market	0.79 ***	4.49	0.83 ***	2.94	1.10 ***	3.61
Assets	0.68 ***	3.74	0.55 *	1.83	0.82 **	2.48
<b>Matching by: Country, 3-Digit SIC Industry, and</b>						
Market Capitalization	0.68 ***	3.46	0.67 **	2.11	0.94 ***	2.85
Book-to-Market	0.79 ***	3.90	0.83 ***	2.63	1.11 ***	3.33
Assets	0.63 ***	3.23	0.61 **	1.96	0.83 **	2.55
<b>Nearest Neighbor Matching (2-digit GICS)</b>						
Cap, B/M, Country	0.75 ***	3.03	0.67 **	2.02	1.02 ***	3.03
Cap, Assets, Country	0.72 ***	2.92	0.68 **	2.03	1.04 ***	2.88
Cap, Assets, B/M, Country	0.64 **	2.56	0.56 *	1.72	0.94 ***	2.68
Assets, B/M, Country	0.71 ***	2.96	0.69 **	2.04	1.01 ***	2.90

**Table 3. The Abnormal Returns of Cross-Listed FPIs**

This table reports the percentage abnormal returns of cross-listed FPIs and Brown and Warner (1985) t-statistics during and around the March 29 oral argument event. Sample FPIs are all from the NYSE, AMEX, or Nasdaq, have listings in both the U.S. and home countries, and are on the SEC's FPI compliance list. The sample in the U.S. and home countries is different only to the extent of data availability of stock returns. We present the results using a variety of benchmarks and measures of abnormal performance. For the market model returns we use the period from January 2008 to December 2009 as the estimation period. For the MSCI and FTSE benchmarks, we take the list of all constituent securities for each benchmark from March 25, 2010 and remove sample firms, which are affected by the Supreme Court decision. The market adjusted returns and mean adjusted returns are calculated as in Brown and Warner (1985), and we use the January 2008 to December 2009 as the baseline period for mean adjusted returns. We report results assuming both dependence and independence in cross-sectional returns. Panel A presents results for U.S. abnormal returns for both all sample FPIs and only FPIs located in North or South America. Panel B repeats the analysis assuming independence for samples of ADRs and ADRs plus direct listings using the MSCI Europe Benchmark, all sample FPIs, and the three-day event windows from March 26-30. The coefficients and test statistics differ slightly from the March 29<sup>th</sup> event day because we required firms to trade at least 500 shares on average per event day. Abnormal returns are either positive or insignificant, contrary to the legal bonding hypothesis. The # of Positives is the number of FPIs with positive abnormal returns out of the total number of sample FPIs with available data. \*\*\*, \*\*, and \* indicate that estimates are significant at the 1%, 5%, and 10% levels, respectively, according to the Brown and Warner t-statistics, which are reported under the heading of BW t-stat. Following Morck, Yeung, and Wu (2000), we trim the stock returns for cross-listed FPIs from Capital IQ and CRSP by excluding any daily return that exceeds 25% in absolute value. The data are from January 2008 through March 2010.

**U.S. Returns, March 29 Window**

	Exchange Listed FPIs				Western Hemisphere FPIs				
	Returns	Brown-Warner t-stat.		# of Positives	Returns	Brown-Warner t-stat.		# of Positives	
		Independence	Dependence			Independence	Dependence		
<b>Market Model Returns</b>									
S&P 500	0.45	3.26 ***	0.42	348/575	0.68	2.84 ***	0.46	142/210	
MSCI Europe	0.44	2.90 ***	0.28	349/575	0.62	2.40 **	0.38	141/210	
MSCI World	0.26	1.93 *	0.32	317/575	0.48	2.07 **	0.40	133/210	
FTSE World	0.20	1.54	0.25	311/575	0.43	1.83 *	0.36	129/210	
<b>Market Adjusted Returns</b>									
S&P 500	0.42	3.14 ***	0.39	346/575	0.61	2.64 ***	0.41	139/210	
MSCI Europe	0.17	1.11	0.10	305/575	0.36	1.38	0.21	124/210	
MSCI World	0.31	2.28 **	0.35	327/575	0.50	2.15 **	0.41	133/210	
FTSE World	0.27	1.96 **	0.30	318/575	0.46	1.96 **	0.38	129/210	
<b>Mean Adjusted Returns</b>	1.01	5.75 ***	0.44	427/575	1.18	4.05 ***	0.50	161/210	

**Table 4. Portfolio Abnormal Returns of Cross-Listed FPIs**

This table reports the percentage abnormal U.S. returns of equal- and value-weighted portfolios of cross-listed FPIs for the March 29 event. We report the coefficient on an event dummy variable and the associated  $t$ -statistic. The narrow event presents difficulties for using robust standard errors (see Long and Ervin (2000)). We therefore present  $t$ -statistics that are not corrected for heteroskedasticity in addition to results using robust standard errors for comparison. Note that the results using robust errors are *more* significant than the results using non-robust errors due to a negative relationship between the event dummy variable and the residuals. The coefficients in the Returns column represent abnormal returns of sample FPIs during the event period. We fail to find a negative reaction associated with the legal event, which is inconsistent with the legal bonding hypothesis. We require that the sample securities trade at least 500 shares on the event day. The data are from January 2008 through March 2010.

	Value-Weighted Portfolios			Equal-Weighted Portfolios		
	Returns	Non-Robust	Robust	Returns	Non-Robust	Robust
<b>S&amp;P 500 Benchmark</b>						
<i>ADRs – Baseline</i>	0.42	0.47	10.37 ***	0.38	0.43	9.64 ***
Including Returns > 25%	0.40	0.44	9.20 ***	0.26	0.30	6.35 ***
Emerging Markets	0.62	0.50	11.15 ***	0.63	0.61	13.45 ***
Excluding Tax Havens	0.38	0.47	10.43 ***	0.27	0.33	7.48 ***
<i>ADRs + Direct Listers – Baseline</i>	0.60	0.61	13.85 ***	0.48	0.48	10.35 ***
Including Returns > 25%	0.53	0.57	12.56 ***	0.30	0.31	6.41 ***
Emerging Markets	0.65	0.56	12.55 ***	0.48	0.48	10.21 ***
Excluding Tax Havens	0.59	0.60	13.79 ***	0.43	0.43	9.44 ***
<b>MSCI Europe</b>						
<i>ADRs – Baseline</i>	0.46	0.26	5.54 ***	0.40	0.24	5.07 ***
Including Returns > 25%	0.43	0.24	4.96 ***	0.29	0.17	3.43 ***
Emerging Markets	0.69	0.32	6.82 ***	0.66	0.37	7.86 ***
Excluding Tax Havens	0.42	0.25	5.39 ***	0.31	0.19	3.84 ***
<i>ADRs + Direct Listers – Baseline</i>	0.63	0.36	8.12 ***	0.46	0.30	6.66 ***
Including Returns > 25%	0.57	0.32	7.12 ***	0.30	0.19	4.01 ***
Emerging Markets	0.71	0.34	7.37 ***	0.49	0.30	6.24 ***
Excluding Tax Havens	0.61	0.36	8.09 ***	0.41	0.27	5.99 ***
<b>MSCI World</b>						
<i>ADRs – Baseline</i>	0.23	0.28	5.74 ***	0.18	0.26	5.04 ***
Including Returns > 25%	0.20	0.25	5.08 ***	0.06	0.09	1.81 *
Emerging Markets	0.41	0.34	6.86 ***	0.43	0.48	9.70 ***
Excluding Tax Havens	0.20	0.27	5.62 ***	0.08	0.12	2.31 **
<i>ADRs + Direct Listers – Baseline</i>	0.40	0.48	10.22 ***	0.28	0.37	7.21 ***
Including Returns > 25%	0.33	0.42	9.20 ***	0.10	0.14	2.77 ***
Emerging Markets	0.44	0.40	8.08 ***	0.28	0.35	6.71 ***
Excluding Tax Havens	0.39	0.47	10.24 ***	0.23	0.30	6.08 ***
<b>FTSE World</b>						
<i>ADRs – Baseline</i>	0.18	0.20	4.13 ***	0.13	0.17	3.41 ***
Including Returns > 25%	0.15	0.17	3.38 ***	0.00	0.01	0.11
Emerging Markets	0.35	0.28	5.72 ***	0.37	0.42	8.36 ***
Excluding Tax Havens	0.15	0.19	3.91 ***	0.03	0.04	0.77
<i>ADRs + Direct Listers – Baseline</i>	0.35	0.38	8.41 ***	0.23	0.29	5.77 ***
Including Returns > 25%	0.29	0.32	7.13 ***	0.05	0.06	1.25
Emerging Markets	0.38	0.33	6.83 ***	0.23	0.28	5.34 ***
Excluding Tax Havens	0.34	0.38	8.38 ***	0.18	0.23	4.66 ***

### Table 5. Cross-Sectional Regression Analysis of Abnormal Returns, Three-Day Window

This table reports the results of cross-sectional regressions where country- and firm-level variables of cross-listed foreign private issuers (FPIs) are used to explain cross-sectional variation in the abnormal returns of individual FPIs during the three-day, March 26-30 oral argument event. All the coefficient estimates are in percentage terms. Panel A presents results for U.S. abnormal returns using the FPI-free MSCI World index, and Panel B repeats the analysis for home market returns. For this analysis we exclude two Irish banks from the sample that received bailout funds from the government on March 29<sup>th</sup>. *Non-U.S. Market Cap* is one minus the ratio of the market value of equity in the United States divided by the non-U.S. company market value at the end of February 2010.  $0 \leq \text{Non-U.S. Market Cap} \leq 60\%$  equals to Non-U.S. Market Cap if Non-U.S. Market Cap is between 0 and 60%, and 0 otherwise;  $60\% < \text{Non-U.S. Market Cap} \leq 82\%$  equals to Non-U.S. Market Cap if Non-U.S. Market Cap is between 60% and 82%, and 0 otherwise;  $82\% < \text{Non-U.S. Market Cap}$  equals to Non-U.S. Market Cap if Non-U.S. Market Cap is between 82% and 100%, and 0 otherwise. *Rule of Law* from the World Bank is a measure of confidence that people abide by rules and the quality of enforcement. *Constraint Exec* is the XCONST variable from the Polity IV Project and measures constraints imposed on executive decision-making by institutions. This variable is identical to the EXCONST variable from the same source. *Disclosure* is an index of securities law disclosure rules and *Private Litigation* is an index of securities litigation rules, both from La Porta et al. (2006). *Class Actions* are US-style class actions from Hensler (2011). *Anti-Director Rights* is an index of shareholder protection laws from Djankov et al. (2008). *Public Enforcement* is the weighted size of staff of the securities regulation agency from Jackson and Roe (2009). *Tobin's q* is  $(\text{market value of equity} + \text{total assets} - \text{common equity}) / \text{total assets}$ . *Fixed Asset Intensity* is property, plant, and equipment as a percentage of total assets. *Log (Total Assets)* is the logarithm of total assets. *Return on Equity* is net income as a percentage of common equity. *Capital Expenditure* is capital expenditure as a percentage of total assets. *Sales Growth* is one-year sales growth and controls for growth opportunities. *Leverage* is short-term debt as a percentage of total assets. *Log (GDP per capita)* is the logarithm of the GDP per capita of the home countries of individual FPIs. Standard errors are enclosed in parentheses and presented below the coefficients. \*\*\*, \*\*, and \* indicate that z-statistics are significant at the 1%, 5%, and 10% levels, respectively, according to bootstrapped standard errors using 5,000 replications. *N* is the number of observations. The control variables are from 2009.

Panel A. US Market Returns with FPI-free MSCI World

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Non-U.S. Market Cap								
[0, 0.60]	0.94 (1.50)	0.89 (1.50)	1.52 (1.71)	2.01 (1.75)	1.99 (1.76)	1.28 (1.73)	1.30 (1.79)	1.88 (2.28)
(0.60, 0.82]	-0.21 (3.94)	0.22 (4.01)	1.30 (3.71)	2.96 (3.70)	2.95 (3.62)	2.86 (3.65)	1.55 (3.80)	4.19 (4.74)
(0.82, 1]	1.95 (4.27)	3.60 (4.16)	7.08* (3.76)	8.14** (3.78)	7.90** (3.72)	8.60** (3.90)	7.14* (3.80)	6.76 (5.26)
Fixed Asset Intensity	-0.44 (0.99)	0.23 (0.93)	0.73 (0.88)	0.28 (0.88)	0.31 (0.90)	0.64 (0.93)	0.79 (0.88)	1.23 (0.90)
Log (Total Assets)	0.13 (0.09)	0.17* (0.09)	0.17* (0.10)	0.17 (0.11)	0.17 (0.11)	0.19* (0.11)	0.17* (0.10)	0.07 (0.12)
Return on Equity	0.08 (0.27)	0.09 (0.28)	0.11 (0.28)	0.13 (0.31)	0.13 (0.31)	0.11 (0.24)	0.10 (0.28)	0.05 (0.62)
Capital Expenditure	10.00** (5.04)	6.22 (4.35)	1.59 (4.26)	4.63 (4.08)	4.53 (4.09)	2.48 (4.90)	3.88 (4.17)	7.04 (4.76)
Sales Growth	0.09 (0.22)	0.10 (0.22)	0.12 (0.19)	0.15 (0.19)	0.15 (0.20)	0.14 (0.19)	0.13 (0.19)	0.19 (0.28)
Tobin's q	-0.21* (0.12)	-0.13 (0.11)	0.02 (0.15)	-0.07 (0.16)	-0.07 (0.16)	0.00 (0.18)	-0.03 (0.16)	-0.08 (0.29)
Leverage	-0.92 (0.98)	-0.82 (0.95)	-1.08 (0.95)	-1.58 (1.00)	-1.55 (1.02)	-1.83* (1.05)	-0.93 (0.99)	-0.45 (1.27)
Log (GDP per Capita)	0.03 (0.21)	0.51* (0.31)	0.05 (0.21)	0.08 (0.21)	0.09 (0.23)	-0.56* (0.28)	-0.29 (0.19)	0.37 (0.31)
Rule of Law		-0.90*** (0.34)						
Exec. Constraints			-0.96*** (0.27)					
Disclosure				-0.04 (0.09)				
Private Litigation					-0.32 (0.72)			
Class Actions						0.19 (0.49)		
Anti-Director Rights							-0.29 (0.19)	
Public Enforcement								-0.02 (0.02)
Intercept	-1.59 (2.19)	-6.25** (3.03)	3.15 (2.13)	-3.16 (2.17)	-3.42 (2.19)	2.50 (2.73)	1.04 (2.20)	-5.51* (3.19)
N	406	403	324	308	308	301	330	202
p-value	0.24	0.08	0.00	0.16	0.10	0.05	0.02	0.15
R-Squared	0.04	0.05	0.13	0.08	0.08	0.10	0.09	0.08
Adjusted R-Squared	0.01	0.02	0.10	0.05	0.05	0.07	0.06	0.03

Panel B. Home Market Returns with FPI-free MSCI World

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Non-U.S. Market Cap								
[0, 0.60]	0.20 (1.43)	-0.07 (1.46)	0.86 (1.31)	0.94 (1.39)	0.96 (1.36)	0.65 (1.38)	0.94 (1.34)	2.28 (1.68)
(0.60, 0.82]	-3.15 (3.63)	-3.16 (3.85)	0.36 (3.33)	0.74 (3.31)	0.79 (3.26)	-0.32 (3.48)	0.52 (3.38)	2.69 (4.52)
(0.82, 1]	6.11 (4.28)	6.40 (4.30)	10.41*** (3.85)	9.28** (3.92)	9.32** (3.89)	8.93** (4.03)	10.59*** (3.92)	8.64* (4.91)
Fixed Asset Intensity	0.20 (1.00)	0.90 (0.98)	0.84 (0.84)	0.65 (0.86)	0.65 (0.87)	1.25 (0.95)	1.11 (0.87)	1.69* (0.97)
Log (Total Assets)	-0.02 (0.10)	0.01 (0.09)	0.04 (0.09)	0.06 (0.09)	0.06 (0.09)	0.07 (0.08)	0.05 (0.09)	0.03 (0.09)
Return on Equity	-0.01 (0.26)	-0.01 (0.25)	0.02 (0.23)	0.03 (0.32)	0.04 (0.30)	-0.02 (0.23)	0.00 (0.22)	0.29 (1.32)
Capital Expenditure	10.26** (5.14)	5.09 (4.70)	5.18 (4.44)	5.49 (4.21)	5.59 (4.17)	5.66 (5.35)	5.83 (4.40)	6.53 (5.10)
Sales Growth	0.08 (0.21)	0.06 (0.22)	0.13 (0.17)	0.13 (0.18)	0.13 (0.18)	0.20 (0.18)	0.16 (0.17)	0.20 (0.25)
Tobin's q	-0.27 (0.17)	-0.12 (0.16)	-0.10 (0.16)	-0.12 (0.16)	-0.13 (0.16)	-0.11 (0.19)	-0.12 (0.16)	0.03 (0.28)
Leverage	-1.06 (0.93)	-0.99 (0.92)	-1.07 (0.87)	-1.29 (0.91)	-1.30 (0.90)	-1.54* (0.88)	-0.78 (0.90)	-0.78 (1.42)
Log (GDP per Capita)	0.08 (0.22)	0.73* (0.39)	0.24 (0.22)	0.14 (0.22)	0.15 (0.22)	-0.29 (0.29)	-0.15 (0.20)	0.84** (0.33)
Rule of Law		-1.06** (0.43)						
Executive Constraints			-0.82*** (0.26)					
Disclosure				0.03 (0.10)				
Private Litigation					0.09 (0.61)			
Class Actions						-0.43 (0.45)		
Anti-Director Rights							-0.24 (0.19)	
Public Enforcement								-0.05*** (0.02)
Intercept	-0.45 (2.47)	-6.26* (3.47)	1.83 (2.31)	-3.28 (2.24)	-3.16 (2.32)	1.22 (3.12)	0.39 (2.34)	-9.10*** (3.53)
N	289	288	268	259	259	250	274	162
p-value	0.06	0.02	0.00	0.12	0.12	0.01	0.02	0.01
R-Squared	0.06	0.08	0.13	0.08	0.08	0.11	0.10	0.18
Adjusted R-Squared	0.02	0.04	0.09	0.03	0.03	0.07	0.06	0.11

### Table 6. Bid-Ask Spreads of Cross-Listed FPIs

This table reports the results of OLS regressions where country-level variables of cross-listed foreign private issuers (FPIs) are used in conjunction with a post-event dummy to explain the bid-ask spreads of the home market issues. The dependent variable is the difference between the ask and bid prices of the home market issues as a percentage of the closing price. Larger coefficients imply larger spreads. *Post-Event Dummy* is a dummy variable that is 1 for dates from March 31, 2010 to August 31, 2010 and 0 for dates from January 1, 2010 to March 25, 2010. The dependent variable was winsorized at the 99.5<sup>th</sup> percentile and the analysis was restricted to days in which an issue traded at least 500 shares. The left tail of the dependent variable was not winsorized because zero is a lower bound on the spread. *Non-U.S. Market Cap* is defined as in Table 5. *Rule of Law* from the World Bank is a measure of confidence that people abide by rules and the quality of enforcement. *Constraint Exec* is the XCONST variable from the Polity IV Project and measures constraints imposed on executive decision-making by institutions. This variable is identical to the EXCONST variable from the same source. *Disclosure* is an index of securities law disclosure rules and *Private Litigation* is an index of securities litigation rules, both from La Porta et al. (2006). *Class Action* is US-style class actions from Hensler (2011). *Anti-Director Rights* is an index of shareholder protection laws from Djankov et al. (2008). *Public Enforcement* is the weighted size of staff of the securities regulation agency from Jackson and Roe (2009). The coefficients are mainly insignificant, and illustrate that the spreads of the home market issues were unaffected by the oral arguments in *Morrison*, contrary to the legal bonding hypothesis. Standard errors are clustered by firm and presented in parentheses below the coefficients. \*\*\*, \*\*, and \* indicate that *t*-statistics are significant at the 1%, 5%, and 10% levels, respectively. *N* is the number of observations. The data are from January 2010 through August 2010.



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Event Dummy	-0.03 (0.04)	0.06 (0.07)	0.26 (0.22)	-0.04 (0.12)	0.00 (0.10)	0.00 (0.04)	0.06 (0.09)	-0.06 (0.04)
Non-US Market Cap. (0, 0.60]	0.70 (0.77)	0.76 (0.76)	0.63 (0.82)	0.57 (0.83)	0.61 (0.82)	0.50 (0.82)	0.71 (0.82)	0.32 (0.77)
(0.60, 0.82]	-5.50*** (1.19)	-5.45*** (1.17)	-5.09*** (1.24)	-5.14*** (1.27)	-5.17*** (1.26)	-4.40*** (1.29)	-4.93*** (1.23)	-4.66*** (1.43)
(0.82, 1]	-9.18*** (1.47)	-8.93*** (1.46)	-8.12*** (1.56)	-8.00*** (1.55)	-8.21*** (1.59)	-6.52*** (1.75)	-7.94*** (1.55)	-8.23*** (1.61)
Rule of Law		-0.05 (0.10)						
Executive Constraints			0.08 (0.06)					
Disclosure				0.03 (0.04)				
Private Litigation					-0.02 (0.29)			
Class Action						0.42** (0.21)		
Anti-Director Rights							0.01 (0.05)	
Public Enforcement								0.00 (0.01)
Post-Event*Rule of Law		-0.08 (0.05)						
Post-Event*Constraints			-0.04 (0.03)					
Post-Event*Disclosure				0.00 (0.02)				
Post-Event*Private Litigation					-0.05 (0.13)			
Post-Event*Class Action						-0.07 (0.08)		
Post-Event*Anti-Director							-0.03 (0.02)	
Post-Event*Enforcement								0.00 (0.00)
Intercept	1.63*** (0.18)	1.67*** (0.22)	0.95** (0.41)	1.28*** (0.31)	1.53*** (0.29)	1.19*** (0.23)	1.42*** (0.24)	1.38*** (0.25)
N	33735	33608	31512	30928	30928	30908	32093	19757
Clusters	406	403	336	324	324	327	342	211
p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R-squared	0.10	0.10	0.08	0.08	0.08	0.09	0.08	0.09

### Table 7. Price Differences between U.S. and Home Markets

This table reports the results of OLS regressions where country-level variables of cross-listed foreign private issuers (FPIs) are used in conjunction with a post-event dummy to explain the price premium of U.S. listings relative to the home market listing. In Panel A, the dependent variable is the difference in the U.S. and home market prices as a percentage of the home market price. *Post-Event Dummy* is a dummy variable that is 1 for dates from March 31, 2010 to August 31, 2010 and 0 for dates from January 1, 2010 to March 25, 2010. *Non-U.S. Market Cap* is defined as in Table 5. *Rule of Law* from the World Bank is a measure of confidence that people abide by rules and the quality of enforcement. *Constraint Exec* is the XCONST variable from the Polity IV Project and measures constraints imposed on executive decision-making by institutions. This variable is identical to the EXCONST variable from the same source. *Disclosure* is an index of securities law disclosure rules and *Private Litigation* is an index of securities litigation rules, both from La Porta et al. (2006). *Class Action* is US-style class actions from Hensler (2011). *Anti-Director Rights* is an index of shareholder protection laws from Djankov et al. (2008). *Public Enforcement* is the weighted size of staff of the securities regulation agency from Jackson and Roe (2009). The data were winsorized at the 0.5<sup>th</sup> and 99.5<sup>th</sup> percentile and the analysis was restricted to days in which an issue traded at least 500 shares; standard errors are clustered by firm and appear in parentheses below the coefficients. The legal bonding hypothesis predicts that shares purchased on a U.S. exchange would become more valuable owing to the legal rights uniquely assigned to those shares post-event. The insignificant or weakly significant signs of the coefficients on the post-event dummy are inconsistent with this hypothesis. Panel B uses the method described in Gagnon and Karolyi (2011), which defines the dependent variable to be the equal-weighted mean difference between the U.S. and home market returns. As in Panel A, we fail to find a significant increase in the returns to the U.S. shares relative to the home market shares in our sample. Panel C uses bootstrapping to estimate the empirical distribution of the difference in returns between markets, and compares the event period mean return difference to that distribution. The mean difference in returns during the event is not unusual when compared with hypothetical event periods between January 2008 and August 2010. \*\*\*, \*\*, and \* indicate that *t*-statistics are significant at the 1%, 5%, and 10% levels, respectively. *N* is the number of observations. Except for Panel C, the data are from January 2010 through August 2010.

Panel A. Difference between U.S. Price and Home Market Price as Percentage of the Home Price

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Event Dummy	0.14 (0.11)	0.41* (0.22)	-0.47 (0.49)	-0.39 (0.43)	0.17 (0.22)	-0.07 (0.09)	-0.20 (0.27)	0.85* (0.44)
Non-US Market Cap. (0, 0.60]	-3.09** (1.51)	-3.10** (1.52)	-3.26* (1.66)	-3.17* (1.71)	-3.03* (1.63)	-1.43 (0.93)	-3.70** (1.70)	-1.64 (1.83)
(0.60, 0.82]	-2.13 (4.47)	-2.36 (4.51)	-1.88 (4.88)	-1.50 (4.84)	-1.63 (4.86)	1.23 (3.59)	-3.71 (4.86)	-1.76 (6.12)
(0.82, 1]	-4.13 (6.69)	-4.20 (6.73)	-3.95 (7.28)	-2.30 (7.25)	-2.91 (7.43)	-6.23 (4.96)	-5.35 (7.03)	-8.49 (10.31)
Rule of Law		-0.19 (0.35)						
Executive Constraints			0.39 (0.34)					
Disclosure				0.10 (0.17)				
Private Litigation					0.21 (0.50)			
Class Action						-0.61 (0.37)		
Anti-Director Rights							0.50 (0.33)	
Public Enforcement								-0.04* (0.02)
Post-Event*Rule of Law		-0.24* (0.12)						
Post-Event*Constraints			0.10 (0.08)					
Post-Event*Disclosure				0.07 (0.05)				
Post-Event*Private Litigation					-0.02 (0.19)			
Post-Event*Class Action						0.09 (0.12)		
Post-Event*Anti-Director							0.10 (0.09)	
Post-Event*Enforcement								-0.02* (0.01)
Intercept	1.07* (0.56)	1.29* (0.77)	-1.54 (2.40)	0.25 (1.27)	0.88 (0.77)	0.93* (0.55)	-0.63 (1.32)	2.01* (1.18)
N	54805	54583	50583	49159	49159	47642	51715	32477
Clusters	423	420	347	333	333	326	354	220
p-value	0.02	0.05	0.04	0.05	0.03	0.11	0.06	0.39
R-squared	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03

Panel B. Return Differentials of Equal-Weighted Portfolios of ADRs + Direct Listings

	S&P 500		MSCI Europe		MSCI FPI-free World		FTSE FPI-free World	
	Ret	t-stat	Ret	t-stat	Ret	t-stat	Ret	t-stat
	<b>March 29, 2010 - Baseline</b>	-0.02	-0.02	-0.04	-0.03	-0.02	-0.02	-0.02
Including Returns > 25%	-0.02	-0.02	-0.03	-0.03	-0.01	-0.01	-0.01	-0.01
Emerging Markets	-0.44	-0.35	-0.47	-0.38	-0.44	-0.36	-0.45	-0.36
Excluding Tax Havens	0.04	0.03	0.03	0.02	0.04	0.04	0.04	0.04
<b>Days (1 to +1) - Baseline</b>	-0.57	-0.89	-0.58	-0.91	-0.57	-0.89	-0.57	-0.89
Including Returns > 25%	-0.57	-0.89	-0.57	-0.90	-0.56	-0.88	-0.56	-0.88
Emerging Markets	-0.14	-0.19	-0.15	-0.20	-0.14	-0.20	-0.14	-0.20
Excluding Tax Havens	-0.55	-0.83	-0.56	-0.84	-0.55	-0.82	-0.55	-0.82
<b>Days (0, +1) - Baseline</b>	0.18	0.22	0.17	0.21	0.18	0.23	0.18	0.23
Including Returns > 25%	0.18	0.23	0.17	0.22	0.18	0.23	0.18	0.23
Emerging Markets	-0.13	-0.15	-0.13	-0.15	-0.13	-0.15	-0.13	-0.15
Excluding Tax Havens	0.21	0.25	0.20	0.24	0.21	0.25	0.21	0.26
<b>Days (1, 0) - Baseline</b>	-1.04	-1.34	-1.05	-1.35	-1.04	-1.33	-1.04	-1.33
Including Returns > 25%	-1.04	-1.33	-1.05	-1.34	-1.04	-1.32	-1.03	-1.32
Emerging Markets	-0.30	-0.34	-0.32	-0.36	-0.30	-0.35	-0.31	-0.35
Excluding Tax Havens	-1.01	-1.24	-1.02	-1.25	-1.01	-1.24	-1.01	-1.24

Panel C. Bootstrapped Difference in U.S. and Home Market Returns

	Event	Mean	p1	p5	p10	p50	p90	p95	p99
<b>ADRs</b>									
<i>March 29, 2010</i>									
Mean	-0.235	-0.015	-4.850	-2.530	-1.689	0.074	1.698	2.169	4.208
Rho	0.657	0.452	0.106	0.229	0.291	0.459	0.613	0.653	0.710
<i>Three-Day Window</i>									
Mean	-0.341	0.001	-1.447	-0.804	-0.611	0.023	0.583	0.788	1.252
Rho	0.545	0.475	0.181	0.283	0.341	0.486	0.603	0.627	0.660
<b>ADRs + Direct Listers</b>									
<i>March 29, 2010</i>									
Mean	-0.295	-0.003	-3.682	-2.023	-1.376	0.024	1.435	1.897	2.921
Rho	0.598	0.485	0.204	0.299	0.348	0.481	0.624	0.656	0.722
<i>Three-Day Window</i>									
Mean	-0.305	-0.014	-1.420	-0.700	-0.458	0.000	0.451	0.600	1.128
Rho	0.570	0.523	0.300	0.371	0.417	0.529	0.617	0.637	0.718

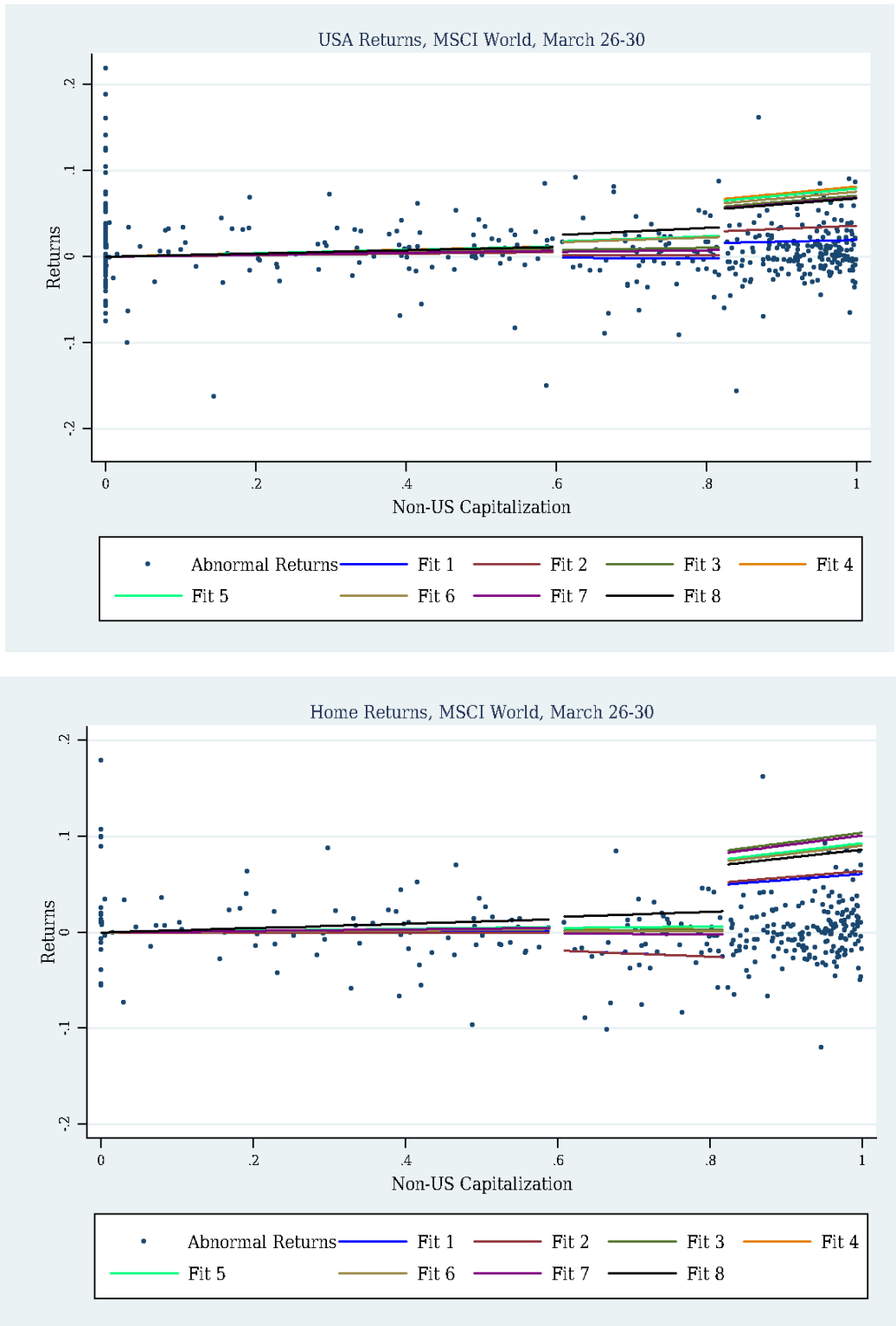
### **Table 8. U.S. Location of Trading in Stocks of Cross-Listed FPIs**

This table reports the results of OLS regressions where country-level variables of cross-listed foreign private issuers (FPIs) are used in conjunction with a post-event dummy to explain the proportion of total monthly trading volume that occurs on U.S. exchanges. The dependent variable is the sum of daily trading volume over each month that occurs in the United States divided by the sum of world (including U.S.) volume. All the coefficient estimates are in percentage terms, and represent the change in the share of total volume attributed to the U.S. associated with the independent variable. *Post-Event Dummy* is a dummy variable that is 1 for dates from March 31, 2010 to December 31, 2010 and 0 for dates from January 1, 2010 to March 25, 2010. *Non-U.S. Market Cap* is defined as in Table 5. *Rule of Law* from the World Bank is a measure of confidence that people abide by rules and the quality of enforcement. *Constraint Exec* is the XCONST variable from the Polity IV Project and measures constraints imposed on executive decision-making by institutions. This variable is identical to the EXCONST variable from the same source. *Disclosure* is an index of securities law disclosure rules and *Private Litigation* is an index of securities litigation rules, both from La Porta et al. (2006). *Class Actions* are US-style class actions from Hensler (2011). *Anti-Director Rights* is an index of shareholder protection laws from Djankov et al. (2008). *Public Enforcement* is the weighted size of staff of the securities regulation agency from Jackson and Roe (2009). The legal bonding hypothesis predicts migration of trading volume to U.S. markets. The signs of the coefficients on the post-event dummy are unstable - i.e., significantly negative, insignificant, or weakly positive, which is inconsistent with this hypothesis. Standard errors are clustered by firm and presented in parentheses below the coefficients. \*\*\*, \*\*, and \* indicate that *t*-statistics are significant at the 1%, 5%, and 10% levels, respectively. *N* is the number of observations. The data are from January 2010 through December 2010.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Post-Event Dummy	0.01*	-0.00	-0.06**	0.02	0.02	0.01*	-0.00	0.01
	(0.00)	(0.01)	(0.03)	(0.02)	(0.01)	(0.00)	(0.01)	(0.01)
Non-U.S. Market Cap.								
[0, 0.60]	0.27**	0.28***	0.22*	0.22*	0.21*	0.26**	0.20*	0.19
	(0.11)	(0.10)	(0.11)	(0.12)	(0.12)	(0.12)	(0.11)	(0.13)
(0.60, 0.82]	-0.32	-0.36	-0.20	-0.27	-0.22	-0.21	-0.24	-0.11
	(0.33)	(0.31)	(0.34)	(0.34)	(0.34)	(0.36)	(0.33)	(0.41)
(0.82, 1]	-2.88***	-2.75***	-2.46***	-2.58***	-2.55***	-2.51***	-2.37***	-2.73***
	(0.34)	(0.33)	(0.36)	(0.36)	(0.37)	(0.41)	(0.35)	(0.51)
Rule of Law		-0.10***						
		(0.02)						
Executive Constraints			-0.03					
			(0.02)					
Disclosure				-0.04***				
				(0.01)				
Private Litigation					-0.16***			
					(0.06)			
Class Actions						-0.06*		
						(0.04)		
Anti-Director Rights							0.05***	
							(0.02)	
Public Enforcement								-0.00
								(0.00)
Post-Event*Rule of Law		0.01**						
		(0.00)						
Post-Event*Constraints			0.01**					
			(0.00)					
Post-Event*Disclosure				-0.00				
				(0.00)				
Post-Event*Private Litigation					-0.01			
					(0.02)			
Post-Event*Class Actions						-0.00		
						(0.01)		
Post-Event*Anti-Director Rights							0.00	
							(0.00)	
Post-Event*Public Enforcement								-0.00
								(0.00)
Intercept	0.62***	0.71***	0.75***	0.82***	0.66***	0.57***	0.38***	0.63***
	(0.04)	(0.04)	(0.16)	(0.09)	(0.06)	(0.05)	(0.07)	(0.07)
N	4575	4539	3958	3778	3778	3707	4034	2413
Clusters	383	380	331	315	315	309	337	203
R-sqr	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
p-value	0.3030	0.3552	0.2536	0.2839	0.2636	0.2511	0.2572	0.2740

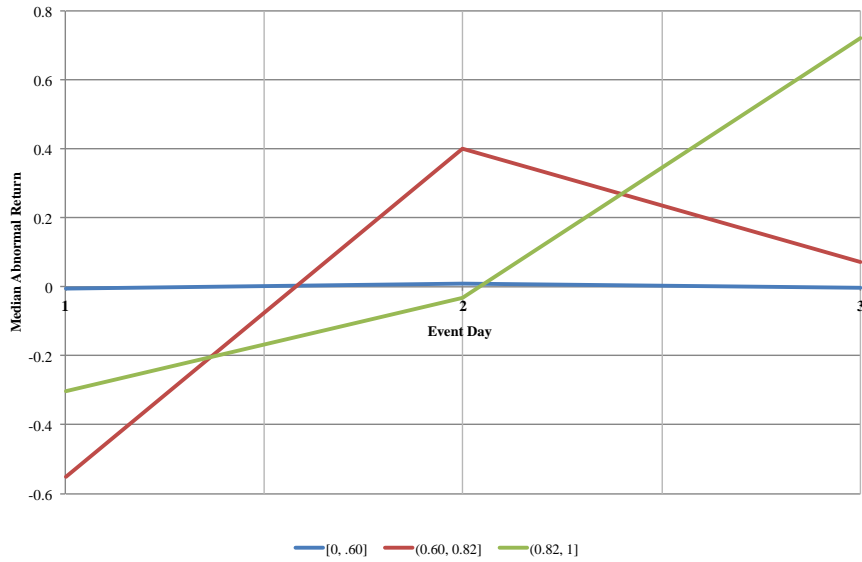
**Figure 1. Scatter Plot and Fit between Event Period Abnormal Returns and Non-U.S. Market Cap.**

Figure 1 shows the scatter plot and fitted relation between event period abnormal returns and non-U.S. market capitalization of individual foreign private issuers (FPIs). Non-U.S. market capitalization is the market value of equity of the FPI outside the U.S. divided by company market value at the end of February 2010. FPIs are exchange listed with SEC compliance. CAR is event period abnormal returns (market model returns of FPIs during the between March 26 and March 30 of 2010 for which we use the FPI-free MSCI World index as the benchmark). Fit1-Fit8 are the coefficient estimates for non-U.S. market capitalization in Table 6 multiplied by non-U.S. market capitalization.



**Figure 2. Median Abnormal Returns and Non-U.S. Market Cap.**

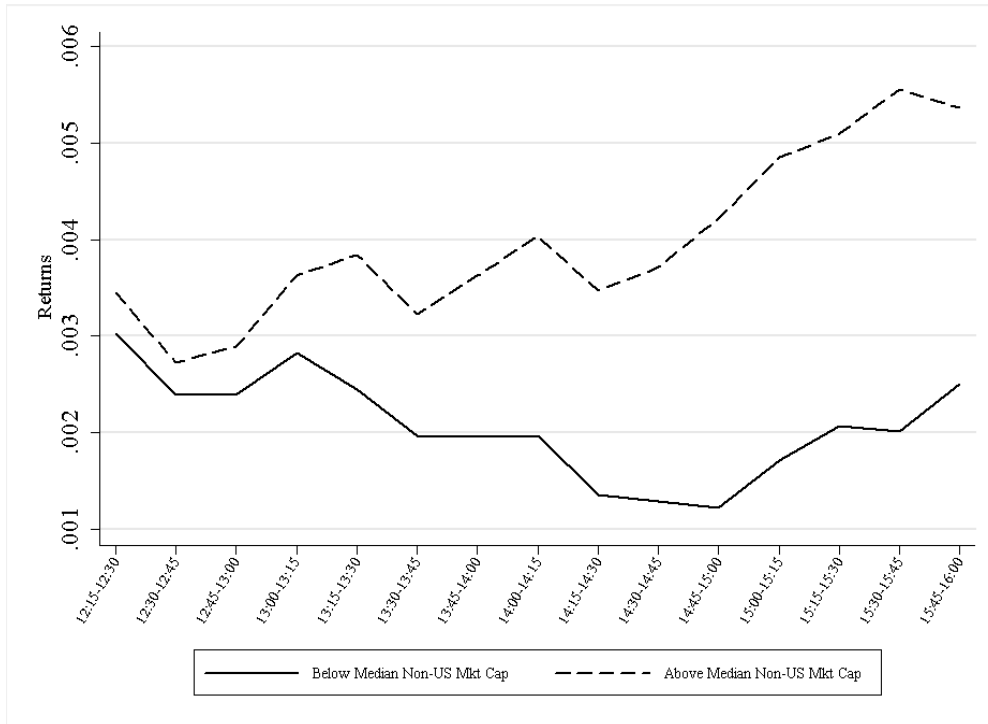
Figure 2 shows the median abnormal return for each day during the three-day oral argument event by level of non-US market capitalization. The non-US market capitalization groups are as defined in Table 5, and the median abnormal return is calculated from market model abnormal returns using an FPI-free MSCI Europe index as the benchmark. The returns of firms with the highest non-US market capitalization grew over the three-day window, whereas those of firms in the other group began to decline after March 29 (event day 2).





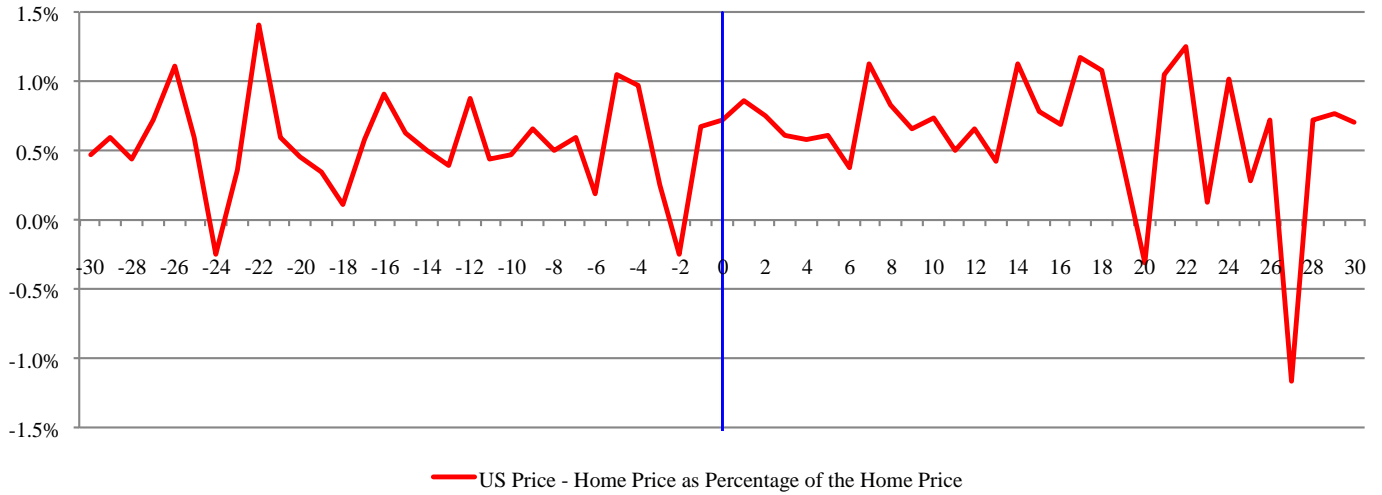
### Figure 3. Intraday March 29 Returns and Non-U.S. Market Cap.

Figure 3 shows the cumulative returns in the United States of foreign private issuers during trading on March 29, 2010 for companies with above and below median market capitalization outside the United States. The firms with above median non-U.S. market capitalization experienced higher intraday returns than firms with more of their market capitalization in the United States. These higher returns started around the time of the oral arguments in *Morrison*.



**Figure 4. U.S. Market Prices Relative to Home Market Prices**

Figure 4 shows the mean difference in the U.S. market and home market share prices expressed as a percentage of the home market share price for the thirty business days surrounding March 29, 2010 ( $x=0$ ). There is no clear pattern in price premiums in the days surrounding the oral argument in *Morrison*. The institutional substitutes (legal bonding) hypothesis predicts that the U.S. shares should become more valuable (the graph should move upwards) post-*Morrison*, when only transactions in those shares are afforded the protection of section 10(b). The lack of a revaluation suggests that the market did not see such protection as a source of value.



## Appendix A. Abnormal Returns Using Matched Samples with OTC and Foreign Domestic Firms

This table reports the percentage abnormal returns for samples of cross-listed FPIs, foreign domestic, and SEC-compliant OTC issuers for the March 29 event using a foreign, non-cross-listed peer company for each sample firm. For the sequential matching approach, we identify the publicly traded peer firm for each sample FPI that is closest in terms of market capitalization, book-to-market ratio, or total assets. We draw peer firms domiciled in the same country and operating within the same industry as the sample FPI. The nearest-neighbor propensity score approach relies on a probit model that calculates the probability of a firm being in the sample FPI group based on market capitalization, book-to-market ratio, and total assets. The peer firm then becomes the foreign company without a cross-listing that is closest to the sample FPI in terms of propensity score. In all columns we calculate market model returns for the sample using the peer firm as a benchmark, and t-statistics assuming independence as described by Brown and Warner (1985). Column (1) presents results for all sample FPIs, while columns (2) and (3) limit the analysis to firms located in North and South America. The coefficients represent the mean abnormal return of sample FPIs over the peer firm. We require that the sample securities trade at least 500 shares per day on average during the event. The data are from January 2008 through August 2010.

	All Firms		Western Hemisphere FPIs			
	U.S. Returns		U.S. Returns		Home Returns	
	(1)		(2)		(3)	
	Ret.	t-stat	Ret.	t-stat	Ret.	t-stat
<b>Sequential Matching</b>						
<b>Matching by: Country and 2-digit GICS Industry</b>						
Market Capitalization	0.75 ***	4.59	0.75 ***	4.59	1.16 ***	3.69
Book-to-Market	0.83 ***	5.03	0.83 ***	5.03	1.37 ***	4.54
Assets	0.78 ***	4.54	0.78 ***	4.54	1.15 ***	3.52
<b>Matching by: Country and 3-Digit SIC Industry</b>						
Market Capitalization	0.75 ***	4.10	0.75 ***	4.10	1.21 ***	3.76
Book-to-Market	0.82 ***	4.47	0.82 ***	4.47	1.41 ***	4.37
Assets	0.75 ***	3.97	0.75 ***	3.97	1.18 ***	3.60
<b>Nearest Neighbor Matching (2-digit GICS)</b>						
Cap, B/M, Country	0.74 ***	3.25	0.74 ***	3.25	1.32 ***	4.00
Cap, Assets, Country	0.77 ***	3.32	0.77 ***	3.32	1.34 ***	3.93
Cap, Assets, B/M, Country	0.62 ***	2.77	0.62 ***	2.77	1.28 ***	3.80
Assets, B/M, Country	0.71 ***	3.26	0.71 ***	3.26	1.33 ***	3.94

## Appendix B. The Abnormal Returns of Foreign Issuers

This table reports the percentage abnormal returns of cross-listed FPIs, OTC issuers, and foreign domestic firms along with Brown and Warner (1985) t-statistics during and around the March 29 oral argument event. Firms in these samples have listings in both the U.S. and home countries. For the market model returns we use the period from January 2008 to December 2009 as the estimation period. For the MSCI and FTSE benchmarks, we take the list of all constituent securities for each benchmark from March 25, 2010 and remove sample firms, which are affected by the Supreme Court decision. The market adjusted returns and mean adjusted returns are calculated as in Brown and Warner (1985), and we use the January 2008 to December 2009 as the baseline period for mean adjusted returns. We report results assuming both dependence and independence in cross-sectional returns. Panel A presents separate results for the particular event date, March 29, for FPIs and foreign domestic firms, FPIs and SEC-compliant OTC firms, and all three groups. Panel B presents separate results for the particular event date, March 29, for various combinations of MSCI benchmarks. EM is the MSCI Emerging Markets index. Asia is the MSCI Emerging Asia index. All indices are value-weighted and FPI-free, based on the constituents as of March 25, 2010. Panel C repeats the analysis with the sample of cross-listed FPIs, but excludes firms incorporated in tax havens. Panels D and E show U.S. and home market returns for samples that include over-the-counter ADRs not on the SEC list of foreign private issuers. Panels F and G present results for separate days within the 3-day event window using MSCI and S&P 500 FPI-free benchmarks. Abnormal returns are mostly positive or insignificant, contrary to the legal bonding hypothesis. The # of Positives is the number of issues with positive abnormal returns out of the total number of sample issues with available data. \*\*\*, \*\*, and \* indicate that estimates are significant at the 1%, 5%, and 10% levels, respectively, according to the Brown and Warner t-statistics, which are reported under the heading of BW t-stat. Following Morck, Yeung, and Wu (2000), we trim the stock returns by excluding any daily return that exceeds 25% in absolute value. The data are from January 2008 through March 2010.

### Panel A. U.S. Returns, March 29 Window, Expanded Samples

	Exchange Listed FPIs & Foreign Domestic					Exchange Listed FPIs & SEC Compliant OTC					All SEC Compliant Firms & Foreign Domestic				
	Ret.	Brown-Warner t-stat.			# of Positives	Ret.	Brown-Warner t-stat.			# of Positives	Ret.	Brown-Warner t-stat.			# of Positives
		Independence	Dependence				Independence	Dependence				Independence	Dependence		
<b>Market Model Returns</b>															
S&P 500	0.43	3.24	***	0.43	412/702	0.48	3.52	***	0.45	382/636	0.46	3.49	***	0.45	446/763
MSCI Europe	0.45	3.01	***	0.27	414/702	0.46	3.12	***	0.30	381/636	0.46	3.22	***	0.29	446/763
MSCI World	0.24	1.81	*	0.31	377/702	0.29	1.82	*	0.36	349/636	0.27	1.66	*	0.35	409/763
FTSE World	0.19	1.40		0.24	369/702	0.24	2.21	**	0.30	342/636	0.22	2.08	**	0.28	400/763
<b>Market Adjusted Returns</b>															
S&P 500	0.43	3.28	***	0.43	412/702	0.40	3.22	***	0.36	371/636	0.41	3.36	***	0.40	437/763
MSCI Europe	0.18	1.13		0.10	366/702	0.15	1.19		0.09	328/636	0.16	1.20		0.10	389/763
MSCI World	0.32	2.35	**	0.36	392/702	0.29	2.05	**	0.34	351/636	0.31	2.10	**	0.35	416/763
FTSE World	0.28	2.01	**	0.31	382/702	0.25	2.36	**	0.29	342/636	0.26	2.43	**	0.30	406/763
<b>Mean Adjusted Returns</b>	1.02	6.14	***	0.43	515/702	1.01	5.97	***	0.45	462/636	1.02	6.34	***	0.44	550/763

**Panel B. U.S. and Home Market returns, March 29 Window - Combinations of FPI-Free MSCI Benchmarks**

	U.S. Market				Home Market			
	Brown-Warner t-stat				Brown-Warner t-stat			
	Ret	Independence	Dependence	# Positives	Ret	Independence	Dependence	# Positives
<b><i>Market Model Returns</i></b>								
Canada-Japan-Europe	0.46	2.99 ***	0.28	353/575	0.50	2.23 **	0.53	226/388
Canada-Japan-Europe-EM	0.33	2.20 **	0.21	333/575	0.36	1.41	0.41	212/388
Canada-Japan-Europe-Asia	0.41	2.68 ***	0.25	344/575	0.44	1.87 *	0.46	222/388
Canada-Japan-Europe-China	0.38	2.49 **	0.23	339/575	0.40	1.66 *	0.42	216/388
Canada-Europe	0.44	2.94 ***	0.29	347/575	0.53	2.41 *	0.54	229/388
Canada-Japan	0.86	5.06 ***	0.39	416/575	0.87	3.94 ***	0.49	264/388
<b><i>Market Adjusted Returns</i></b>								
Canada-Japan-Europe	0.26	1.66 *	0.16	317/575	0.44	1.86 *	0.47	222/388
Canada-Japan-Europe-EM	0.12	0.72	0.07	294/575	0.29	0.95	0.34	212/388
Canada-Japan-Europe-Asia	0.20	1.24	0.12	310/575	0.38	1.44	0.40	219/388
Canada-Japan-Europe-China	0.15	0.95	0.09	300/575	0.33	1.18	0.35	217/388
Canada-Europe	0.16	1.06	0.10	301/575	0.33	1.32	0.32	217/388
Canada-Japan	0.37	2.02 **	0.15	335/575	0.55	2.17 **	0.28	234/388

**Panel C. U.S. Returns, March 29 Window, Excluding Tax Havens**

	Exchange Listed FPIs, Excluding Tax-Havens				
	Returns	Brown-Warner t-stat.			# of Positives
		Independence		Dependence	
<b>Market Model Returns</b>					
S&P 500	0.39	2.79	***	0.37	281/457
MSCI Europe	0.39	2.45	**	0.25	283/457
MSCI World	0.20	1.56		0.26	254/457
FTSE World	0.15	1.21		0.19	248/457
<b>Market Adjusted Returns</b>					
S&P 500	0.36	2.66	***	0.33	276/457
MSCI Europe	0.10	0.76		0.06	244/457
MSCI World	0.25	1.85	*	0.29	261/457
FTSE World	0.21	1.56		0.23	252/457
<b>Mean Adjusted Returns</b>	0.94	5.05	***	0.42	346/457

**Panel D. U.S. Returns, March 29 Window**

	All FPIs, Foreign Domestic, and Non-FPI OTC ADRs				Non-FPI, Over the Counter ADRs				
	Returns	Brown-Warner t-stat.		# of Positives	Returns	Brown-Warner t-stat.		# of Positives	
		Independence	Dependence			Independence	Dependence		
<b>Market Model Returns</b>									
S&P 500	0.43	3.71 ***	0.42	545/925	0.32	1.42	0.29	163/289	
MSCI Europe	0.39	3.21 ***	0.28	545/925	0.26	1.11	0.19	164/289	
MSCI World	0.24	2.05 **	0.35	503/925	0.12	0.40	0.19	154/289	
FTSE World	0.19	1.57	0.27	492/925	0.07	0.11	0.11	150/289	
<b>Market Adjusted Returns</b>									
S&P 500	0.38	3.45 ***	0.36	538/925	0.32	1.39	0.29	167/289	
MSCI Europe	0.12	1.04	0.08	473/925	0.07	0.09	0.05	145/289	
MSCI World	0.27	2.43 **	0.36	504/925	0.21	0.83	0.30	153/289	
FTSE World	0.23	2.04 **	0.30	492/925	0.17	0.61	0.25	150/289	
<b>Mean Adjusted Returns</b>	0.95	6.86 ***	0.43	665/925	0.80	3.41 ***	0.36	203/289	

**Panel E. Home Returns, March 29 Window**

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All FPIs, Foreign Domestic, and Non-FPI OTC ADRs

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	Returns	Brown-Warner t-stat.		# of Positives
		Independence	Dependence	
<b>Market Model Returns</b>				
S&P 500	0.52	4.77 ***	0.37	953/1627
MSCI Europe	0.27	1.65 *	0.32	834/1627
MSCI World	0.31	2.38 **	0.29	856/1627
FTSE World	0.25	1.64 *	0.26	827/1627
<b>Market Adjusted Returns</b>				
S&P 500	0.17	0.75	0.09	790/1627
MSCI Europe	-0.08	-2.55 **	-0.06	672/1627
MSCI World	0.07	0.76	0.05	741/1627
FTSE World	0.02	-1.31	0.02	720/1627
<b>Mean Adjusted Returns</b>				
	0.76	7.42 ***	0.47	1066/1627

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**Panel F. U.S. and Home-Market Returns, 1-Day and 3-Day Windows, Market Model Returns for MSCI Europe Benchmark**

Sample	U.S. Returns						Home-Market Returns					
	ADRs			ADRs + Direct Listings			ADRs			ADRs + Direct Listings		
	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives
<b>Market Model</b>												
3/26/2010	0.42	1.64		0.18	0.66		0.00	-0.39		-0.27**	-2.03	
3/29/2010	0.44**	2.36		0.48***	3.14		0.22	0.77		0.57***	2.68	
3/30/2010	0.62***	3.12		0.59***	3.77		0.33**	2.03		0.20*	1.66	
Sum	1.47***	4.11	224/309	1.25***	4.37	390/581	0.54	1.39	139/228	0.49	1.33	231/396
<b>Market Adjusted</b>												
3/26/2010	0.27	0.87		0.02	-0.36		-0.12	-0.91		-0.39**	-2.57	
3/29/2010	0.16	0.84		0.17	1.12		-0.02	-0.31		0.34	1.35	
3/30/2010	0.67***	3.40		0.64***	4.17		0.40**	2.17		0.24**	2.03	
Sum	1.10***	2.95	210/309	0.83***	2.85	359/581	0.26	0.54	127/228	0.19	0.47	217/396

**Panel G. U.S. and Home-Market Returns, 1-Day and 3-Day Windows, Market Model Returns for S&P 500 Benchmark**

Sample	U.S. Returns						Home-Market Returns					
	ADRs			ADRs + Direct Listings			ADRs			ADRs + Direct Listings		
	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives	Returns	BW t-stat.	# of Positives
<b><i>Market Model</i></b>												
3/26/10	0.46**	2.10		0.23	0.99		0.11	0.22		-0.16	-1.33	
3/29/10	0.37**	2.40		0.45***	3.28		0.49**	2.01		0.82***	3.92	
3/30/10	0.16	0.89		0.15	1.04		-0.12	-0.15		-0.26	-0.85	
Sum	1.00***	3.11	197/309	0.84***	3.06	352/581	0.48	1.20	136/228	0.39	1.00	229/396
<b><i>Market Adjusted</i></b>												
3/26/10	0.49**	2.25		0.24	1.13		0.1	0.17		-0.17	-1.29	
3/29/10	0.41**	2.54		0.42***	3.15		0.23	0.91		0.59***	2.73	
3/30/10	0.19	1.07		0.16	1.21		-0.09	-0.10		-0.24	-0.71	
Sum	1.09***	3.38	208/309	0.82***	3.17	357/581	0.25	0.57	126/228	0.18	0.42	216/396

## Appendix C. Country of Incorporation by Non-US Market Capitalization Group

This table reports the count of issuers by country of incorporation and non-US market capitalization for the sample of firms included in the baseline model of Table 5, Panel A.

<b>Non-US Market Capitalization [0, 0.60)</b>				<b>Non-US Market Capitalization [0.60, 0.82)</b>			
Country	N	Country	N	Country	N	Country	N
Argentina	4	Ireland	4	Argentina	5	Israel	4
Australia	1	Israel	23	Brazil	6	South Korea	2
Belgium	1	Italy	1	Canada	24	Luxembourg	1
Bermuda	7	Liberia	1	Chile	1	Mexico	3
Brazil	2	Mexico	8	China	1	Marshall Islands	1
Canada	33	Marshall Islands	6	Cayman Islands	8	Netherlands	1
Chile	1	Netherlands	3	Finland	1	Philippines	1
China	1	Panama	1	France	1	Russia	4
Cayman Islands	44	Peru	1	United Kingdom	4	Taiwan	2
France	1	British Virgin Islands	1	India	3	British Virgin Islands	2
United Kingdom	3	South Africa	2	Ireland	1	South Africa	2
India	1						
		Total	150			Total	78

<b>Non-US Market Capitalization [0.82, 1]</b>					
Country	N	Country	N	Country	N
Argentina	3	Spain	4	South Korea	5
Australia	5	France	5	Luxembourg	3
Belgium	1	United Kingdom	22	Mexico	7
Brazil	5	Greece	3	Netherlands	7
Canada	18	Hong Kong	4	Norway	1
Switzerland	5	Hungary	1	New Zealand	1
Chile	9	Indonesia	2	Papua New Guinea	1
China	10	India	7	Portugal	1
Colombia	1	Ireland	1	Sweden	1
Cayman Islands	5	Israel	4	Turkey	1
Germany	6	Italy	3	Taiwan	3
Denmark	2	Japan	19	South Africa	2
				Total	178

## Appendix D. Data Sources on U.S. Cross-Listed FPIs

The database contains foreign companies with cross listings on U.S. stock exchanges, including OTC markets. Companies were identified to be foreign and listed on a U.S. exchange using all of the sources below. The primary sources, however, were the websites of the SEC and various exchanges, COMPUSTAT North America, the CRSP Monthly Stock File, the CUSIP Master File, and the depository services directories of BONY Mellen, JP Morgan Chase, and Citigroup. Information on which exchanges the firms list on, and whether they have a listing in their home country, was also verified using Capital IQ's screening tools. In addition to those principal sources, the other sources consulted included:

1. American Stock Exchange, "Amex Fact Book," New York, NY: American Stock Exchange, 1983-1998. HOLLIS #: 000166331.
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