

SEC Enforcement of Foreign Firms: Is Bonding Really a Myth?[◇]

Roger Silvers
University of Massachusetts
rsilvers@som.umass.edu

First draft: May 1, 2010
This draft: February 9, 2012

Abstract: This study provides a test of the market valuation impact of Securities and Exchange Commission (SEC) enforcement actions for foreign firms. I examine the SEC enforcement policy towards foreign firms under its jurisdiction. In contrast to Siegel (2005) who examines earlier years, I find that the SEC's current (post-2002) enforcement intensity is considerable and has increased dramatically by comparison. I use SEC enforcement events to construct a novel test of the bonding hypothesis that circumvents the issues associated with firm-level exchange-listing events (e.g. self-selection and simultaneous changes to firm traits). The tests focus on stock returns of foreign firms not targeted by the SEC during event windows surrounding SEC announcements of enforcements against foreign firms. This isolates the effect of a changing enforcement environment. I find that when the SEC takes action against a foreign firm, *non-target* foreign firms experience positive stock returns. Returns are amplified for firms from weaker home legal environments, suggesting that the returns are due to a perceived increase in SEC scrutiny. Finally, consistent with the market adjusting to the new enforcement regime, the magnitude of non-target firm returns declines with each sequential SEC enforcement action. The overall results provide evidence that SEC oversight plays a significant role in increasing the value of foreign firms, which supports the legal bonding hypothesis discussed in prior literature.

Keywords: SEC, cross-list, legal bonding, insider trading, restatements, FCPA

JEL codes: K22, G38, F22, F23, F59, M48

[◇] I am indebted to my dissertation committee members, Pieter Elgers (chair), Mark Bradshaw, Craig Doidge, Ben Branch and Bing Liang. I also received helpful comments from Steve Perreault, Dave Michayluk, Brooke Beyer, Holly Skaife, and Terry Warfield as well as participants at the 2011 Edwards Symposium on Markets and Institutions, 2011 International Accounting Section mid-year meeting, 2011 AAA annual meeting, the 2011 FMA annual meeting, and workshop participants at the University of Wisconsin and University of Massachusetts. I gratefully acknowledge the funding of Gene and Ronnie Isenberg through the Isenberg Scholarship award. The usual disclaimers apply.

I. Introduction

The Paulson report (Committee on Capital Markets Interim Report 2006) suggests that the regulatory framework in the U.S. has become overly burdensome to public companies and is responsible for an alleged decline in U.S. market competitiveness. The report cites listing and capital raising choices of foreign firms, who have increasingly bypassed U.S. public markets in favor of private or non-U.S. sources of capital, as evidence of overregulation. Fundamentally, the report questions whether intense regulatory and enforcement processes have “gone too far.” On the other hand, the literature emphasizes that enforcement may actuate beneficial components of the regulatory system (Bhattacharaya and Daouk 2002; Coffee 2007; Carvajal and Elliot 2007). Despite repeated calls for more research concerning the capital market effects of enforcement, little empirical evidence exists to guide the controversial academic or public debates.¹

Contemporary research faces basic challenges when measuring enforcement. While Bhattacharaya and Daouk (2002) use the first insider trading prosecution as an enforcement proxy, these events may be correlated with parallel initiatives that seek to promote market development. La Porta et al. (2006) and Djankov et al. (2005) use regulators’ formal authority to construct enforcement indices, but practical levels of enforcement often depart from the legal authority vested in the regulator. Jackson and Roe (2009) use regulators’ scaled staff and budgetary resources as a surrogate for enforcement intensity and show a positive association with market development, but these scaled resources are not the only determinants of enforcement.²

Using actual SEC enforcement actions, I demonstrate a surge in the SEC enforcement intensity of foreign firms in U.S. markets. SEC enforcement actions targeting foreign firms are up to 28 times more likely post-2002. The increase in enforcement intensity identified in this study may be related to several factors. First, the Sarbanes-Oxley (SOX) act required enhanced disclosure related

¹ Leuz (2006), Bhattacharaya (2006), Holthausen (2009), and Daske et al. (2008) explicitly solicit research in this area.

² In measuring private enforcement, prior research has similarly used formal authority or vignette-based survey indices (LaPorta et al. 1998; Djankov et al. 2005)

to internal controls, and increased director and officer liability (Berger, et al. 2010). Also, enhanced scrutiny of foreign firms could result from related increases in SEC budget appropriations. Second, enforcement may be a spill-over effect from the post-September 11th information sharing agreements with foreign authorities that facilitate the acquisition of information necessary for litigation. As a matter of national security, these covenants were intended to help identify terrorist financing activity. However, they also had important unintended consequences for enabling the pursuit of foreign firms by the SEC via enhanced networks of international coordination. Finally, in 2005 the SEC announced that it would carefully review the reporting outcomes of financial reports under both International Financial Reporting Standards (IFRS) and U.S. GAAP, which was followed by a wave of SEC-prompted restatements.

In addition to the increase in enforcement intensity, the context of U.S.-listed foreign firms presents several useful attributes. First, from the perspective of a non-target foreign firm, the surge of enforcement actions represents a series of exogenous shocks to the regulatory environment. I employ these actions as part of a novel event-study that investigates the valuation consequences of SEC enforcement on *non-target* foreign firms. Second, variation in firms' home market legal strength provides cross-sectional predictions that condition the expected effects of enforcement, thereby strengthening the research design and causal inferences (see Posner 1974; Watts and Zimmerman 1978; Mulherin 2007). Third, in contrast to studies that evaluate a single regulatory or enforcement event, the multitude of enforcement actions are not systematically distributed over time, leaving the series less vulnerable to confounding events.³ Fourth, this setting is ideal for studying pre-existing statutory obligations that are moved to action by enforcement. Finally, U.S.-listed foreign firms are at the heart of the debates concerning the value of enforcement and capital market competitiveness of the U.S., making this context ideal for further investigation.

³ SEC enforcement actions are announced as they take place, and therefore these shocks to peer (non-target) firms are distributed randomly throughout time (see Figure 1a and 1b for details).

Foreign firms listed in the U.S. represent a significant fraction of global market capitalization, with cross-listed firms alone exceeding \$8 trillion (Gozzi, et al. 2007). It is not surprising that many foreign firms choose a U.S. listing given prior literature that shows lower financing costs are associated with a U.S. listing. However, there are different views about the mechanisms by which this reduction takes place. Some research proposes that firms choose a U.S. listing because the enhanced legal framework helps protect shareholders and provides high quality disclosure. Known as the “bonding hypothesis,” the pledge to meet the demands of the American legal environment implied by a U.S. listing is viewed as a signal regarding a firm’s commitment to enhanced disclosure and investor protection.⁴ However, others question the bonding hypothesis on the grounds that SEC and private oversight provided by a U.S. listing are largely mythical. For example, the SEC's enforcement policy towards cross-listed firms has been described as a “free pass” (Shnitser 2010, title), “rare” (Coffee 2002, p 47; 2007, p 55), and “hands off” (Licht 2003, p 143), while Licht et al. (2011, p 15) state that “the rumors of the SEC’s imminent threat of public enforcement have been greatly exaggerated.” In a study of cross-listed Mexican firms, Siegel (2005) finds that SEC enforcement actions against these firms are practically nonexistent and suggests that this trend extends to all foreign firms.⁵ These studies maintain that the cost of capital benefits associated with a U.S. listing are due instead to overcoming investment barriers, such as formal restrictions on domestic equity ownership or informal restrictions related to transaction costs (Merton 1987; Errunza and Losq 1985). This view, known as the “market segmentation hypothesis,” serves as the main alternative to the bonding hypothesis.

⁴ The “bonding hypothesis” is often attributed to Rene Stulz or John Coffee who, in the spirit of Jensen and Meckling (1976), describes bonding as “the costs or liabilities than an agent or entrepreneur will incur to assure investors that it will perform as promised, thereby enabling it to market its securities at a higher price” (Coffee 2002).

⁵ Similar evidence is presented by Frost and Kinney (1996) who demonstrate substantially lower disclosure frequency, later annual filings, and an absence of enforcement despite significant noncompliance with U.S. disclosure obligations.

Prior research has wrestled with empirical difficulties in testing the bonding hypothesis.⁶ First, firms self-select into a U.S. listing, making it difficult to find a comparable benchmark. Some studies try to overcome this problem by using firms as their own control (e.g., pre-U.S. listing). However, simultaneous changes to fundamentals, such as expected growth, capital structure, and liquidity, obscure the source of any measured valuation benefit of a U.S. listing. Similar to self-selection concerns, these fundamental changes make it difficult to attribute valuation effects of cross-listings to the bonding hypothesis, market segmentation hypothesis, or both.

I offer two stages of tests that evaluate: (1) the SEC's enforcement intensity regarding foreign firms over time, and (2) the enforcement consequences for peer foreign firms not accused of wrongdoing ("non-target firms" hereafter). Enforcement frequency has prominently increased after 2002. However, fluctuations in enforcement frequency over time are jointly determined by the enforcement mechanism *and* malfeasant firm behavior (Demsetz 1967; Peltzman 1976). Therefore, it is important to make use of research design elements that preclude an escalation in firm-level wrongdoing as an explanation for the increased enforcement frequency, leaving the enforcement mechanism as the mostly likely explanation. To do so, I apply litigation models from prior literature to SEC enforcement actions against foreign firms, integrating an innovative proxy for wrongdoing (using class action litigation) to model the SEC's enforcement choice. Based on Siegel's (2005) results and the environmental changes discussed above (e.g. SOX, SEC budgetary increases, September 11th, and IFRS considerations), the analysis is partitioned into two separate time periods: pre- and post-2002. I find that after controlling for factors including the number of foreign firms listed in U.S. markets and accusations of wrongdoing, the probability of foreign firms being targeted by SEC enforcement actions has increased by several orders of magnitude in the post-2002 time period.

⁶ See Karolyi (2010), Hail and Leuz (2009), Leuz (2006) and Benos and Weisbach (2004).

This policy shift from passive to aggressive SEC enforcement provides data useful for evaluating the broader consequences of enforcement. Results indicate that when the SEC pursues a foreign firm, non-target foreign firms' abnormal stock returns are approximately 0.4% per action. Thus, in this context, active regulatory oversight appears to increase firm value. In economic terms, the valuation impact on non-target foreign firms associated with the SEC enforcement actions is considerable. Moreover, I find that the country of origin is associated with the magnitude of the valuation impact in predictable ways. Firms from countries with weaker legal environments exhibit an amplified response to SEC enforcement. Finally, I demonstrate that the magnitude of the response to extraterritorial SEC enforcement declines over time, consistent with the market expectation of SEC oversight gradually adapting to the regime shift. Taken together, these findings suggest that foreign firms enjoy significantly positive valuation benefits as a consequence of increased enforcement, a result that also conforms to the key predictions of the bonding hypothesis.

The results are robust to several sensitivity analyses and alternate research designs. Portfolio-based results are constructed to account for cross-sectional dependence across firms and are robust to alternative specifications of abnormal returns and return windows. Simulations that randomly assign treatment dates (stratified to match yearly enforcement frequencies) rarely yield returns that exceed the true enforcement dates, indicating that the results are not driven by an omitted risk factor. Results are also consistent using a panel regression framework with daily abnormal returns as the dependent variable. These regressions include controls for size and market to book, as well as country-, industry-, and year-fixed effects with standard errors double-clustered by firm and date.

This study seeks to contribute to the sparse literature on enforcement, the public discussions regarding U.S. market competitiveness, and to the debate in academic literature concerning the bonding hypothesis. The research design captures the effects of exogenous changes that are confined to the legal environment of foreign firms, thereby providing a test of the bonding hypothesis that

circumvents the issues of self-selection and changes to firm fundamentals that occur with a U.S. listing. Quantifying capital market benefits of enforcement has eluded prior research and regulators (Sherwin 2005), but this study may help identify concrete value in active enforcement of the capital markets. While some prior literature attempts to measure the costs of regulation (e.g. declines in the number of foreign listings, decreases in capital raised in U.S. markets, delisting choices of foreign firms), the benefits of regulatory enforcement documented in this study indicate that enforcement intensity is a desirable feature from the perspective of higher quality foreign firms who can withstand intense scrutiny. Finally, to my knowledge, this study is the first to link positive market-wide valuation effects to specific enforcement actions. Such results extend prior research by suggesting a causal direction for the previously documented association between public enforcement and market development proposed by Coffee (2007), Jackson (2007), and Jackson and Roe (2009).⁷

The paper proceeds as follows: Section II discusses background literature related to the bonding hypothesis and describes reasons why the SEC enforcement policies toward foreign firms may have shifted in the past decade. Section III develops hypotheses that relate to the SEC policy toward foreign firms over time, the effect on non-target foreign firms, and cross-sectional and temporal predictions. I discuss sample data in Section IV. Section V describes the research design and main results. Finally, Section VI briefly discusses additional analyses that explore information transfer. Section VII concludes.

II. Background

A new line of research has emerged that seeks to evaluate the impact of regulatory changes (e.g. SOX, SEC rules, and Supreme Court decisions) on U.S.-listed foreign firms. Piotroski and Srinivasan (2008) study the effect of SOX on the new listing decisions of foreign firms, pitting U.S. markets against comparable markets in London. Their evidence shows that SOX has had little impact

⁷ This however, does not rule out the possibility that the causal structure is bi-directional.

for large firms considering a U.S. or London Stock exchange listing, but after SOX, smaller firms were more likely to select the Alternative Investment Market (London) rather than U.S. exchanges. Doidge et al. (2010) evaluate the exodus of foreign firms from U.S. markets as a result SEC Rule 12h-6, which makes it easier for a cross-listed firm to deregister from their U.S. listing (thereby eliminating the requirements of U.S. laws, including SOX). Firms that deregister possess characteristics that indicate greater agency costs, inferior growth opportunities, poor performance, and little need for external financing. Ultimately, they conclude that SOX regulations were probably not a major determinant of the decision to secede from U.S. markets. In a related study, Fernandes et al. (2010) document that the option to flee from the rigorous U.S. legal system (provided by SEC Rule 12h-6) is associated with a negative and significant share price reaction for firms from weak home legal environments, while the response is insignificant for firms from strong home legal environments. The evidence from these studies indicates that shareholders may perceive value from U.S. oversight, but that the impact may be determined by firm specific factors (such as home market legal strength).

Licht et al. (2011) investigate a Supreme Court decision (*Morrison v. Australia National Bank*) that obstructs the ability to apply U.S.-style private class action litigation extraterritorially. This change, which denied the protection of U.S. civil liability for investors in foreign located transactions, exhibits a positive association with foreign firm abnormal returns, suggesting that the reduction in potential liability actually benefitted the value of U.S.-listed foreign firms, consistent with the interpretation that the previous civil liability regime may have been too onerous.⁸ Gagnon and Karolyi (2011) study the same events related to the Supreme Court decision but reach the opposite conclusion. Using a sample that is limited to instances where shares viably trade both in the U.S. and foreign markets, they provide evidence that the U.S.- versus home-market price deviates

⁸ The key dates related to Morrison also map onto key dates related to the Dodd-Frank act, making the net change in the regulatory environment potentially ambiguous.

from parity such that U.S. shares trade at greater prices. This is consistent with the legal system creating fundamentally different classes of shares based upon the option to invoke the U.S.-style private right of action (see Stulz (2009) for further details).

While the enforcement construct is absent from these studies, we do learn that foreign firms have experienced several regulatory changes, and many provide outcomes indicating that some features of the U.S. legal environment are valued by investors. Outside of this context, a handful of papers empirically consider the vital role of enforcement activity in obtaining compliance with existing regulations (Coffee 2007; Holthausen 2009). For example, Bhattacharaya and Daouk (2002) use the first time insider trading laws are actually enforced as the proxy for enforcement and conclude that the establishment of insider trading laws has no discernible impact on a country's cost of capital until those laws are actually enforced. Jackson and Roe (2009) use regulators' real resources as a surrogate for enforcement intensity and provide evidence that market development is positively associated with public enforcement, even after controlling for the effect of private enforcement. Kedia and Rajgopal (2011) use actual enforcement actions to argue that restatements are less likely when SEC enforcement threat salience is greater (as measured by geographic proximity to the SEC, and past geographic enforcement intensity). Christensen et al. (2011) use a more active research design that examines the effect of two new directives related to insider trading/market manipulation and corporate reporting/disclosure. Their research design exploits the staggered directive implementation and shows that market liquidity increases following the directives, and the improvement in liquidity is more prominent in countries with an existing framework that can apply and enforce the directives more stringently.

In the context of foreign firms in U.S. markets, however, empirical proxies of enforcement intensity have eluded prior research, in part because, based on Siegel's (2005) study, enforcement of

foreign firms is often assumed to be illusory.⁹ The dramatic expansion of foreign SEC enforcement is associated with several factors. First, the terrorist attacks of September 11, 2001 increased the priority of cross-border information sharing. In response, the USA Patriot Act of 2001 required remediation of intra-jurisdictional enforcement cooperation at the SEC, Department of Justice, and Financial Crimes Enforcement Network (a division of the U.S. Treasury known as “FinCEN”). The Patriot Act’s formal objective is to deter and punish terrorist acts across the globe via enhanced law enforcement and regulatory tools. Numerous examples of Patriot Act sections have specific provisions to enable extraterritorial enforcement. For example, section 311 (Special Measures) allows the identification of customers and oversight of payable-through accounts for foreign banking institutions. If jurisdictions or countries are not cooperative or are incapable of providing adequate procedures, they can suffer the imposition of prohibitions against transacting with any members of the U.S. financial system. Sections 313 (Prohibition on U.S. Correspondent Accounts with Foreign Shell Banks), 314 (Cooperative Efforts to Deter Money Laundering), and 319b (Bank Records Related to Anti-Money Laundering Programs) provide explicit power to prevent, investigate, disrupt, and pursue terrorist financing, money laundering, and related illegal activities that take place outside the U.S. territory.¹⁰ These initiatives paralleled the global efforts of the International Organization of Securities Commissions (IOSCO), Financial Action Task Force (FATF), and Financial Stability Forum (FSF) (Friedman et al. 2002).

Those within the SEC, like acting director of the Office of International Affairs, Felice Friedman, noticed practical differences following the terrorist attacks:

⁹ Although lack of enforcement by the SEC and possible failure of private litigation led Siegel to conclude that the U.S. legal environment is of little consequence to foreign firms, other research raises concerns about the methods used in, and conclusions drawn from, Siegel’s study (Benos and Weisbach 2004; Doidge 2004; Leuz 2006; Coffee 2007). Leuz (2006) and Coffee (2002) stress that legal bonding does not imply that scrutiny of foreign and U.S. firms be equivalent. The necessary condition for bonding merely requires that entry into U.S. markets provides an incremental improvement in disclosure or minority shareholder protection. Coffee (2002) goes on to point out that SEC oversight can take place in a multitude of ways, including informal and unobservable contact. Furthermore, ad hoc examination of specific SEC actions (or lack thereof) does not constitute an effective test of bonding (Coffee 2002; Benos and Weisbach 2004).

¹⁰ See <http://www.uspatriotact.org/> and http://www.fincen.gov/ststutes_regs/patriot/ for more details.

“The effects of the events of 11th September, 2001 on securities markets underscored the importance of international cooperation among regulators. In the aftermath of the attacks securities regulators cooperated - perhaps more than ever before. Regulators were in touch on a daily basis to exchange regulatory and enforcement information, and consulted with one another about the regulatory relief they were considering.” -Friedman et al. (2002, p 37)

Both the Department of Justice and the SEC established more formal mechanisms that promoted cross-border cooperation and anti-terrorism intelligence. These mechanisms include Multilateral Legal Assistance Treaties (MLATs) and Multilateral Memorandum of Understanding (MMOU), respectively. The MMOU was brokered by IOSCO and outlines the scope of the international assistance, permissible uses of the information acquired, and explicitly states conditions under which the information will be confidential (Friedman, et al. 2003).¹¹

Other concurrent factors may have also contributed to increased enforcement. For example, the Sarbanes-Oxley Act of 2002 may contribute to an expansion of oversight. Berger citation In addition, the SEC budget increased by 21% in 2002 and 40% in 2003, the largest two increases during the 16-year sample period. Finally, the dialogue concerning IFRS prompted the SEC to scrutinize the financial reports of foreign firms as they reconsidered the need for foreign firms to provide reconciliation to U.S. GAAP (see Gordon, et al. (2011) for details). While separating the contribution made by each of these factors (September 11th, SOX, budgetary increases at the SEC, and IFRS) to the enforcement intensity of foreign firms is difficult, an increase from the ineffective regime documented by Siegel (2005) to a more extensive foreign enforcement policy at the SEC is expected.

Exploring a parallel trend of increasing enforcement in the private sector, Gande and Miller (2011) demonstrate both (1) an increasing frequency of class action litigation targeting foreign firms and (2) that target firms bear significant penalties. They predict private litigation using firm

¹¹ Importantly, the MMOU does not require that the activities be illegal in both countries (dual criminality), and establishes channels through which the SEC can execute asset freezes (see <http://www.sec.gov/news/press/2010/2010-153.htm>). The SEC also obtained an exemption from the U.S. Freedom of Information Act (amended, 2002), to ensure that after a foreign regulator surrenders information, its public disclosure is still at the discretion of the original regulator.

fundamentals and aspects of historical return behavior and find limited support for the notion that the probability of litigation is related to the quantity of U.S. sales. Kim and Skinner (2011) also indicate that the probability of private litigation is unaffected by foreign location of incorporation. Although predicting SEC enforcement is less common in the literature, several papers attempt to model SEC Accounting and Auditing Enforcement Releases (AAERs). Dechow et al. (2010) and Schrand and Zechman (2011) link the probability of receiving SEC AAERs to accounting attributes and executive overconfidence.

III. Hypothesis development

To investigate the effects of enforcement on capital markets, I first consider the SEC enforcement policy towards foreign firms and then study the market response of their *non-target* U.S.-listed foreign peers. Finally, I evaluate the cross-sectional association between returns and home country legal characteristics and the magnitude of the market response over time. In the pre-2002 time period examined by Siegel (2005), pursuit of foreign firms was rare, despite compelling evidence of asset taking by Mexican firm insiders. However, the recent SEC regime shift (which motivates enforcement of foreign firms) may provide a context that can provide important evidence concerning enforcement, and also explore potential for legal bonding. For example, in August of 2002, Gary Goodenow, an attorney at the SEC's Division of Enforcement described the practical level of enforcement cooperation: "The SEC and other regulators...have only very recently begun considering information sharing between financial regulators" (Vaknin 2002). Market awareness can also be demonstrated by PriceWaterhouseCoopers' 2003 Securities Litigation Study which observes that "the SEC entered into new cooperation agreements with the European Union and various EU countries' securities regulators, as many more securities litigation matters went 'global'" (PriceWaterhouseCoopers 2004, p 2). However, because the SEC never provided an official "free pass" to foreign firms, a publicly expressed amendment to this policy would be a tacit admission that

a “hands off” policy was applied in the past, which is inconsistent with the SEC’s mission. I neither expect nor find an explicit announcement that the policy changed. However, the various environmental changes all point to the potential for a practical increase in the enforcement of foreign firms, which motivates the first hypothesis (stated in alternative form):

H1: The probability of SEC enforcement targeting foreign firms is greater in the post-2002 period, than the pre-2002 period.

The legal bonding hypothesis suggests that firms benefit from signaling their superior reporting quality by withstanding the potential scrutiny of the SEC.¹² Legal bonding requires that the oversight of the SEC and the threat of enforcement be sufficient to reduce investor perceptions of risks (e.g. risks decline due to an increased cost of rogue management behavior (Zimring and Hawkins 1973)). Indeed, Kedia and Rajgopal (2011) demonstrate that the propensity to engage in rogue behavior is inversely related to enforcement threat salience (measured by historical county-level SEC enforcement). Accordingly, I expect that in cases of SEC enforcement of foreign firms, other U.S.-listed foreign firms are a relevant peer group for both managers and investors to reassess enforcement intensity. If the market perceives that the SEC is providing scrutiny of foreign firms that would otherwise not be held to such standards, the potential for legal bonding exists. However, I again note that legal bonding does not imply that scrutiny of foreign firms and U.S. firms is equivalent (Leuz 2006; Coffee 2002). As Leuz (2006) points out “[the bonding hypothesis] only maintains that the U.S. cross-listings provide some additional reassurance to outside investors.”¹³

Investors may be skeptical of the practical impact of the MMOU information sharing agreement on extraterritorial enforcement because the SEC has entered into similar information

¹² The legal system as a whole is the critical element, but the SEC ostensibly plays a sizeable role as the most powerful financial regulatory body in the U.S. legal landscape.

¹³ The theoretical grounds for my expectations relate to legal bonding, which is classically applicable to cross-listed firms. However, extraterritorial SEC oversight of both cross-listed and exclusively U.S.-listed foreign firms was once deficient and has subsequently expanded. Therefore, to the extent that the market considers extraterritorial SEC enforcement actions relevant to both subsets of firms and perceives value in SEC oversight, I expect similar valuation consequences. Accordingly, I evaluate all foreign incorporated firms in the remainder of the paper.

sharing agreements in the commission's history, with little observable impact. For example, Mann and Barry (2005, p 667) state, "Whereas in the past authorities paid polite lip service to cooperation, today it is real." Indeed, the SEC's Policy Statement on Regulation of International Securities Markets, formally emphasizing the importance of cross-border regulatory networks, had been in place since 1988, but was followed by the weak oversight documented by Siegel (2005). Furthermore, while the International Organization of Securities Commissions (IOSCO) requires an extensive review that ensures that MMOU members are capable of fulfilling the terms and conditions therein, the MMOU is not legally binding, and the right to refuse to cooperate is at the discretion of the foreign authority.

As a result, the market valuation effects of such a regime shift require evidence of specific actions for the market to resolve uncertainty concerning the actual pace and scope of the more aggressive SEC enforcement policy. Therefore, notification that the SEC has successfully performed this function by pursuing a foreign firm may cause market participants to revise or reaffirm their prior beliefs about the standard to which foreign firms are held. The cost of violating the U.S. rule of law in foreign firms concomitantly increases (and becomes more salient), creating additional deterrents to wrongdoing and reminding the market that foreign firms are not beyond the reach of the SEC (Becker 1968; Jennings, et al. 2011). If investors perceive that the monitoring role of the SEC has expanded, positive returns (higher valuations) to non-target foreign firms may result. This reason motivates the second hypothesis (stated in alternative form):

H2: Around the dates of SEC enforcements against foreign firms, abnormal returns to non-target foreign firms will be positive.

Under the bonding hypothesis, one major driver of increased value of a U.S. listing is the commitment to higher legal, governance, and investor protection standards, all of which are under the jurisdiction of the SEC. Ultimately, SEC actions generate larger marginal benefits to firms with the

most room for improvement. For example, firms from developing countries with poor investor protection (i.e. weak legal systems, disclosure mandates, and anti-director rights) are likely to experience the largest cross-listing benefits (Miller 1999; Doidge, et al. 2004; Doidge 2004). Also, Doidge, et al. (2007) show that firm-level characteristics have little relation to governance scores in under-developed markets beyond country-level characteristics. This suggests that firms from countries known for poor governance may be unable to change investor sentiments through increasing their governance practices alone and are therefore likely to experience the largest marginal impact from SEC scrutiny. Hail and Leuz (2009) show that the reduction in the implied cost of equity capital provided by cross-listing (after controlling for changes in expected growth) is greater for firms domiciled in weak home regulatory environments. Taken together, these results suggest that if regulatory oversight drives returns around SEC enforcements of foreign firms, those firms which are cross-listed in countries with the weakest financial environments should reap the largest benefits.¹⁴ This reasoning leads to the third hypothesis (in alternative form):

H3: The legal strength of firms' home countries is inversely related to the market value impact of SEC enforcement action for non-target foreign firms.

The preceding discussion implies that a change in expectations of SEC enforcement is a contributor to the market's valuation of a firm. Given that extraterritorial capabilities may have only recently become effective, and that this represents a marked change from the prior SEC enforcement policy documented by Siegel (2005), one would expect that the initial enforcements in a new enforcement regime would cause the greatest revisions in the market expectations of SEC oversight. Consequently, increases in valuation are likely to accrue to the earlier enforcement actions.

¹⁴ Christensen et al. (2011) find evidence that countries with stronger existing regulatory frameworks benefit from enforcement directives, while countries with weaker frameworks do not. However, whereas the increased oversight of the SEC in this study is centralized, Christensen et al.'s research context evaluates decentralized directives, questioning the practical change in enforcement for countries with weak prior regulation.

Therefore, in my fourth hypothesis, I conjecture that the magnitude of the abnormal returns declines over time.

H4: Abnormal returns to non-target foreign firms around SEC announcement dates will decline in magnitude over time.

IV. Sample

Enforcement Sample

Data for the sample are collected from multiple sources pertaining to SEC enforcement actions over 16 years (1995 to 2010). I split the sample into two periods (pre-2002:1995-2001 and post-2002:2002-2010) because the terrorist attacks that prompted information sharing took place at the end of 2001, and because I seek to compare the recent enforcement policy with Siegel (2005) which shows that SEC actions are sparse in the pre-2002 period.

Reported in Table 1, Panel A, the sample of 172 events consists of 28 actions against foreign firms in the pre-2002 period and 144 actions in the post-2002 period, which represents a four-fold increase (4 per year in the pre-2002 period versus 16 per year in the post-2002 period). The nature, time trends, and potential valuation consequences of the enforcement actions vary considerably by type, so I also display four categories of enforcement actions: Insider Trading, Restatement, Foreign Corrupt Practices Act (FCPA), and Miscellaneous.

The Securities and Exchange Commission annual reports provide a description of insider trading enforcement actions. Panel A describes the sample of 52 total insider trading enforcement actions brought against firms and their insiders.¹⁵ The frequency of foreign enforcements in Panel A increases from 16 actions from 1995-2001 to 36 actions from 2002-2010. I gather restatement data from the SEC website, EDGAR, Audit Analytics, and the GAO database from 1995 to 2010 on all

¹⁵ Analyses by firm (rather than by enforcement action) which remove firms with multiple offenses buttress the notion that enforcement actions against foreign firms are far from rare, and ensure that results are not driven by multiple litigation releases for the same firm. These results are unreported.

publicly announced SEC-prompted restatements and financial reporting infractions. I do not include restatements due to mergers, acquisitions, stock splits, or other sanctioned business reporting that arise from unusual, but legitimate, operations (Hennes et al. 2008). The resulting sample consists of 75 restatements, of which 70 are in the post-2002 period. This represents an increase of over tenfold on a per year basis. Next, are the actions related to the FCPA, which intends to promote competition by prohibiting bribery of foreign officials to obtain an improper business advantage. The FCPA also stipulates certain accounting practices for firms listed in the U.S. Specifically, firms must (a) keep records that accurately reflect the transactions of the corporation and (b) devise and maintain an adequate system of internal accounting controls. The actions demonstrate a meteoric rise in recent years, thanks in part to the International Anti-Bribery and Fair Competition Act of 1998 which expanded the scope of the FCPA. No actions occur prior to 2002, and 20 actions took place after 2002. Finally, Table 1, Panel A shows additional 25 SEC enforcement actions that are not readily classified. These miscellaneous infractions include as tax evasion, aiding and abetting other firms committing fraud, and false disclosures (unrelated to financial statements). Many of these events also involve significant fines (which average over 80 million dollars).¹⁶

Panel B of Table 1 reports the enforcement actions by listing type. Exchange listings represent firms listed on the NYSE, AMEX, or NASDAQ, while OTC represents the over-the-counter markets.¹⁷ The “Miscellaneous” category includes firms that are 144a private placements, firms that are linked to U.S. markets only through parent or subsidiary companies, or firms that were not listed in U.S. markets at the time the alleged offenses occurred. The overwhelming majority of enforcement actions target *listed* firms (151 of 172 or 88%). This lack of enforcement intensity for

¹⁶ See, for example, <http://www.sec.gov/litigation/litreleases/2006/lr19716.htm>.

¹⁷ Hereafter, “listed” securities represent those trading on a major U.S. exchange (such as the NYSE). These firms correspond to Level II and III American Depositary Receipts (“ADRs”). In contrast, “unlisted” refers to the OTC markets, which includes Level I and rule 144A cross-listings.

unlisted firms may contribute to the reduced benefits of U.S. cross-listing on cost of capital documented by prior literature (e.g. Hail and Leuz 2009).

Universe of Foreign SEC-regulated Firms

To facilitate a better understanding of the frequencies presented in Table 1 Panels A and B, I collect data to describe the representation of foreign firms listed in U.S. markets by listing type.¹⁸ As a benchmark, the bottom of Table 1 Panel C provides the fraction of foreign firms in the relevant U.S. market (the 17.8% represents 2,000 foreign firms in U.S. markets as a percentage of roughly 11,000 total SEC regulated firms). The enforcement proportions reported in Table 1, Panel C do not support the view that the SEC abdicates its responsibility for foreign firms. Enforcement against listed foreign firms as a percentage of total enforcement is generally comparable to the foreign representation in listed markets. For listed securities, the foreign insider trading enforcement actions by the SEC (14.62%) exceed the underlying representation of foreign firms in the market (10.70%).

The only major deficiencies apparent in enforcement activity are found in the OTC market. Consistent with prior literature and the reduced regulatory and disclosure requirements for such listing types, the information demonstrates that listing type does matter. For example, foreign firms represent 28.70% of the OTC markets, while the fraction of enforcement devoted to them is less than 2% in each enforcement type. The OTC under-representation of foreign firms in SEC enforcement actions is not surprising given prior research, which shows that the SEC radar for illegal actions is attenuated for unlisted firms (Miller 1999; Coffee 2002; Lang et al. 2003a; Doidge et al. 2004, 2008; Hail and Leuz 2009). Although these results are similar to Shnitser (2010), she concludes that the SEC pursuit of cross-listed firms is vastly inferior to that of domestic firms. Her analysis, however, does not separately evaluate exchange listed firms and non-exchange-listed firms. Given the

¹⁸ Data are obtained via the Bank of New York, OTC Bulletin Board, NASDAQ, and NYSE/AMEX websites and is cross-validated by information from the SEC website. Because the miscellaneous infractions are not clearly classified into a category, I do not report comparable domestic SEC actions.

empirical support for the SEC's disciplinary role in regulating foreign firms, it is no longer appropriate to dismiss the SEC's role in regulating foreign firms as inactive, laissez-faire, inconsequential, or nonexistent.¹⁹

V. Research design and empirical results

Introduction

The hypothesis tests are presented in the following three sections. First, I evaluate the SEC's choice to pursue foreign firms (H1). Next, I turn to non-target foreign firms. I examine the magnitude and timing of the market response using a portfolio-based event study framework (H2). I then account for the fact that several of the portfolios overlap, and control for other factors that could affect returns by using an alternative pooled time-series cross-sectional regression framework. This approach also allows me to assess the home country characteristics that condition the market response at the firm level (H3) and the return magnitude over time (H4) using panel regression.

Probability of SEC Enforcement

This is the first study to model the SEC's enforcement intensity. As discussed in the previous section, the frequency of SEC enforcement has dramatically increased. However, the fundamental issue is whether the SEC enforcement *intensity* has changed. The enforcement frequency tabulated in Table 1 may not furnish such evidence. I emphasize a difference in enforcement *intensity* versus enforcement *frequency*, which is that increased frequency may be due to an increasing number of malfeasant events within foreign firms, rather than an increased intent to prosecute on the part of the SEC (i.e. intensity). For example, differences in SEC enforcement frequency of foreign firms across time could be an artifact of an increase in the number of foreign firms in U.S. markets or increased

¹⁹ The information in Table 1 should be interpreted cautiously in assessing SEC enforcement equality. The groups may have differences in the underlying frequency or severity of misconduct and the home country may share a portion of the regulatory burdens with the SEC, which could distort observed frequencies. For example, there are multiple instances in which the SEC deferred its prosecutorial role to home regulators because of "double jeopardy" concerns that would interfere with home market investigations (see, for example, Friedman et al. 2002).

wrongdoing by foreign firms. Indeed, Gande and Miller (2011) describe an upward trend in private litigation targeting foreign firms in U.S. markets. I estimate model (1), shown below, using logistic regression with the dependent variable set equal to ‘1’ in the year of SEC enforcement (‘0’ otherwise).

$$(1) \quad SEC_ACTION_{it} = \alpha_0 + \alpha_1 POST + \alpha_2 CLASS_ACTION_{it} + \alpha_3 MB_{it-1} + \alpha_4 SIZE_{it-1} + \alpha_5 RETURN_{it-1} + \alpha_6 SKEW_{it-1} + \alpha_7 TURNOVER_{it-1} + \varepsilon_{eit}$$

Model (1) includes a set of control variables used by prior research including size, market to book ratio, and prior year market-adjusted returns, cumulative turnover, and return skewness (see Appendix for details). To help rule out these alternative explanations, I also include class action litigation as a proxy for wrongdoing, using an indicator variable equal to ‘1’ when a firm has been named as a defendant in a class-action lawsuit in the previous 5 years. I choose 5 years because the statute of limitations for the SEC is typically 5 years.²⁰

The results, which use estimates of standard errors by clustering at the firm level, are presented in Table 2. Panel A displays the results for separate regressions in the pre-2002 and post-2002 time periods, as well as the entire sample period. The coefficient on the indicator for the post-2002 time period, ‘*POST*’, is positive and significant with an odds ratio estimate of 4.25. This suggests that, after controlling for allegations of wrongdoing, the number of foreign firms in U.S. markets, and the other firm-level variables, the SEC enforcement intensity in contemporary time periods has increased 425%. I also compare the SEC enforcement policy across the two time periods. The Chi-squared joint test of parameter equivalence across the two periods is rejected (p=.03), indicating that the SEC enforcement policy has changed. These findings are consistent with the notion that the events described in Section II have had a significant effect on both the SEC enforcement intensity (H1) and policy. Panel B estimates the model separately for each enforcement

²⁰ See Section 3.1.2 of the SEC 2011 enforcement manual, available at www.sec.gov/divisions/enforce/enforcementmanual.pdf.

action type. Results indicate that insider trading enforcement intensity has not increased over time, but restatement, FCPA, and miscellaneous enforcement actions have increased by a factor of more than 28, 12, and 7, respectively. To summarize, these results provide support for H1.

Portfolio CAR

The increased enforcement intensity shown above may benefit non-target foreign firms because SEC scrutiny reduces the cost of external monitoring and increases the cost of insider malfeasance. Muradoglu and Huskey (2008) and Salavei et al. (2009), who examine the market response of target firms to SEC enforcement actions, find that such firms experience significant negative abnormal returns associated with the SEC announcements. These returns to target firms begin around day -1 and change little after day +8 relative to the announcement date. Accordingly, I choose to examine 10-day (-1, +8) returns to a portfolio of non-target foreign firms on U.S. stock exchanges as the event period return window. I also report the anticipatory period (-14, -2) and the subsequent period (9, 16) returns. Although the results are equivalent using a variety of abnormal return specifications, I report market-adjusted abnormal returns to ensure the broadest sample possible.²¹ Similar to Leuz, Triantis, and Wang (2008) the market-adjusted abnormal return deducts the CRSP value-weighted index from each firm's raw return.

I identify cross-listed firms via depository bank websites (JP Morgan, Citigroup, and the Bank of New York's ADR.com), ADR and ADS firm name headings from Compustat and CRSP, and the SEC website. I identify other foreign firms using the location of their incorporation in Compustat. I require that firms have data for each of the 10 days within the event period window (-1,+8). I use the universe of foreign and cross-listed firms covered by CRSP to form equally-weighted portfolios at

²¹ The alternative specifications tested are raw, market-model adjusted, size-adjusted, and Fama-French three-factor. Results using (0, 4), (-2, +2), and (-1, 5) event windows are statistically significant with the same sign and comparable (daily return) magnitudes as the ones reported.

each SEC action date because well over 100,000 observations (firm-events) are available in CRSP.²² This approach mitigates potential cross-sectional dependencies that could bias the standard error estimates (Sefcik and Thompson 1986). The 171 portfolios constructed for each unique SEC enforcement action date assume that different events are uncorrelated, which is not unreasonable given the random nature of the enforcement event announcement dates (see Figure 1a and Figure 1b). Standard errors are estimated using an approach similar to Fama and MacBeth (1973).

The specification of abnormal returns presumes that foreign firms do not have omitted risk characteristics that impart a bias upon returns. In order to give closer inspection to this potential confound, I follow Armstrong, et al. (2010) by comparing event period returns to dates assigned at random. I calculate the (-1, 8) 10-day abnormal returns to the foreign firm portfolio for each trading day from 1995 to 2010. Dates are selected such that they correspond to the number of observations from each year (stratified by year), and the procedure is repeated 1,000 times. The p-value is the number of times out of 1,000 that the simulated returns exceed the returns around the true event dates. If the abnormal returns in randomly assigned (non-event) periods rarely exceed those in event periods, I have additional confidence that the returns are well specified. This simulation approach also has the advantage of requiring no assumptions about the distributional properties of the abnormal portfolio returns. The simulation results, reported as “simulated p-values” in the far right-hand column of Table 4, support the market-adjusted specification of returns used in the primary tests.

Figure 1a displays the 171 portfolio returns to enforcement announcements over time by type of enforcement. The number of SEC actions targeting foreign firms is an increasing function of time. Panel A of Table 4, which reports the anticipatory, event, and subsequent period returns (in basis points) is consistent with the view that the enforcement announcement positively affects foreign

²² I remove any firms who have daily returns (event period CARs) greater than 10% (40%) in absolute magnitude as these represent extreme performance that is likely driven by other firm-specific factors. The average number of firms per event with the necessary information to calculate abnormal returns is about 781. On average, 48% of the portfolio is comprised of American Depositary Receipt firms.

security returns. The anticipatory (day -14 to -2) and subsequent period (9, 20) returns are insignificant while the event period (-1, 8) returns are positive and significant, consistent with H2. Foreign firms appear to benefit from the SEC action by 41.1 basis points over the 10-day window.²³ The Bank of New York estimates that in 2008 the NYSE and NASDAQ held 1.2 trillion dollars of market capitalization for cross-listed firms (BNY 2009), making 4.1 basis points an impressive daily increase in dollar value.

Panel C of Table 4 partitions firms by the type of violation (insider trading, restatement, FCPA, and miscellaneous). The abnormal returns in each partition are again tested at the portfolio level and the abnormal return estimates for all three types are positive in the 2002-2010 partition. The lack of statistical significance in the pre-2002 period is likely due to a lack of power and sensitivity to extreme observations afforded by the portfolio design (which provides as few as 5 observations in the restatement partition). The full sample shows statistical significance for the Restatements, FCPA, and Miscellaneous categories.

Panel Regression Analyses of Firm-specific Abnormal Returns

Given the significant response at the portfolio level reported in Table 4, an exploration of the time-, event-, and firm-specific characteristics that may influence the magnitude of the market response to SEC enforcement actions is informative. Therefore, I apply a pooled time-series cross-sectional panel approach that regresses firm-specific daily returns on market controls (such as size and book to market ratio) and uses indicator variables to capture the effect of the enforcement actions.

²³ This evidence is descriptive in nature, and the estimates of abnormal return magnitude should be interpreted with caution. For example, several of the 171 observations partially or fully overlap, unduly weighting such time periods, and violating the assumption of independence. Furthermore, 29 SEC enforcement actions in the sample relate to SEC allegations about the same firm. Such actions are usually an extension of existing charges stemming from ongoing investigations (which are unlikely to come as a revelation to the market). Also, despite the affirmation of the simulation results and robustness of the returns to a variety of measurements, the literature has demonstrated that other cross-sectional factors such as book to market ratio and size exhibit a significant and predictable relationships with returns (Fama and French 1992; Fama and French 1993; Ferson and Harvey 1999). I address these concerns in the following section.

The panel approach, which uses the entire series of daily return data from 1995 to 2010, has several advantages. First, rather than discarding partially overlapping enforcement events, I can capture the effect of enforcement with greater precision by using indicator variables to denote proximity to an event. In cases where events overlap, the most recent events overwrite the old events, such that no event days are double counted. Second, the indicator variables can be interacted with various event-specific data that I expect to be associated with market sentiment, visibility, and consequently returns. Third, the panel accommodates the inclusion of a vast set of controls for country, industry, and year, as well as measures of market-to-book and size. Finally, the panel facilitates pivotal statistical tests because I can control for dependencies across time and across firms using modern clustering techniques (Cameron et al. 2006; Petersen 2009; Gow et al. 2010). Also, I avoid assumptions about the return behavior in periods that are not within the SEC enforcement action window because I use the entire series of actual returns in the sample period. In comparison to traditional event studies, the panel structure works against finding a statistically significant result because this approach cannot reduce the variability in daily returns through aggregation. However, to the extent that I find significant results in spite of this bias, I present a conservative statistical estimate of the effect.

Shown below, Model (2) uses market-adjusted abnormal returns for firm ‘*i*’ at time ‘*t*’ (in basis points) for ease of presentation as the dependent variable. The variable definitions are provided in the appendix.

$$(2) \quad ARBP_{it} = \beta_0 + \beta_1 EVENT_e + \beta_2 EVT * RULE_LAW_RANK_e + \beta_3 EVT * CHRON_e + \beta_4 RULE_LAW_RANK_e + \beta_5 EVT * CO_MATCH_{ei} + \beta_6 EVT * IND_MATCH_{ei} + \beta_7 EVT * EXCHG_MATCH_{ei} + \sum_{k=1}^K \beta_k CONTROLS + \varepsilon_{eit}$$

Several variants of model (2) are presented in Table 5 with standard errors double-clustered by date and firm. Each specification also includes controls for industry, year, country, size and

market-to-book (all are unreported). First, I test for the effect of SEC enforcement actions on returns using a dummy variable, *EVENT*, set equal to “1” during the (-1,8) window surrounding an SEC announcement of enforcement targeting foreign firms (“0” otherwise).²⁴ Regression (1) includes only the event dummy and controls (market-to-book, size, and country, industry, and year fixed effects). The significantly positive coefficient indicates that the average effect is 4.35 basis points on a daily basis. Nine-hundred fifty-seven unique days fall within the 10-day window, suggesting that the amount of overlap among observations was substantial. Over the sixteen year period, the total increase in market value occurring within the windows surrounding the SEC enforcement actions is approximately 42%.

Panel Regression Analyses of Home Country Strength on Event Return Magnitude

Country specific factors may contribute to the market value implications of SEC enforcement actions. H3 posits that returns for foreign firms are conditioned by their home legal environments such that greater returns accrue to firms with weak home country origins. I measure home country legal strength using the Kaufmann et al. (2010) rule of law index. This index, which assesses strength of governmental rule of law, is intended to capture the construction and implementation of regulations that facilitate development of the private sector. I choose this index because it covers the majority of my sample (LaPorta et al. (2006) and Jackson and Roe (2009) provide measures for less than 50 countries versus 212 for the Kaufmann et al. (2010) study) and allows for time-varying changes to the index scores.²⁵ To facilitate ease of interpretation, I select the *RULE_LAW_RANK* variable that represents the percentile rank of each country, with higher values indicating greater strength. The sample of non-target firms is reported by country in Table 3 (along with the average *RULE_LAW_RANK* variable, as well as alternative measures of legal strength).

²⁴ The results reported in Table 4 exclude the “repeat” observations that relate to extensions of ongoing investigations. Untabulated results indicate that these events produce insignificantly positive results at the portfolio level, and results are equivalent when they are included in the panel.

²⁵ I interpolate for years 1995, 1997, 1999, 2001, and 2010 by using the mean of the adjacent years.

The specification includes *RULE_LAW_RANK* and its interaction with the event dummy, *EVT_RULE_LAW_RANK*, to capture the effect of home country strength in non-event and event periods respectively. This prevents confusing a trend that exists even in non-event periods with the one I expect will be manifest during the event period (that is, confusing main effects and interaction effects). Also, I include dummies for each individual enforcement event to purge event specific variance in return magnitudes.

The second column presents this specification as a test of the effect of home country legal strength on return magnitude (H3). The negative and significant coefficient on *EVT_RULE_LAW_RANK* indicates that firms from weaker home institutions exhibit a greater marginal benefit from SEC oversight, which provides support for H3. The interpretation of the coefficient is that for a 1% (10%) increase in the percentile rank of home legal strength, the abnormal returns to SEC enforcement actions are lower by .08 (.8) basis points per day. Results are similar using a common law origin indicator variable to capture home country strength.

Overall, the negative relation between home country legal strength and abnormal returns shown in Table 5 suggests that the firms from weak home legal environments experience the greatest marginal benefit from increased SEC oversight, supporting H3, the legal bonding hypothesis, and the interpretation that enforcement can add value to firms. This is consistent with Miller (1999), Doidge, et al. (2004), and Doidge (2004) who show that home country characteristics similarly condition the benefits demonstrated at the time of the listing event. Extending their work, these results distill the effects of legal bonding in isolation by excluding the potential for selection problems or simultaneous changes in liquidity, market segmentation, etc. that may be associated with the listing event.

Intertemporal Effect of Enforcement Events on Return Magnitude

Consistent with legal bonding, the results reported in Tables 3 and 4 indicate that SEC enforcement actions increase the security values of non-target foreign firms and that such returns are

greatest in firms from weak home legal environments. These results imply that a revised expectation of SEC enforcement intensity is a contributor to the market's valuation of a firm. H4 suggests that the initial enforcements in the new enforcement regime cause the greatest revisions in market expectations and consequently the greatest changes in valuation. Therefore, I test for the decline in the magnitude of the response to SEC enforcement actions over time as the market becomes aware of a more active enforcement program. I use a variable, *CHRON*, that captures the date of the enforcement action (measured in days past the year 1960), and expect a negative coefficient. The third column of Table 5 presents the results of this specification, which again includes event specific dummies to reduce event-specific variation. The negative and significant coefficient on *CHRON* provides support for H4 and supports the notion that the revision to the market expectation is greater for earlier rather than later enforcement actions.

VI. Additional Analyses

Contagion/Competitive Effects

The positive valuation effects documented in section V are compelling given the possibility that increased SEC enforcement actions could trigger losses of credibility of foreign firms, their insiders, and overall financial disclosures. For example, skepticism of earnings is illustrated by Gleason, et al. (2008) in a study of intra-industry information transfer that is consistent with “contagion” effects, which represent a negative spill-over effect for peer firms. In contrast to contagion, “competitive effects” refers to the beneficial reaction to peer firms. Lang and Stulz (1992) show how bankruptcy information can convey information about demand shifts within an industry. Presumably, competitive effects represent a zero sum game (i.e. over-all industry size is unaffected, while constituents jockey for market share). Interestingly, the aggregate magnitude of the response to SEC enforcement actions renders competitive effects (demonstrated by an investor preference

shifting away from the target firm and redistributing capital toward non-target peers) unlikely to fully explain these results.²⁶

While I demonstrate a positive effect of SEC enforcement on the broad peer group of non-target firms, the directional expectation of sharing additional qualities with target firms is unknown.²⁷ In order to address the possibility of contagion and/or competitive effects, regression (4) in Table 5 includes dummy variables equal to '1' when the target firm (firm 'x') and non-target firm (firm 'i') share the same home country, GICs industry, or stock exchange. Results indicate that the effect of sharing the same GICs industry is negative (-6.55 basis points), while the effect of sharing the same stock exchange is positive (4.42 basis points). This is consistent with investors responding to SEC enforcement actions with increased skepticism of foreign firms that share industry designation.

VII. Conclusion

This paper assesses the valuation impact of SEC enforcement action on the share prices of non-target foreign firms. I evaluate the premise that SEC enforcement oversight reduces investment risks and capital costs, and consequently enhances market values of firms. Prior studies have concluded that the SEC has historically followed a hands-off policy toward foreign firms, thereby reducing or eliminating the potential valuation benefits of legal bonding. However, SOX, budgetary increases at the SEC, and the events of September 11th (post-2002) are associated with a surge of SEC enforcement actions against foreign firms. This more recent regime of active and aggressive SEC enforcement enhances the credibility of the legal bonding premise, and also provides an archive

²⁶ The average market value increase reflected in the portfolio of foreign firms completely subsumes the entire market capitalization of even the largest firms.

²⁷ On the one hand, similar peers may indicate more focused scrutiny, and therefore increase peer firms' value. On the other hand, despite the overall positive reaction to SEC enforcements, peer firms' returns could be attenuated or even negatively affected by additional scrutiny. For instance, the valuation impact could be less if the SEC action identifies a country-, industry-, or exchange-wide questionable practice, or increases the perceived likelihood that firms will become SEC targets in the future. Therefore, I am unable to develop directional expectations.

of data useful for evaluating the valuation impacts of the SEC enforcement intensity (by studying the share prices of non-target foreign firms).

I find that the SEC enforcement intensity of foreign firms has increased profoundly, and that these more frequent SEC actions confer significant positive abnormal returns to non-target foreign firms. Moreover, I show that the magnitudes of such returns are associated with country-specific characteristics that measure the strength of various aspects of a nation's regulatory system. Firms from weak home legal environments reap the greatest returns from the SEC action announcements. Finally, the magnitude of the response declines over time, consistent with the market adjusting to the new enforcement regime. Ultimately, the results imply that enforcement intensity is at least in part a driver of the cost of capital reduction for firms who can stand up to increased scrutiny. Although prior research has had difficulty in discriminating between bonding and avoiding explanations, results from this study cannot be explained by market segmentation reductions, or other changes taking place at the time of the secondary listing.

In addition to the bonding question, this study is relevant to concurrent debates in public discussions and the accounting policies literature. These results are consistent with the intuition of Doidge et al. (2009), Leuz (2007), and Coffee (2007) who suggest that the Sarbanes-Oxley Act is not the culprit for a slowdown in cross-listings in the US. A complementary explanation suggests that as the legal landscape became more formidable for existing cross-listed firms, firms with marginal reporting and governance quality who were considering a cross-listing were intimidated, leaving other countries' exchanges to cater to such lower quality firms intending to cross-list (Piotroski and Srinivasan 2007).²⁸

Although the findings in this study document a positive impact of SEC enforcement actions on the share values of non-target foreign firms, the implications for the wealth impact of legal

²⁸ In fact, of the 59 sample firms examined by Doidge et al. (2009) who delisted, more than 20% (12 firms) were former targets of SEC enforcement (9) or class action lawsuits (3).

bonding, and increased regulatory oversight in general, should be drawn cautiously. The legal system to which foreign firms may adhere embraces a variety of regulatory protections with potential for positive and negative impacts on security valuations.²⁹ Adhering to a legal system with multiple aspects undoubtedly includes some legal components that presently are overly burdensome, and other components that enable reduced capital costs and higher share values. The empirical results in this paper provide emphatic support for the interpretation that SEC enforcement actions have created shareholder value for non-target foreign firms in the contemporary (post-2002) era.

²⁹ For example, the findings in Licht et al. (2011) that a reduction in potential civil liability has a positive impact on share values does not necessarily conflict with my findings that increased SEC enforcement activity is also associated with increased share values.

References:

- Amihud, Y., Mendelson, H., 1986. Asset pricing and the bid-ask spread. *Journal of Financial Economics*. 17, 223-249.
- Armstrong, C., Barth, M., Jagolinzer, A. and Riedl, E., 2010. Market Reaction to the Adoption of IFRS in Europe. *The Accounting Review*. 85, 31-61.
- Ayyagari, M., 2004. International corporate governance: A study of complementarities and convergence. Ph.D. dissertation, University of Maryland.
- Ball, R. and Shivakumar, L. 2005. Earnings quality in U.K. private firms. *Journal of Accounting and Economics*. 39, 83-128.
- Bank of New York, 2009. The depositary receipt markets: 2009 mid-year review. Available at: <http://www.adrbnymellon.com/files/MS26436.pdf>.
- Becker, G., 1968. Crime and punishment: an economic approach. *Journal of Political Economy*. 109, 811-841.
- Benos, E., Weisbach, M., 2004. Private benefits and cross-listings in the United States. *Emerging Markets Review*. 5, 217-240.
- Berger, P., Li, F., Wong, F. 2006. The impact of Sarbanes-Oxley on cross-listed companies. Working paper, University of Chicago.
- Bhattacharaya, U., 2006. Enforcement and its impact on cost of equity and liquidity of the market. Task Force to Modernize Securities Legislation in Canada.
- , and Daouk, H., 2002. The world price of insider trading. *Journal of Finance*. 57, 75-108.
- Burgstahler, D., Hail, L. and Leuz, C., 2006. The importance of reporting incentives: Earnings management in European private and public firms. *The Accounting Review*. 81, 983-1016.
- Christensen, H. B., Hail, L., and Leuz, C., 2011. Capital-Market Effects of Securities Regulation: The Role of Implementation and Enforcement. Available at SSRN: <http://ssrn.com/abstract=1745105>.
- Cameron, C. A., Gelbach, J., and Miller, D., 2006. Robust inference with multi-way clustering. NBER Technical Working Paper No. 327.
- Coffee, J.C., 1984. Market failure and the economic case for a mandatory disclosure system. *Virginia Law Review* 70, 717-753.
- , 2000. Racing towards the top?: The impact of cross-listings and stock market competition on international corporate governance. *Columbia Law Review*. 102, 1757-1831.
- , 2007. Law and the Market: The Impact of enforcement. Columbia Law and Economics Working Paper No. 304. Available at SSRN: <http://ssrn.com/abstract=967482>.
- , 1999. The future as history: the prospects for global convergence in corporate governance and its implications. *Northwestern University Law Review*. 93, 641-707.
- Daske, H., Hail, L., Leuz, C., and Verdi, R. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research*, 46(5), 1085-1142.3
- Doidge, C., 2004. U.S. cross-listings and the private benefits of control: evidence from dual-class firms. *Journal of Financial Economics*. 72, 519-553.
- , Karolyi, G.A., Stulz, R., 2004. Why are foreign firms listed in the U.S. worth more? *Journal of Financial Economics*. 71, 205-238.
- , Karolyi, G.A., Stulz, R., 2009. Has New York become less competitive than London in global markets? Evaluating foreign listing choices over time. *Journal of Financial Economics* 91, 253-277.
- , Karolyi, A., Stulz, R., 2007. Why do countries matter so much for corporate governance? *Journal of Financial Economics*. 86, 1-39.
- , Karolyi, G.A., Lins, K., Miller, D., Stulz, R., 2009. Private benefits of control, ownership, and the cross-listing decision. *Journal of Finance*. 64, 425-466.
- Djankov, S., Lopez de Silanes, F., La Porta, R., Shleifer, A. 2005 The law and economics of self-dealing. Available at: <http://ssrn.com/abstract=864645> or doi:10.2139/ssrn.864645
- Errunza, V., and Losq, E., 1985. International asset pricing under mild segmentation: Theory and test. *The Journal of Finance*. 40(1), 105-124.
- Fama, E., French, K., 1992a. The cross-section of expected stock returns. *Journal of Finance*. 47, 427-465.
- , -----, 1992b. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*. 33, 3-56.

- , MacBeth, J., 1973. Risk, return, and equilibrium: empirical tests. *Journal of Political Economy*. 81, 607–636.
- Ferson, W., Harvey, C., 1999. Conditioning variables and the cross-section of stock returns. 54, 1235-1360.
- Firth D. Bias reduction of maximum likelihood estimates. *Biometrika* 1993; 80:27–38.
- Foerster, S., Karolyi, G.A., 1999. The effects of market segmentation and investor recognition on asset prices: evidence from foreign stocks listing in the US. *Journal of Finance*. 54, 981–1013.
- , Karolyi, G.A., 2000. The long-run performance of global equity offerings. *Journal of Financial and Quantitative Analysis*. 35, 499–528.
- Friedman, F. B., Jacobs, E, Macel IV, S. C., 2002. Taking stock of information sharing in securities enforcement matters. *Journal of Financial Crime*, 10, 37-53.
- Frost C., Kinney J. 1996. Disclosure choices of foreign registrants in the United States. *Journal of Accounting Research*. 34, 67-84.
- Gagnon, L., Karolyi, A., 2011. The economic consequences of the U.S. Supreme Court’s Morrison v. National Australia Bank decision for foreign stocks cross-listed in U.S. markets. Working paper, Cornell University. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1961178.
- Gande, A., Miller, D. 2011. Why do U.S. securities laws matter to non-U.S. firms? Evidence from private class-action lawsuits. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1939059.
- Gordon, E., Jorgensen, B., Linthicum, C. 2011. Could IFRS replace US GAAP? A comparison of earnings attributes and informativeness in the US market. Working paper.
- Gow, I., Ormazabal, G., Taylor, D., 2010. Correcting for cross-sectional and time-series dependence in accounting research. *The Accounting Review*. 85, 483-512.
- Gozzi, J., Levine, R., and Schmukler, S., 2008. Internationalization and the evolution of corporate valuation. *Journal of Financial Economics*. 88(3), 607-632
- Gleason, C., Jenkins, N., Johnson, W., 2008. The contagion effects of accounting restatements. *The Accounting Review*. 83, 83-110.
- Hail, L., Leuz, C., 2009. Cost of capital effects and changes in growth expectations around U.S. cross-listings. *Journal of Financial Economics*. 93, 428-454.
- , and -----, 2006. International differences in the cost of equity capital: Do legal institutions and securities regulation matter?. *Journal of Accounting Research*. 44, 485-531.
- Heinze, G., Schemper, M. 2002. A solution to the problem of separation in logistic regression. *Statistics in Medicine*. 21 2409-2419.
- Hennes, K., Leone, A., Miller, B., 2008. The importance of distinguishing errors from irregularities in restatement research: The case of restatements and CEO/CFO turnover. *The Accounting Review*. 83, 1487-1519.
- Holthausen, R. W., 2009. Accounting Standards, Financial Reporting Outcomes, and Enforcement.’ *Journal of Accounting Research*. 47, 447-458.
- ideaCity06 Conference, 2006. Conference presentation, Toronto, CA. Available at: <http://sciencestage.com/v/34634/lord-conrad-black-at-ideacity06-part-1-of-3.html>.
- Interim Report of the Committee on Capital Markets Regulation, 2006. Available at: http://www.capmksreg.org/pdfs/11.30Committee_Interim_ReportREV2.pdf.
- Jackson, H., 2007. Variation in the intensity of financial regulation: Preliminary evidence and potential implications. *Yale Journal on Regulation*. 24 (2), 253-291.
- Jennings, J., Kedia, S., Rajgopal, S., 2011. The deterrence effects of SEC enforcement and class action litigation. Available at SSRN: <http://ssrn.com/abstract=1868578>
- Kadlec, G., McConnell, J. 1994. The effect of market segmentation and illiquidity on asset prices: Evidence from exchange listings. *The Journal of Finance*. 49, 611-636.
- Karolyi, G.A., Stulz, R., 2003. Are financial assets priced locally or globally? In: Constantinides, G., Harris, M., Stulz, R. (Eds.), *Handbook of the Economics of Finance*. North-Holland, Amsterdam, pp. 975–1020.
- , 1998. Why do companies list shares abroad? A survey of the evidence and its managerial implications. *Financial Markets, Institutions and Instruments*. 7, 1–60.
- , 2006. The world of cross-listings and cross-listings of the world: challenging conventional wisdom. *Review of Finance*. 10, 99–152.

- , 2010. Corporate governance, agency problems and international cross-listings: A defense of the bonding hypothesis. Working paper, Cornell University.
- Kaufmann, D., Kraay, A., Mastruzzi, M. 2010. The worldwide governance indicators : a summary of methodology, data and analytical issues. World Bank Policy Research Working Paper No. 5430. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130
- Kedia, S., Rajgopal, S., 2011. Do the SEC's enforcement preferences affect corporate misconduct? Journal of Accounting and Economics. (forthcoming).
- Kim, I., Skinner, D., 2011. Measuring securities litigation risk. Journal of Accounting and Economics. Forthcoming.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2006. What works in securities laws? Journal of Finance. 61, 1–32.
- Lang, M., Lins, K., Miller, D., 2003. ADRs, analysts, and accuracy: does cross-listing in the United States improve a firm's information environment and increase market value? Journal of Accounting Research. 41, 317–345.
- , Raedy, J. S. and Yetman, M., 2003. How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality. Journal of Accounting Research. 41, 363–386
- Lel, U., Miller, D. 2008. International cross-listing, firm performance, and top management turnover: A test of the bonding hypothesis. The Journal of Finance. 63, 1897-1937.
- Leuz, C., 2006 Cross-listing, bonding and firms' reporting incentives: A discussion of Lang, Raedy and Wilson (2006)*. Journal of Accounting & Economics, 42, 285.
- , 2007. Was the Sarbanes-Oxley Act of 2002 really this costly? A discussion of evidence from event returns and going-private decisions*. Journal of Accounting and Economics. 44, 146-165.
- , 2010. Different approaches to corporate reporting regulation: How jurisdictions differ and why. Chicago Booth Initiative on Global Markets Research Paper No. 53; ECGI - Law Working Paper No. 156/2010. Available at SSRN: <http://ssrn.com/abstract=1581472>
- , and P. Wysocki, 2008, Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research, Working paper, University of Chicago.
- Licht, A., 2003. Cross-listing and corporate governance: Bonding or avoiding? Chicago Journal of International Law. 4, 141-163.
- , Li, X., Siegel, J., 2011. What makes the bonding stick? A natural experiment involving the supreme court and cross-listed firms. Working paper, Harvard Business School. Available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1744905
- Mann, M., Barry, W., 2005. Developments in the internationalization of securities enforcement. The International Lawyer. 39 (3), 667-696.
- Merton, R., 1987. A simple model of capital market equilibrium with incomplete information. Journal of Finance. 42, 483–510.
- Miller, D., 1999. The market reaction to international cross-listings: evidence from depositary receipts. Journal of Financial Economics. 51, 103–123.
- Mulherin, J.H., 2007. Measuring the costs and benefits of regulation: Conceptual issues in securities regulation. 13, 421-437.
- Muradoglu, Y. and Huskey, J., 2008. The Impact of SEC litigation on firm value. Available at SSRN: <http://ssrn.com/abstract=1094948>.
- Petersen, M., 2009, Estimating standard errors in finance panel data sets: Comparing approaches, Review of Financial Studies 22, 435-480.
- Piotroski, J., Srinivasan, S., 2008. Regulation and bonding: the Sarbanes–Oxley Act and the flow of international listings. Journal of Accounting Research. 46, 383–425.
- Posner, R. 1974. Theories of economic regulation, Bell Journal of Economics and Management Science. 5 (2), 335-358.
- PriceWaterhouseCoopers., 2004. 2003 PriceWaterhouseCoopers LLP Securities Litigation Study. Available at: http://10b5.pwc.com/PDF/2003_STUDY_FINAL.PDF.
- Reese, W., Weisbach, M., 2002. Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. Journal of Financial Economics. 66, 65–104.

- Salavei, K., Golec, J., Harding, J., 2009. Litigation risk and market reaction to restatements. Available at SSRN: <http://ssrn.com/abstract=1505119>.
- Schipper, K., and Thompson, R., 1983. Evidence on the capitalized value of merger activity for acquiring firms. *Journal of Financial Economics*. 11, 85-119.
- Schrand, C., Zechman, S., 2009. Executive overconfidence and the slippery slope to financial misreporting. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1265631.
- Sefcik, S., Thompson, R., 1986. An approach to statistical inference in cross-sectional models with security abnormal returns as dependent variable. *Journal of Accounting Research*. 24, 316-334.
- Sherwin E. 2005. The cost-benefit analysis of financial regulation: What the sec ignores in the rulemaking process, why it matters, and what to do about it. Working Paper, Harvard University. Available at: http://www.law.harvard.edu/faculty/hjackson/pdfs/CBA_article.doc.pdf.
- Shleifer, A., 2005. Understanding regulation. *European Financial Management*. 11(4), 439-451.
- Shnitser, N., 2010. A free pass for foreign firms? An assessment of SEC and private enforcement against foreign issuers. *Yale Law Journal*, 119, 1638-1701.
- Siegel, J., 2005. Can foreign firms bond themselves effectively by renting U.S. securities laws? *Journal of Financial Economics* 75, 319-359.
- Stigler, G., 1964. Public regulation of the securities market. *Journal of Business* 37, 117-142.
- , 1971. The theory of economic regulation. *Bell Journal of Economics and Management Science* 2, 3-21.
- Stulz, R., 1999. Globalization, corporate finance, and the cost of capital. *Journal of Applied Corporate Finance*. 12, 8-25.
- , 2009. Securities laws, disclosure, and national capital markets in the age of financial globalization. *Journal of Accounting Research*, 47, 349-390.
- USA Patriot Act of 2001. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT ACT) Act of 2001. Available from the Library of Congress at: <http://thomas.loc.gov/cgi-bin/bdquery/z?d107:HR03162:%5D>.
- Vaknin, S., 2002. The Future of the SEC: Interview with Gary Goodenow. Available at: <http://samvak.tripod.com/sec.html>.
- Watts, R., J. Zimmerman. 1978. Towards a positive theory of the determination of accounting standards. *The Accounting Review* 53, 112-134.
- White, H., 1980. Heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*. 48, 817-38.
- Zhu, Q., 2010. The home stigma: Adverse selection in ADRs and the home capital market environment. Available at SSRN: <http://ssrn.com/abstract=1537502>.
- Zimring, F. and Hawkins, G. 1973. Deterrence: The legal threat in crime control: *Journal of Criminal Justice*. 1, 168-170.
- Zingales, L., 2004. The costs and benefits of financial market regulation. ECGI/University of Chicago Working Paper, Available here: <http://www.cgscenter.org/library/CorpGovCompValue/CostbenefitofFinMarketEvaluation.pdf>.
- , 2007. Is the U.S. capital market losing its competitive edge?. ECGI/University of Chicago Working Paper, Available here: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1028701.
- , 2009, The future of securities regulation, *Journal of Accounting Research* 47, 391-425.

Appendix: Variable Definitions

Model (1):

$$SEC_ACTION_{it} = \alpha_0 + \alpha_1 POST + \alpha_2 CLASS_ACTION_{it} + \alpha_3 MB_{it-1} + \alpha_4 SIZE_{it-1} + \alpha_5 RETURN_{it-1} + \alpha_6 SKEW_{it-1} + \alpha_7 TURNOVER_{it-1} + \varepsilon_{eit}$$

Where:

SEC_ACTION_{it} = indicator equal to '1' when SEC files enforcement action, '0' otherwise
 $EVENT_e$ = indicator equal to '1' after year 2001, '0' otherwise
 $CLASS_ACTION_{it}$ = indicator equal to '1' if class action lawsuit was filed against firm 'i' in the previous 5 years, '0' otherwise
 MB_{it-1} = firm i's beginning of year market-to book ratio
 $SIZE_{it-1}$ = natural log of firm i's beginning of year total assets
 $RETURN_{it-1}$ = cumulative monthly market-adjusted return in year t-1
 $SKEW_{it-1}$ = cumulative monthly market-adjusted return
 $TURNOVER_{it-1}$ = cumulative percentage of firm 'i's share turnover in year 't-1'
 ε_{eit} = the residual

Model (2):

$$ARBP_{eit} = \beta_0 + \beta_1 EVENT_e + \beta_2 EVT * RULE_LAW_RANK_e + \beta_3 CHRON_e + \beta_4 RULE_LAW_RANK_e + \beta_5 EVT * CO_MATCH_{ei} + \beta_6 EVT * IND_MATCH_{ei} + \beta_7 EVT * EXCHG_MATCH_{ei} + \beta_k CONTROLS + \varepsilon_{eit}$$

Where:

$ARBP_{eit}$ = Value-weighted CRSP-adjusted abnormal return (in basis points)³⁰
 $EVENT_e$ = indicator equal to '1' within event period, '0' otherwise
 $RULE_LAW_RANK_e$ = the percentile rank of the strength of the rule of law in the home country of firm i as measured by the Kaufmann et al (2010) indices
 EVT = denotes interaction with event dummy
 $CHRON_e$ = date of the enforcement action, measured in days past the year 1960 (for programming convenience)
 CO_MATCH_{ei} = indicator equal to '1' when firm 'i' shares the same home country as the target firm, '0' otherwise
 IND_MATCH_{ei} = indicator equal to '1' when firm 'i' shares the same (GICs) industry as the target firm, '0' otherwise
 $EXCHG_MATCH_{ei}$ = indicator equal to '1' when firm 'i' shares the same exchange as the target firm, '0' otherwise
 ε_{eit} = the residual

CONTROLS:

$SIZE_i$ = natural log of firm i's beginning of year total assets
 MB_i = firm i's beginning of year market-to book ratio
Y = Year fixed effects
I = Industry fixed effects
C = Country fixed effects
E = Event dummies

³⁰ Note: e, i, and t subscripts denote event 'e', firm 'i', and time 't' respectively

Figure 1: Portfolio Returns

Figure 1a shows the market-adjusted returns to the non-target portfolio of firms around the announcement of enforcement actions by the SEC against foreign firms. The 171 data points are represented by different symbols which denote enforcement type. Figure 1b shows the distribution of the SEC enforcement announcements throughout the year.

Figure 1a: by Event Type

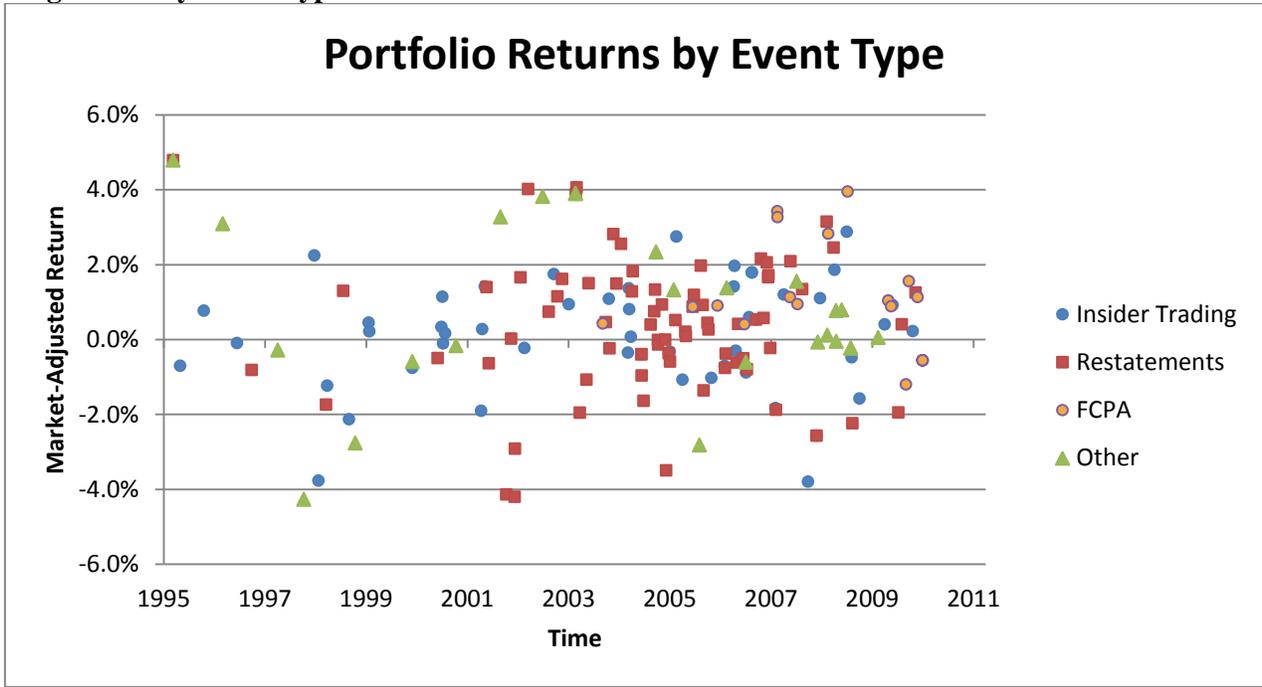


Figure 1b: by Month

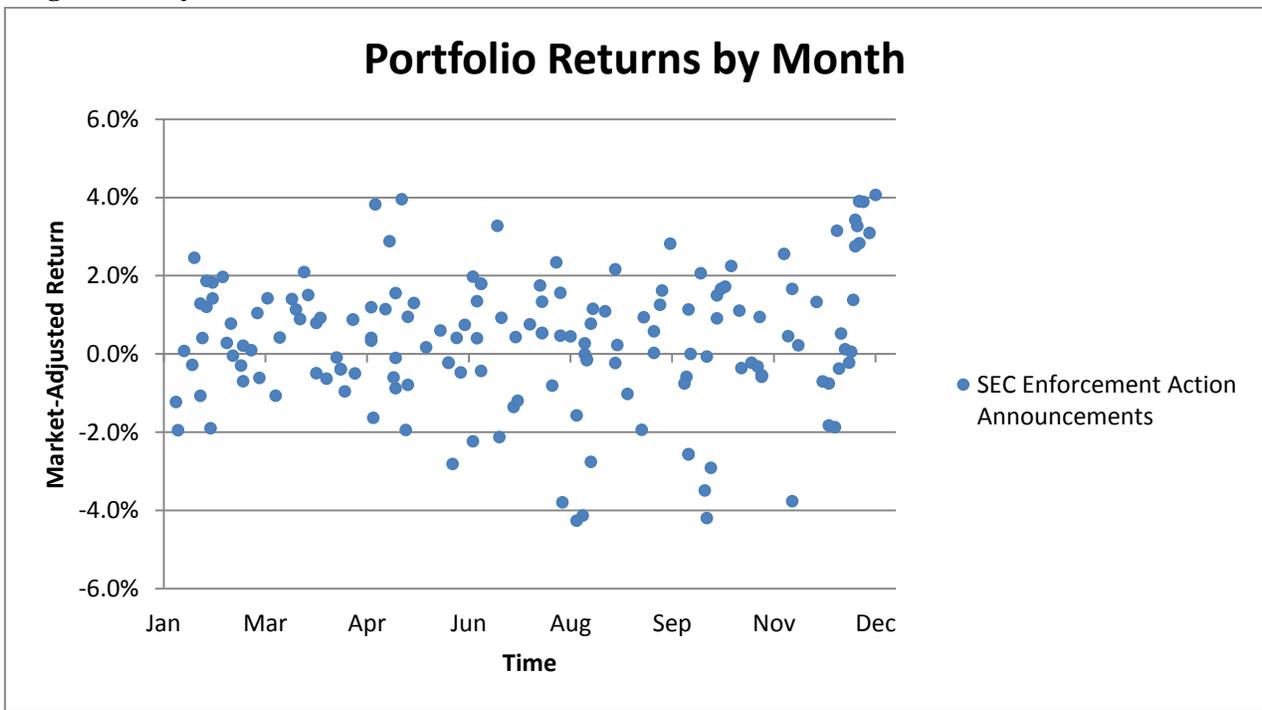


Table 1: Enforcement Sample Description

Panels A and B describe the SEC enforcement of foreign firms listed in U.S. market over time and by listing type, each partitioned by enforcement category.^a I split the data into two time periods (1995-2001 and 2002-2010). Panel C reports foreign SEC enforcement actions as a percentage of total actions of that type since 2002. The denominator is 212 for insider trading, 824 for restatements, 89 for FCPA violations, and because the comparable domestic enforcement is not clearly defined for the miscellaneous category, no percentages are reported. As a reference point, I report the foreign firms as a percentage of U.S. market (as of April 2010).

	Panel A: SEC Enforcements Over Time			Panel B: SEC Enforcement by Listing Type			Panel C: Proportion of Foreign SEC Enforcement Actions (Post-2001)*				
	<i>Pre-2002</i>	<i>Post-2001</i>	<i>Total</i>	<i>Exchange Listings</i>	<i>OTC</i>	<i>Other</i>	<i>Total</i>	<i>Exchange Listings</i>	<i>OTC Listings</i>	<i>Other</i>	
Total Sample	28	144	172	151	12	9					
Insider Trading	16	36	52	47	3	2	16.98%	14.62%	1.42%	0.94%	
Restatements	5	70	75	65	6	4	8.50%	7.28%	0.73%	0.49%	
FCPA	0	20	20	19	0	1	22.47%	21.35%	0.00%	1.12%	
Miscellaneous	7	18	25	20	3	2					
	*Foreign Firms as a Percent of U.S. Market										
							Total	17.80%	10.70%	28.70%	-

^a I confine the Insider Trading sample to cases in which the SEC charges a firm insider because I am interested in pursuit of firms. Therefore, I exclude cases in which the insiders are unassociated with any firm (for example, see <http://www.sec.gov/litigation/litreleases/lr19212.htm>). Roughly 40% of all insider trading cases fall into this category. I also exclude firms from the restatement sample if I cannot identify the firms and their status as foreign or domestic.

Table 2: Probability of SEC Enforcement

This table provides the results of seven logistic regressions that model the SEC's enforcement choice. The sample is comprised of all foreign firms listed in U.S. markets. Panel A estimates the probability of enforcement for the entire sample, the pre- and post- periods, and the results of the joint test that all coefficients are equal across the two time periods (indicated by "*Chi-Square Test*"). Panel B separates the probability of enforcement by type. The number of actions (in parentheses) is different than Table 1 because of data requirements and because individual enforcement actions can target multiple firms.

Panel A: All Enforcements

Parameter		1995-2010		1995-2001		2002-2010	
		Estimate	Odds Ratio	Estimate	Odds Ratio	Estimate	Odds Ratio
<i>POST</i>	+ (<i>HI</i>)	1.45 ^{***}	4.25				
<i>CLASS_ACTION</i>		1.16 ^{***}	3.19	1.4	4.04	1.13 ^{***}	3.09
<i>MB</i>		0.00 ^{**}	1.00	0.00	1.00	0.00 ^{***}	1.00
<i>SIZE</i>		0.27 ^{***}	1.31	0.09	1.09	0.28 ^{***}	1.32
<i>RETURN</i>		0.34	1.4	0.44 ^{***}	1.56	0.27	1.31
<i>SKEW</i>		-0.23 [*]	0.79	-0.67 ^{***}	0.51	-0.18	0.84
<i>TURNOVER</i>		0.00	1.01	-0.1	0.9	0.00	1.00
<i>Intercept</i>		-8.22 ^{***}		-6.72 ^{***}		-6.86 ^{***}	
<i>Chi-Square Test (p-value)</i>					11.74 ^{**}	(p=.03)	
N (Number of Actions)		12,474	(156)	4,909	(11)	7,565	(145)
Pseudo-R ²		0.17		0.09		0.14	
Area Under ROC Curve		0.84		0.7		0.8	

Panel B: By Enforcement Type

Parameter		Insider Trading		Restatement		FCPA ^b		Miscellaneous	
		Estimate	Odds Ratio	Estimate	Odds Ratio	Estimate	Odds Ratio	Estimate	Odds Ratio
<i>POST</i>	+ (<i>HI</i>)	-0.23	0.8	3.35 ^{***}	28.41	2.49 ^{***}	12.08	0.79	7.79
<i>CLASS_ACTION</i>		1.92 ^{***}	6.84	1.64 ^{***}	5.18	1.18 [*]	3.25	0.25	2.36
<i>MB</i>		0.00	1.00	0.00 ^{***}	1.00	0.01	1.01	-0.01	1.01
<i>SIZE</i>		0.38 ^{***}	1.46	0.13	1.14	0.41 ^{***}	1.51	0.85 ^{***}	2.82
<i>RETURN</i>		0.57 ^{***}	1.77	-0.18	0.83	-1.00	0.37	1.11 ^{***}	4.21
<i>SKEW</i>		-0.12	0.89	-0.29 ^{***}	0.75	-0.47 ^{***}	0.63	0.37	2.18
<i>TURNOVER</i>		0.00	1.00	0.00	1.00	-0.01	1.01	-0.01	1.09
<i>Intercept</i>		-9.49 ^{***}		-9.46 ^{***}		-12.34 ^{***}		-15.56 ^{***}	
N (Number of Actions)		10,772	(31)	11,330	(63)	10,588	(16)	10,828	(46)
Pseudo-R ²		0.18		0.16		0.27		0.36	
Area Under ROC Curve		0.79		0.85		0.85		0.91	

* ** *** denotes significance at the 10%, 5%, and 1% level for a two-tailed test, respectively.

^b-The Firth procedure was applied to reduced coefficient bias due to complete separation ("monotone likelihood") (Firth 1993; Heinz and Schemper 2002).

Table 3: Non-target Sample Representation by Country

Country	Firms	Firm-years	Common Law	LLS Public Enforcement	Djankov Public Enforcement	Average KKM Rule of Law Ranking
ANTIGUA AND BARBUDA	1	6	-	-	-	42
ARGENTINA	18	169	0	0.58	0	40
AUSTRALIA	39	277	1	0.9	0.5	95
AUSTRIA	1	8	0	0.17	1	98
BAHAMAS	5	45	-	-	-	88
BELGIUM	6	32	0	0.15	0.5	88
BELIZE	1	11	-	-	-	57
BERMUDA	109	767	-	-	-	81
BOLIVIA	1	1	-	-	-	49
BRAZIL	17	112	0	0.58	0.5	44
BRITISH VIRGIN ISLANDS	37	239	-	-	-	66
CANADA	525	3,280	1	0.8	1	95
CAYMAN ISLANDS	105	469	-	-	-	63
CHILE	29	291	0	0.6	1	87
CHINA	24	180	-	-	-	43
COLOMBIA	1	5	0	0.58	0	23
CYPRUS	1	3	-	-	-	87
DENMARK	7	65	0	0.37	0.75	98
DOMINICAN REPUBLIC	1	7	-	-	-	36
FINLAND	8	60	0	0.32	0	99
FRANCE	42	343	0	0.77	0.5	90
GERMANY	33	228	0	0.22	1	93
GHANA	1	7	-	-	-	47
GREECE	9	51	0	0.32	0.5	74
HONG KONG	17	112	1	0.87	0	80
HUNGARY	1	13	0	0	0	78
INDIA	17	122	1	0.67	0.5	57
INDONESIA	4	39	0	0.62	0	29
IRELAND	27	234	1	0.37	0	93
ISRAEL	139	1,137	1	0.63	1	81
ITALY	19	164	0	0.48	0	73
JAPAN	39	428	0	0	0	88
JORDAN	1	4	0	0.6	0	63
KOREA, SOUTH	17	119	0	0.25	0.5	77
LIBERIA	6	63	-	-	-	60
LUXEMBOURG	20	142	0	0	1	96
MARSHALL ISLANDS	28	132	-	-	-	71
MEXICO	61	442	0	0.35	0.5	39
NETHERLANDS	55	450	0	0.47	0	96
NETHERLANDS ANTILLES	6	68	-	-	-	96
NEW ZEALAND	11	55	1	0.33	0	98
NORWAY	13	81	0	0.32	1	99
PANAMA	6	62	-	-	-	49
PAPUA NEW GUINEA	1	15	-	-	-	20
PERU	3	22	0	0.78	0.25	31
PHILIPPINES	4	32	0	0.83	0	43
POLAND	2	5	0	0	1	71
PORTUGAL	4	35	0	0.58	1	86
PUERTO RICO	1	3	-	-	-	72
RUSSIA	6	57	-	-	-	20
SINGAPORE	10	85	1	0.87	1	88
SOUTH AFRICA	21	142	1	0.25	0	55
SPAIN	9	91	0	0.33	0.75	87
SWEDEN	22	128	0	0.5	1	97
SWITZERLAND	23	219	0	0.33	0.5	98
TAIWAN	10	73	0	0.52	0	77
TURKEY	1	10	0	0.63	0	54
UNITED KINGDOM	153	1,039	1	0.68	0	94
VENEZUELA	3	23	0	0.55	0	22

Table 4: Non-Target Foreign Firm Market Returns around Enforcement Announcement Dates

This table provides the market-adjusted returns (in basis points) to portfolios of firms centered on announcement dates of SEC enforcement of foreign firms. Unless noted otherwise, portfolio membership includes all foreign firms with requisite stock price data to compute abnormal returns. The Foreign-other category consists of foreign firms listed only in the U.S. Standard errors and t-statistics treat each event as one observation (similar to Fama and MacBeth (1973)). The simulated p-values reported for 'All Years' is described in Appendix A. I discard one action date that occurs late in year 2010, leaving 171 actions, because the daily return window extends into year 2011 (this data is unavailable in CRSP). I also discard one outlying extreme observation from the (-14,-2) window in the 1995-2001 time period.

Panel A: Non-Target Foreign Firm Returns

Market Adjusted Returns											
	1995-2001				2002-2010			All Years			
	Window	N	Return	t	N	Return	t	N	Return	t	Simulated p-value
	(-14, -2)	27	-12.2	-0.39	143	0.9	0.17	171	0.0	-0.09	0.620
	(-1, 8)	28	-1.8	-0.26	143	51.7***	3.64	171	41.1***	3.04	0.008
	(9, 20)	28	-0.1	-0.31	143	14.7	1.17	171	0.1	0.19	0.591

Panel B: By Listing Type

10-day Market Adjusted Returns											
Cross-listed	(-1, 8)	28	-0.6	-0.14	143	64.2***	4.42	171	52.2***	3.72	0.004
Foreign-other	(-1, 8)	28	-14.0	-0.35	143	39.4***	2.44	171	30.7**	2.00	0.029

Panel C: By Type of Violation

10-day Market Adjusted Returns											
Insider Trading	(-1, 8)	16	-36.0	-1.02	36	28.2	1.09	52	8.4	0.36	0.561
Restatements	(-1, 8)	5	61.1	0.53	70	34.1**	1.88	75	36.5*	1.74	0.096
FCPA	(-1, 8)	0	-	-	19	101.7***	3.04	19	101.7***	3.04	0.000
Miscellaneous	(-1, 8)	7	-0.0	-0.02	18	107.0**	2.50	25	76.3*	1.70	0.036

*, **, *** denotes significance at the 10%, 5%, and 1% level for a two-tailed test, respectively.

Table 5: Panel Regression Analysis of SEC Enforcement

This table reports results of pooled time-series cross-sectional regression where the dependent variable is *ARBP*, the daily abnormal return of firm '*i*' on day '*t*' in basis points. The *EVT** prefix indicates that the variable of interest has been interacted with the event indicator. All specifications include controls for market-to book and size, as well as fixed effects for country (C), industry (I) and year (Y). All continuous variables are winsorized at the 1% level, *ARBP* is truncated at $\pm 1,000$ ($\pm 10\%$ in percentage terms) and repeat events are discarded. Regressions (2), (3), and (4) also include fixed effects for each event to purge event specific variation. *RULE_LAW_RANK* is the percentile rank of the strength of the rule of law in the home country of firm *i* as measured by the Kaufmann et al (2010) indices. Variables with the prefix *EVT** represent an interaction of the event dummy and the corresponding variable. Note that in specifications (2) and (3), the *EVENT* dummy is not interpretable because it is a function of the dummy variable coding for each event. Coefficient estimates are in bold and standard errors are reported below. Reported standard errors are double-clustered by firm and date.

Parameter	Expected Sign	(1)	(2)	(3)	(4)
<i>EVENT</i>	+ (<i>H2</i>)	4.35 **	10.82	5.49	
		2.62	8.61	8.09	
<i>EVT*</i> <i>RULE_LAW_RANK</i>	- (<i>H3</i>)		-0.08 **		
			0.04		
<i>EVT*</i> <i>CHRON</i>	- (<i>H4</i>)			-0.02 **	
				0.01	
<i>EVT*</i> <i>CO_MATCH</i>	?				-3.34
					8.16
<i>EVT*</i> <i>IND_MATCH</i>	?				-6.55 **
					3.61
<i>EVT*</i> <i>EXCHG_MATCH</i>	?				4.42 ***
					1.58
<i>RULE_LAW_RANK</i>			0.04		
			0.04		
<i>Intercept</i>		-4.48	-59.02 ***	204.94	-48.76 ***
		8.09	6.49	141.34	9.99
F-value		35.26***	519.72***	31.99***	31.72***
Observations		2,748,957	2,706,793	2,739,135	2,748,957
Controls		Y	Y	Y	Y
Fixed Effects		C,I,Y	E,C,I,Y	E,C,I,Y	E,C,I,Y

*, **, *** denotes significance at the 10%, 5%, and 1% level, respectively (one-sided for predicted relations, two-sided otherwise).