This study evaluates the short-term valuation impact of U.S. class action lawsuits by focusing on both sued and non-sued foreign companies listed in the United States. Using a comprehensive database that includes stock- and company-level information in both the U.S. and local home markets, I examine how private U.S. securities litigations affect the market value of both sued foreign companies and peer foreign firms not accused of wrongdoing. I find that during the event period surrounding the lawsuit-filing date, there is a significant negative stock price reaction for the sued foreign companies. Moreover, investors also tend to react negatively towards non-sued foreign issuers during this period. The logistic regression results also suggest that the determinants of lawsuit propensity are similar for foreign firms cross-listed in the U.S. and U.S. domestic companies. Finally, certain firm-, lawsuit-, and country-level characteristics can explain the degree of stock market reactions. The overall results provide evidence that private class action lawsuits in the U.S. have economically significant impact on cross-listed foreign issuers, thus playing an important role in overseeing and disciplining foreign companies.
Originality Statement

I hereby declare that this submission is my own work and to the best of my knowledge it contains no materials previously published or written by another person, or substantial proportions of material which have been accepted for the award of any other degree or diploma at UNSW or any other educational institution, except where due acknowledgement is made in the thesis. Any contribution made to the research by others, with whom I have worked at UNSW or elsewhere, is explicitly acknowledged in the thesis. I have also declared that the intellectual content of this thesis is the product of my own work, except to the extent that assistance from others in the project’s design and conception in style, presentation and linguistic expression is acknowledged.

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December 2012
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Abstract

This study evaluates the short-term valuation impact of U.S. class action lawsuits by focusing on both sued and non-sued foreign companies listed in the United States. Using a comprehensive database that includes stock- and company-level information in both the U.S. and local home markets, I examine how private U.S. securities litigations affect the market value of both sued foreign companies and peer foreign firms not accused of wrongdoing. I find that during the event period surrounding the lawsuit-filing date, there is a significant negative stock price reaction for the sued foreign companies. Moreover, investors also tend to react negatively towards non-sued foreign issuers during this period. The logistic regression results also suggest that the determinants of lawsuit propensity are similar for foreign firms cross-listed in the U.S. and U.S. domestic companies. Finally, certain firm-, lawsuit-, and country-level characteristics can explain the degree of stock market reactions. The overall results provide evidence that private class action lawsuits in the U.S. have economically significant impact on cross-listed foreign issuers, thus playing an important role in overseeing and disciplining foreign companies.
I. Introduction

Among all the capital markets around the world, the value of U.S. financial stocks significantly exceeds that of the U.K., Japan, and the Euro zone. In addition, the U.S. is among the most popular places for foreign companies to cross-list their shares. Recent developments in cross-listing mechanisms and the recent increase in the number of securities fraud cases involving cross-listed companies have heightened the need for further analysis of the motivations for a firm’s cross-listing decision and the valuation impact of cross-listing. It is widely acknowledged among finance academics that cross-listing enables a foreign issuer to raise capital and expand the market for its shares through broadened exposure, which consequently leads to an improvement of stock liquidity and, ultimately, better share valuation. Moreover, these firms can “bond” themselves by cross-listing in markets with higher standards of investor protection to attract investors (e.g., Coffee, 1999; Stulz, 1999; and Black, 2001). However, the ability of a U.S. listing to increase investor protection remains debatable, as foreign firms are arguably bound to less stringent securities regulation and the Securities Exchange Commission (SEC) enforcement has been criticized as insufficient (Benos and Weisbach, 2004; Karolyi, 2006; Siegel, 2005). In addition, U.S. regulatory framework has been described as overly burdensome to cross-listed foreign companies (Licht et al., 2011). To the extent that the SEC is the main mechanism enforcing formal bonding, many empirical studies in this area have focused on the effectiveness (or lack thereof) of SEC enforcement actions targeting cross-listed foreign issuers.

The U.S. securities market is unique in allowing private litigations (class action lawsuits) to penalize corporate frauds and deter potential miscreants as a supplement to
public enforcement actions in the legal regime. Private litigations have long been viewed as having greater likelihood and more monetary sanctions than the SEC (Coffee, 2006), and the number of lawsuits specifically against foreign issuers has been increasing. Private litigations can therefore offer another useful, yet under-utilized, avenue to explore whether and how U.S. regulations and securities laws impact foreign companies.

In general, private litigations affect both sued and non-sued foreign companies. This point can be illustrated with two particular examples. On January 31, 2006, a class action lawsuit was filed in a U.S. court on behalf of all stock purchasers of Spanish oil group Repsol YPF, S.A. (NYSE: REP) between July 28, 2005 and January 27, 2006 inclusive (the "Class Period"). The company and some of its executives were allegedly “knowingly or recklessly made numerous false and misleading statements concerning the company’s business and financial results”, in particular about its level of oil and gas reserves. The complaint followed Repsol’s announcement of a 25% cut in its proven reserves. After this news was released on January 26, 2006, Repsol ADRs closed at $27.99, a decline of $2.12 (over 7%). Over the 2-week period prior to the filing date, Repsol experienced a total cumulative abnormal return (CAR) of -14.62% in the U.S. market and a CAR of -16.77% in its home market. The negative market response was observed not only for Repsol but also for other, non-sued foreign issuers. Over a 2-week period following this particular litigation event, non-sued cross-listed foreign companies experienced an average CAR of -1.38% and -0.49% in the U.S. and in their home markets, respectively.

On July 2, 2004, a class action lawsuit was filed in a U.S. court on behalf of all securities purchasers of Russian oil company Yukos Oil Company (Pink Sheets: YUKOF), from February 13, 2003 through October 25, 2003, inclusive (the "Class Period"). The complaint alleged that Yukos Oil and some of its executives violated the Securities Exchange Act of 1934, including Rule 10b-5, by issuing a series of material misrepresentations to the market. More specifically, the complaint alleged that the defendants created a complex network of shell companies to evade taxes and, as a result, Yukos' tax liability was materially understated and its earnings were materially overstated in violation of U.S. GAAP. Over the 2-week period prior to the filing date, Yukos experienced a CAR of -22.76% in the U.S. market and -13.98% in its home market. This class action lawsuit also affected other, non-sued cross-listed foreign companies. Over the 2-week period following Yukos’ lawsuit-filing date, non-sued foreign firms had an average CAR of -0.004% in the U.S. and -1.22% in their home markets.²

The overall aim of this study is to provide a comprehensive, systematic assessment of the short-term valuation impacts of U.S. class action lawsuits targeting cross-listed foreign firms. More specifically, I examine the cumulative abnormal returns (CARs) of both sued companies and non-sued firms surrounding lawsuit-filing events. I collect 137 U.S. class action lawsuits targeting cross-listed foreign firms over the period of 1996-2010, and these firms have stock- and firm-level information available in both the U.S. and their home markets. My first empirical finding suggests that, when these foreign issuers are sued in the U.S., they not only experience significant losses in the U.S. but also significantly negative reactions in their local markets. In addition, most of

² Source: http://securities.stanford.edu/1031/YUKOFPK04-01/ for background information concerning the Yukos lawsuit. All cumulative abnormal returns (CARs) figures used in these two examples are based on the author’s own calculations.
the negative impact hits within a short event window of [-10, +1] relative to the lawsuit-filing date.

My second empirical finding shows that these class action lawsuits affect more than just the sued foreign companies. Following Silvers (2012), I devise a portfolio-based event study to examine the valuation impact of U.S. lawsuits on non-sued foreign issuing firms. These firms experience significantly negative market reactions after market participants become aware of lawsuits filed against cross-listed companies.

Using a logistic model, I investigate how differences in specific factors affect the propensity for foreign issuers to be sued. These factors include size of damage, firm characteristics, and litigation intensity. Over-valued and large firms are more likely to be targeted by private litigations, as well as firms with poor stock performance and high share turnover. Profitable firms, on the other hand, are less likely to be sued. This third empirical finding, in conjunction with those documented in prior studies, suggest that the determinants of lawsuit propensity are similar for foreign firms cross-listed in the U.S. and U.S. domestic companies.

Regression analysis further tests the association between the magnitude of negative market reactions and certain time-, event-, and firm-specific variables separately for sued companies and non-sued firms. My final set of empirical findings indicates that, whereas sued companies from “poorly-governed” countries with weak legal protection experience significant valuation losses, non-sued firms experience smaller losses (but still statistically significant). In addition, the negative market reactions of non-sued firms are larger for peer firms from the same “poorly-governed” home countries (mainly due to the spill-over effect) but smaller for peer firms from the same industry (mainly competitive effect). Furthermore, sub-sample results also reveal
additional insights regarding the sensitivity of market reactions to certain variables and how Sarbanes-Oxley (SOX) and the recent global financial crisis (GFC) affect company losses due to class action litigations.

This study makes two important contributions to the literature. My analysis concerning cross-listed companies targeted by lawsuits is in many ways similar to that of Gande and Miller (2012). My results support and extend their findings. I provide a more balanced analysis of shareholder reactions to these sued companies in both the U.S. and local markets. My results also highlight that certain factors not considered in their study can be important in explaining the magnitude of negative shareholder responses.

Secondly and more importantly, this work is the first study to investigate the valuation impact of U.S. class action lawsuits on non-sued foreign issuers. In terms of empirical methodology, this part of my study is mostly closely related to Silvers (2012). However, I examine private litigations instead of formal SEC enforcement actions. Furthermore, Silvers (2012) observes a positive impact of enforcements on the post-event CARs for non-sued foreign firms. My findings indicate that shareholders, when they become aware of class action lawsuits specifically targeting foreign companies, react negatively towards non-sued foreign issuers on average. Given that private litigations provide an important supplement to SEC enforcement actions (Alanko, 2004; Gande and Miller, 2012), such observed differential market responses are intriguing in their own right.

The rest of this study is structured as follows. Section II reviews related literature and develops the main testable hypotheses. Section III describes my data collection process and presents the sample description. Section IV details the
construction of key variables and outlines my empirical research design. Section V presents my main findings, and Section VI discusses robustness tests. Section VII concludes and discusses potential future improvements.
II. Literature Review and Hypothesis Development

1. Characteristics of cross-listing

Cross-listing is when a firm issues shares on a foreign exchange outside its home country. A firm can choose to either issue shares solely on one foreign market or issue separate stocks listed on different exchanges but still function as one company. This incremental process to bridge this gap includes conducting a depositary program and/or direct-listing equity shares.

A depositary receipt (DR) is a negotiable certificate issued by a depositary bank that represents the interests in shares of a foreign company’s equity. It is freely traded on the world’s major markets and denominated in the target market currency. Whereas ADRs (American Depositary Receipt) are quoted only in U.S. dollars and traded only in the United States, Global Registered Shares (GRSs) can be traded on equity exchanges around the globe in a variety of currencies. Compared to direct-listing, DRs overcome many of the inherent operational hurdles of international investing. For U.S. investors, the ADR quotation and payments of dividend or interest are in U.S. dollars, which is very convenient. From the issuing company’s viewpoint, there is a wide choice of ADR types designed for foreign issuers with different needs. For example, firms registered with level I ADRs do not have to comply with the U.S. disclosure requirements to have their shares traded on OTC markets.

Usually, cross-listed firms gain from the cross-listing of their stocks (i.e., valuation increase) (Foerster and Karolyi, 1999) due to improved stock liquidity, more transparent information disclosure, better investor protection, and overcoming market
segmentation. The market segmentation hypothesis refers to the enhanced price informativeness resulting from the investment barrier dissipation (Foerster and Karolyi, 1999). It is also widely believed that expanding market share through broadened and more diversified investor exposure may increase liquidity and in turn share valuation. For example, Foerster and Karolyi (1998) show that cross-listings of Canadian firms in the U.S. are followed by an increase in trading volume and a decrease in effective spreads. In addition, cross-listing on a foreign market can affect firms’ information environment and signal their quality, especially for companies located in emerging countries with inadequate monitoring and surveillance systems (Fuester 1998, Moel 2001, Lang et al. 2003). Finally, cross-listed firms can “bond” themselves by issuing shares on markets with higher standards of investor protection to attract investors, as first posited by Coffee (1999) and Stulz (1999).

The term “bonding” is derived from Jensen and Meckling (1976) and represents the expenditure paid to an agent to guarantee that he will maximize the welfare of investors. As argued by Coffee (1999), “foreign issuer is increasing the share value of its public shares by agreeing to comply with the generally higher disclosure standards that prevail in the U.S. (page 72)”. Major markets, such as those of the U.S. and the UK, usually require higher levels of information disclosure and enforce better investor protection. A firm’s decision to cross-list can thus be viewed as a signal to commit to quality disclosure and investor protection. In addition, once foreign firms enter into the U.S. markets, they are required to reconcile their financial statements to U.S. GAAP accounting principles. All these factors could be considered as efficient mechanisms by which cross-listed firms are bonded with better shareholder protection.
However, empirical studies have found mixed results concerning the bonding hypothesis. Miller (1999) shows that firms listed on the main U.S. exchanges (i.e., NYSE and NASDAQ) experience greater abnormal returns compared to those listed on OTC market, as the former require a higher commitment to securities law. Reese and Weisbach (2002) find that the value increase is larger for foreign issuers from countries with weak investor protection. Although a variety of studies have provided support for the legal mechanism in U.S. (e.g., Coffee, 1999; Stulz, 1999; Doidge et al, 2009), other studies cast doubts on the bonding role of cross-listing. Based on the survey conducted by Licht (2003), instead of bonding, many ADR issuers may actually be avoiding better corporate governance because, to attract foreign issuers to the U.S., the SEC relieves them of corporate governance requirements. For example, Rule 12 g3-2(b) under the Securities Exchange Act of 1934 provides an exemption from the registration and reporting requirements of the Exchange Act for foreign private issuers trading only on the OTC markets: they are no longer required to comply with the Exchange Act reporting obligations.

The literature has only recently begun analyzing the practical ability of the stringent regulation regime, and the evidence of legal bonding is still scarce. Siegel (2005) claims that SEC enforcement actions against foreign firms have been rare and mostly ineffective throughout history, whereas Silvers (2012) argues that the SEC have become much more active in recent years. Other than SEC enforcement, litigations offer another useful, yet under-explored, avenue to investigate and test the bonding hypothesis. Regarding the Supreme Court’s decision on *Morrison v. Australia National Bank*, empirical studies also reach conflicting results. This court decision led to a U.S. legal regime change in that civil liability for securities fraud no longer applies to extraterritorial effects. Gagnon and Karolyi (2011) report increased price deviation
between the cross-listed and underlying home market shares (U.S. shares at higher prices for protection under U.S. civil liability), providing evidence in favor of the bonding hypothesis. Meanwhile, Licht et al. (2011) found no significant change in the bid-ask spreads and trading volume and, in fact, a reduction in the price premium for U.S. purchases equities. This finding calls into question the necessity of the onerous legal system.

2. **Private securities litigations**

The U.S. securities market is unique in that it allows private class action lawsuits to deter potential miscreants as a supplement to public enforcement actions in the legal regime. Frost and Pownall (1994) find that disclosure frequency was greater in the United States than in the United Kingdom and one of potential reason behind is the difference in legal remedies through private litigation lawsuits. Given the significant impact of private class action lawsuits on firms’ disclosure and compliance behaviour, the practical ability of private class action lawsuits should not be neglected. Private securities class action litigations have long been viewed as having greater likelihood and more monetary sanctions than SEC enforcements. Coffee (2006) finds that 2.1 - 2.8% of firms were subject to private litigation lawsuits between 1995 and 2005, and Jennings et al. (2011) report that 1.28% of firms were subject to GAAP-violation-related litigations from 1996 to 2006. Coffee (2006) also shows that the penalties imposed by private litigations overshadow those imposed by the SEC. Considering these two facts, private securities class action litigations could still perform as a mechanism of deterrence despite being potentially frivolous. The private securities cases very often target large firms with deep pockets, foregoing small and cash-strapped firms, which,
however, need more market surveillance and investor protection. In addition, from a compensatory perspective, shareholders cannot benefit from this mechanism in most cases (see Coffee 2006; Klausner, 2009), as private litigation has a limited effect on personal monetary liability to managers and only recovers a small share of investor losses, which brings the investor protection rationale under suspicion.

The number of class action lawsuits is on the rise, and the number of such private litigations specifically targeting foreign firms has grown dramatically during the last decade. Gande and Miller (2012) are among the first to look into this issue, reporting that one in every eight foreign firms trading in the U.S. were sued at least once during 1996-2008. Unlike in the case of SEC enforcement, foreign firms tend to be sued approximately as often as domestic firms (see Alanko 2004). In addition, for securities traded on the OTC markets (Level-I ADR and 144A), lawsuit damages both under section 10(b) and Rule 10b-5 of the Exchange Act can be still claimed even if the issuer’s securities are not registered with the SEC, which forces foreign issuers to bond to the U.S. securities regime. In conclusion, private litigation lawsuits provide an important supplement to SEC enforcement actions.

3. Private securities litigations and cross-listed firms

Considering the potential monetary sanctions and reputational losses upon the initiation of a private litigation lawsuit, negative investor reactions are naturally expected for the sued firms in not only the U.S. but also the firms’ home markets. Gande and Miller (2012) find that, surrounding the U.S. lawsuits against foreign firms, these targets also experience a significant decrease in stock value in their home markets, and the combined value losses can be quite large. Licht et al (2011) examine the market
reaction of all foreign private issuers (FPIs) in the U.S. around the *Morrison* case, which changed the regime of private enforcement, and observe significant abnormal returns both in the U.S. and the foreign firms’ home markets. To the extent that information about lawsuits travels across national borders, these two papers’ findings support the notion of an information “spill-over” from the U.S. markets to home markets.

In general, private litigations and formal enforcement actions affect both targeted companies and other firms. In particular, not all lawsuits are in response to idiosyncratic miscreants or the situations of particular firms. Many lawsuits likely affect firms with common characteristics (such as those from the same industry and/or same home country). Market-based litigations, such as those involving discretionary accruals, are likely to be shared by the entire industry (Jennings et al., 2011). The filings of such litigations signal to the investors the likelihood of potential investigation and even lawsuits. Lang and Stulz (1992) provide evidence for the existence of industry contagion (or “spill-over”, as termed in this study) for firms filing for bankruptcy. Gande and Lewis (2009) find that shareholder-initiated class action lawsuits affect U.S. domestic non-sued firms in the same industry as the sued companies, which is related to the anticipation of the likelihood of these non-sued firms to be sued in the future.

4. **Summary of testable hypotheses**

Class action lawsuits are expensive to sued firms, including those foreign firms cross-listed in the U.S., not only in the sense of substantial attorney fees and potential monetary penalties but also because managers’ time and attention are diverted away from running the firm and because of the damage of the firm’s reputation (Field et al.,
As a result, we would expect significantly negative stock price reactions surrounding the lawsuit filling date in the United States.\(^3\) In addition, to the extent that information travels across national borders, we would also expect to observe significant investor reactions in their home markets. The lawsuit filings release to the market information regarding potential losses and litigation risk, which could lead to share value impact and shareholder losses. However, if the penalties followed by the privation litigation are not enforceable against target firms, or the severity of such litigations is below market expectation, we shall not observe significant price reaction to the class-action lawsuits.

**H1: Around the class-action lawsuit filing dates against cross-listed companies, stock markets react negatively towards these sued foreign firms, both in the U.S. and their home markets.**

Recent trends of increasing private litigations targeting foreign issuers (Gande and Miller, 2012; Alanko, 2004) prove that foreign issuing firms are not beyond the reach of the U.S. legal regime. The market is also reminded that foreign firms listed in the U.S. markets are held accountable to the proper shareholder protection standards, as they expected.

According to the legal bonding hypothesis, a cross-listed firm’s decision to issue shares on a foreign exchange with higher disclosure requirements and investor protection signals its commitment to quality disclosure and better corporate governance. Private litigation lawsuits (as well as SEC enforcement actions) specifically targeting a foreign firm can be interpreted by market participants as a signal of the enforceability of U.S. securities law. Based on the bonding-benefit argument put forward by Silvers

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\(^3\) Gande and Miller (2012) report that, during a three-day window surrounding the lawsuit filing events, 69\% of target firms experienced negative abnormal returns.
(2012) and Silvers and Elgers (2011), upon the announcements of lawsuits, we would expect positive investor reactions towards non-sued foreign issuing firms.

**H2a: Around the class-action lawsuit filing dates against cross-listed foreign companies, stock markets react positively towards other, non-sued foreign firms.**

On the contrary, if the spill-over effect dominates (Gande and Lewis, 2009) and investors become very concerned about non-sued firms’ likelihoods of becoming future lawsuit targets, we would expect investors to capitalize on the expected losses and therefore negative market responses towards the non-sued firms.

**H2b: Around the class-action lawsuit filing dates against cross-listed foreign companies, stock markets react negatively towards other, non-sued foreign firms.**

Firms from the same industry or the same home country might share some basic characteristics because of similarities in their economic background and legal environment, and such peer firms would have higher likelihoods of being sued once lawyers go after a target firm. In a paper by Jennings et al. (2011), private litigation deters peer firms in the same industry due to fear of “the higher probability of getting ‘caught’”. In addition, Gande and Lewis (2009) indicate that shareholders factor the potential risk in the stock prices and capitalize on the anticipated lawsuit decisions based on lawsuit filings against other peer firms prior to a lawsuit-filing date. As such, after a firm is targeted by private class actions, investors perceive the probability of litigation to be higher for companies from the same country and/or same industry and react accordingly. Thus, we would expect to observe a more dramatic market reaction towards these peer firms.
H3: The average market reactions towards peer non-sued foreign firms (those from the same home country and/or same industry) are more significant.
III. Data Collection Process and Sample Description

1. U.S. class action lawsuits and foreign issuers

The initial sample of all U.S. securities class action lawsuits is provided by Stanford Law School/Cornerstone Research Securities Class Action Clearinghouse (“SCAC”) from 01/01/1996 to 06/12/2012 and is comprised of 3497 litigations filed against both domestic and foreign companies. I then restricted the sample to 292 lawsuits specifically targeting foreign firms by the end of 2010.

Foreign targets are identified by headquarters. According to SCAC, the recorded headquarter information of securities issuers is based upon the SEC filings at the time of violation as determined by the class period. For merger lawsuits, SCAC focused on the security issuer for which the shareholders are bringing the action. Lawsuit cases against the stocks of U.S. subsidiaries of foreign entities are considered as U.S. domestic cases. I identify the event date as the filing date of the lawsuit, following Jennings et al. (2011), and the filing dates are also provided by SCAC. As such, all lawsuits filed after the end of 2010 are excluded from my sample of foreign targets.

The SCAC also classifies all the lawsuits into three classifications: restatement cases, other accounting violations cases, and non-accounting cases. Based on case status, lawsuits are categorized into cases settled, dismissed and ongoing. To analyze the different features of cross-listing approaches, I manually search for the security types for all 292 foreign targets in Datastream and through other online resources; 107 of these foreign targets are in the form of ADR (including one GDR), and the remaining

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4 Lawsuit case status is accurate as of June 2012, when SCAC provided the original data.
185 are ordinary shares. When a target firm issues both ordinary and ADR shares, I consider it to be direct-listing because ordinary shares are subject to higher disclosure requirement standards.⁵

2. Targeted and non-sued foreign issuers

I collect a comprehensive list of foreign stocks dual-listed in both their home markets and the U.S. in the form of American Depositary Receipts (ADRs), Global Depositary Receipts (GDRs), and direct-listed ordinary shares.

My sample construction begins with the ADRs, GDRs, and direct-listing lists downloaded from Datastream. For depository receipts, I set the search criteria as “Exchange” equal to U.S. exchanges (including NYSE, NASDAQ, OTC, XBQ, etc.) and “instrument type” equal to ADR (3664), GDR (670), and Equity (5151). For the direct-listing list, I add two more criteria: “Market” not equal to United States and “Currency” equal to USD. These three lists only include information about securities listed in the United States.⁶

To collect local information about the underlying stocks, I then use the Datastream code “ADRP” to extract the parent companies for both the ADR and GDR series and the datatype QTEALL (Related Country Quotes) to obtain all listing details for each individual direct-listed security, including country of exchange. I identify the

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⁵ However, such firms would be recorded as ADRs (instead of direct-listed) if relevant lawsuits are ADR-specific or only ADR prices are available.

⁶ Headquarters depicts a more accurate picture than incorporation country, in particular for companies that are incorporated in tax haven countries. For instance, Tyco International was a US company but it moved its country of incorporation to Bermuda. If we consider incorporation country, Tyco would have been classified as a foreign firm. However, Tyco’s operational headquarters is located in the United States, where most of its revenue is generated. For our study, Tyco International is classified as a U.S company rather than a foreign corporation. Due to data availability, however, we define non-sued foreign firms by their countries of incorporation.
parent companies for direct-listing stocks by choosing the securities for which the country of exchange equals the “MARKET”. Because I focus only on dual-listed securities, I excluded foreign issuers that do not have local information available. I also exclude foreign securities that are listed in the U.S. but not their local markets. The remaining 3017 pairs of ADRs, 614 pairs of GDRs, and 3084 pairs of direct-listed shares are then matched to information from Datastream and Worldscope to obtain security-level price data from 1996 to 2010.\(^7\)

Meanwhile, I manually search for the security code (DScode) of the entire 292 target sample in the Datastream datasets and match them with the total foreign issuer sample, yielding 137 pairs (70 pairs of ADRs and 67 pairs of direct-listing) of target lawsuits. These 137 dual-listed foreign firms comprise my main sample of cross-listed foreign firms targeted by U.S. class action lawsuits.\(^8\)

3. Utilizing stock price data

I refer to the “Equity Data Coverage – North America” available through Datastream Extranet for the details on the number of total stocks in U.S. markets. Following Gande and Miller (2012), all foreign firms are identified as those whose two-

\(^7\) Datastream variable “Market” (or GEOGN) pertains to the country where the company is listed. Especially for cross-listed firms, if the company is not listed in its own country, its GEOGN would be the country where it is being listed. Following this definition, the direct-listing list would be incomplete. More specifically, 27 direct-listing securities are recognized by Datastream as U.S. securities because of this issue. I therefore add back these 27 direct-listing pairs to the direct-listing sample. I end up with a direct-listing sample consisting of 3111 pairs.

\(^8\) The 155 remaining, unmatched targets are either single-listed stocks, stocks for which information cannot be extracted from Datastream, or targets that are funds rather than corporations. In this study, I focus on corporations only.
digit share code (SHRCD) in the Centre for Research in Securities Prices (CRSP) begins with 3 (ADRs) or ends with 2 (Companies incorporated outside the U.S.).

For each sample stock, I extract unpadded (P#S) daily closing adjusted prices for both the local and U.S. market from Thomson Reuters’ Datastream, which starts on January 1, 1996 and ends on December, 2010. To follow an event study methodology and measure daily abnormal returns, I must employ stock index returns. I use the Standard & Poor’s 500 index (S&PCOMP) and Datastream Total Market Country Index as my benchmark indices for U.S. and local markets, respectively.

I add back some prices before calculating daily returns, particularly if a stock has valid prices on day 1 and day 3 but not day 2. The lack of a valid price on day 2 is most likely because day 2 is a non-trading day or no trading occurred for the stock on that particular day. In such cases, I set a “rule” forcing their prices for the following three days (the longest no-trading period for almost all the countries, in most cases, Christmas Holiday) to equal their prices on day 1. In addition, I only retain the stocks with no less than 150 trading-day prices to ensure sufficient daily observations in the estimation window. After imposing these rules, my final sample consists of 1879 pairs of ADRs, 210 pairs of GDRs, and 1463 pairs of direct-listing stocks (3552 stocks in the U.S. market, 3516 stocks in local markets). Additional information including exchange name, currency, and industry for sub-sample analysis is also extracted from Datastream. If these variables are missing for lawsuit-targeted cross-listed firms, I then manually add back the relevant information available through CRSP.

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9 In the Datastream datasets, there is no accurate way to identify all foreign stocks traded in U.S. markets due to the aforementioned definition of “Market”. The foreign/total stocks ratio remains qualitatively the same if all these aggregate data are sourced from CRSP.

10 If Total Market Country Index is not available for a particular local market, I use Morgan Stanley Capital International (MSCI) All-Capital World Index excluding the U.S. index (MSWFXUS$) as the alternative local market benchmark.
4. Sample description

Table 1 provides an overall picture of U.S. class action lawsuits, including the frequencies of lawsuits targeting domestic firms and foreign firms. From 1996 to 2010, there was an overall increase in the frequency of lawsuits for both groups, especially the percentage of foreign firms being sued. One in every six foreign firms listed in the U.S. were sued at least once during this period, compared to one in every five U.S. domestic firms. Moreover, lawsuits against foreign firms represent an increasingly higher percentage of the total class action lawsuits over time.

For the purpose of this study, I focus on the 137 dual-listed foreign target firms that have available accounting and stock price data in both the U.S. and their home markets.\textsuperscript{11} Table 2 reports the lawsuits by industry, security type, litigation type, country, and case status. Consistent with results reported by Gande and Miller (2012), Panel A shows that lawsuits peaked during the Internet boom of 2001 and that the lawsuit occurrence is higher in the financial and technology industry and lower for firms subject to regulatory oversight. Panel B presents the number of lawsuits by litigation and security types. Among all accounting-related cases, there are more accounting violations not related to restatement (35 compared to 11). Moreover, there are significantly more non-accounting lawsuits than accounting-based cases (91 out of 137). In terms of security type, foreign U.S. listed firms in the form of direct-listing (common shares) and ADR are equally likely to be sued throughout the sample period (67 direct-listing compared to 70 ADR). Panel C presents the number of lawsuits by target firms’

\textsuperscript{11} Gande and Miller (2012) study 186 shareholder lawsuits that are not subject to confounding event from 1996 to 2008, but only 85 of their sample firms have price data available in both the U.S. and home markets.
headquarters countries, showing that among all the target firms, which represent 23 different countries, Canada has the highest number of lawsuits (46), followed by the United Kingdom (16) and Israel (12). Panel D classifies the sued firms by case status; approximately half of the completed litigations end up being dismissed by courts.

The overall preliminary examination suggests that U.S. securities law enforcement actions are enforceable against foreign firms and that foreign firms are sued almost as often as their U.S. domestic counterparts. This finding provides evidence that private securities litigation provides an important supplement to SEC enforcement and heightens the need for further analysis of the valuation impact of private litigation lawsuits on cross-listed foreign firms.
IV. Key Variables and Empirical Research Design

To test the effects of U.S. class action lawsuits on cross-listed foreign firms, I first examine the market reactions towards sued foreign firms, both in the U.S. and their home markets. Next, I study how investors in the U.S. and locally react to lawsuit announcements by examining the market responses towards non-sued cross-listed firms. Finally, I test what factors may help explain the observed market reactions using panel regression techniques.

1. Filing data announcement effects: CARs

I use cumulative abnormal returns as a proxy for the short-term valuation impact of private litigations targeting foreign issuing firms. Following standard event study methodology, I measure the share return reaction to a lawsuit-filing event using a two-factor pricing model. Daily abnormal returns (ARs) are calculated as the difference between a stock’s actual return and its estimated return based on the two-factor model:

\[
\begin{align*}
AR_{j,t}^{US} &= R_{j,t}^{US} - (\alpha_j^{US} + \beta_j^{US} R_{m,t} + \gamma_j^{US} R_{h,t}) \\
AR_{j,t}^H &= R_{j,t}^H - (\alpha_j^H + \beta_j^H R_{m,t} + \gamma_j^H R_{h,t}) 
\end{align*}
\]

where \(R_{j,t}^{US}\) and \(R_{j,t}^H\) are the rate of return on stock \(j\) on day \(t\) in the U.S. and local markets (i.e., home markets), respectively; \(R_{m,t}\) represents the first pricing factor, U.S. market index return on day \(t\); and \(R_{h,t}\) is the corresponding rate of return for my second pricing factor, the local market index on day \(t\).\(^{12}\) The coefficients \(\alpha_j\), \(\beta_j\) and \(\gamma_j\) are ordinary least

\(^{12}\) In unreported results (omitted for brevity), I also tested a single-factor pricing model and found similar abnormal returns. All the reported results hold when I use a one-factor instead of two-factor pricing model.
squares (OLS) estimates of firm \( j \)’s two-factor model parameters over a 150-trading-day period from day -200 to day -51, where day 0 is the lawsuit-filing date.

For each of the 137 sued cross-listed companies, the filing date announcement effect is measured by cumulating abnormal returns (CARs) in the U.S. market and local markets over a specified event window:

\[
(3) \quad CAR_j = \sum AR_j
\]

For the non-sued foreign firms, I first construct 137 unique non-sued portfolios, each specifically linked to one lawsuit event. Each portfolio includes all non-sued foreign firms that are traded in the U.S. on the relevant lawsuit-filing date. I adopt this portfolio-based approach to mitigate potential cross-sectional dependencies (Silvers, 2012; Sefcik and Thompson, 1986). Following Silvers and Elgers (2011), to remove extreme stock performance driven by other firm-specific factors not related to lawsuits, I then eliminate any non-sued firms who have daily returns (daily abnormal return) greater than 30% in absolute magnitude during the estimation window (event window). In addition, I also exclude firms with earnings announcements that coincide with the class-action filing date (during the event window [-10, +1]) to control for potential confounding events.\(^{13}\) Thirdly, time zone differences could reduce the overlap between U.S. trading hours and those of certain local markets (Pulatkonak and Sofianos, 1999; Hailing et al, 2008), leading to a delay in the local market reactions. I arbitrarily assume that all lawsuits are announced at 9:00 am New York time on each event day and that all markets close for trading at 4:00 pm local time. For markets whose local time is later

\(^{13}\) I obtain the quarterly (yearly, if quarterly not available) earnings announcements from Datastream.
than 4:00 pm, when a U.S. announcement is made, I observe the local reactions on the following day. Therefore, I adjust the local event windows for firms from these countries. After the filtering and adjustments, I use the “cleaned” daily stock ARs to compute the non-sued portfolio daily ARs. Finally, the filing date announcement effect for each unique non-sued portfolio is measured by the portfolio cumulating abnormal returns (CARs) in the U.S. and local markets.

2. Explanatory variables

This paper presents the short-term valuation impact of U.S. class action lawsuits on both targeted and non-sued foreign issuers and examines which factors could help explain the degree of such an impact. Such valuation impact, as discussed above, is measured through CARs for targeted companies and portfolio CARs for non-sued firms. Potential explanatory variables are listed and discussed below. All firm-level and market-level explanatory variables are based on information extracted from Datastream, and firm-level variables are winsorized at 1% and 99% for subsequent analyses.

**Size of Damages:** Following Field et al (2005), I use three proxies for the size of potential damages: prior stock returns, volatility, and share turnover.

Prior stock returns and volatility have been shown to be related to lawsuits (e.g., Gande and Lewis, 2009; Gande and Miller, 2012), as they are associated with plaintiffs’ incentives to bring a lawsuit. Similarly, firms with high turnover are subject to potential lawsuit as recoverable damages are an increasing function of the number of shares

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14 Similar cleaning processes, including the exclusion of extreme return and confounding events and adjustment for time zone differences, are also performed for the target group.
traded at misleading prices. All three variables are calculated using daily stock returns over the one-year period prior to the lawsuit-filing date.

**Firm-specific variables:** In addition to stock-specific information, other firm-level variables are also related to potential damages, increasing the probability of being sued. Firm size is considered to be closely related to lawsuits in the sense of “deep pockets”, which attracts the attention of plaintiffs by paying larger recoverable amounts. Corporate performance, proxied by return on assets and market-to-book ratio, has been shown to be important for determining lawsuit likelihood and potential damages (Field et al, 2005; Gande and Lewis, 2009; Silvers, 2012).

**Country-Level Shareholder Protection:** Halling et al (2007) indicate that the location of U.S. cross-listed firms affects the stock performance in U.S. markets; therefore, I also include measures that proxy for the home country legal and trading environment. Similar to Gande and Miller (2012) and Silvers (2012), I use three commonly employed indexes for the home country legal environment: the Spamann anti-direct rights index (Spamann, 2010), advised anti-direct rights index (Djankov et al, 2008) and the rule of law ranking (Kaufmann et al, 2010). These indexes, which assess the strength of relevant governmental rule of law, represent the protection for shareholders. Firms from poorer legal environments are often associated with higher probabilities of engaging in wrongdoing. The dummy variables SADRI, RADRI, and ROLR take on the value of one for countries with below-median scores based on these indexes (i.e., “poorly-governed countries”) and zero otherwise.

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15 Similar to Gande and Miller (2012), I also calculate the log of U.S. sales to proxy for a foreign issuer’s presence in the U.S. To do so, I first extract the annual geographic segment description in Datastream, by local DScode, and then match it with geographic segment sales. However, this approach has some drawbacks. If the firm is not listed in the U.S., the geographic segment description would be “NA”; thus decreasing the sample size with U.S. presence. Therefore, log_us_sales would not be included in the main regression analysis.
Other Country-Level Variables: In addition to the legal environment, the stock performance of foreign firms in the U.S. is likely to be correlated with foreign market information disadvantage (Halling et al, 2007; Pulatkonak and Sofianos, 1999). Geographical proximity suggests that U.S. investors may be familiar with a foreign company, representing a lower information barrier for U.S. investors to invest in this company. Similarly, greater local market liquidity can also reduce the trading frictions of investing in a foreign stock (Halling et al, 2007). I calculate the geographical proximity as the logarithm of distance between each home country and the United States. The market liquidity measure, Amihud (2002)’s illiquidity ratio (ILR), is a measure of the elasticity dimension of liquidity, which is employed when using daily closing prices in the absence of bid-ask prices. The information needed to compute ILR is sourced from Datastream.16

Litigation environment variables: I also examine the factors correlated to the litigation environment, which include previous lawsuit dummy and the litigation intensity measures. The previous lawsuit dummy takes on the value of one if the firm has been sued previously. For the sued companies, I include measures of litigation intensity, which is the number of class-action lawsuits that have been filed against other foreign firms (in the same industry or from the same home country as the sued firms), measured over a one-year estimation period preceding the lawsuit-filing date. For the non-sued firms, in addition to the litigation intensity, I also create dummy variables representing whether the non-sued firm is from the same country or the same industry.

16 I would like to thank the Datastream support team for their help in providing me with a workable formula to directly extract this information. The calculation of ILR ratio, as suggested by the Datastream support team, is as follows:

$$\frac{1}{D_T} \sum_{i=1}^{T} \frac{|R_{i,t}|}{VOL_{i,t}}$$

where $D_T$ is the number of trading days within a time window $T$, $R_{i,t}$ is the return on day $t$ for security $i$, and $VOL_{i,t}$ is the trading volume (in units of currency) on day $t$.
as the targeted company. To capture the non-linear and interaction effects of these measures, I also include some squared terms and interaction terms in later regression analysis.

**Industry dummies:** Following Gande and Lewis (2009), I create industry dummy variables for regulated, financial, and technology firms (defined by Field et al., 2005). Firms in the financial industry may be more likely to be sued as they directly address customers and investors. Similarly, technology firms, as fast-growing firms, are very often targeted by security litigations. In contrast, regulated firms should have a lower litigation frequency due to close scrutiny by regulators.

3. **Determinants of lawsuits targeting foreign issuers**

Before determining which factors explain market reactions to both targeted and non-sued foreign issuers, I use a logistic regression model to make inferences about the probability that a foreign issuer is targeted by U.S. private litigations. If a lawsuit is expected rather than unexpected, investors partially anticipate the lawsuit and capitalize part of the losses in advance (Gande and Lewis, 2009). Moreover, with respect to non-sued firms, this anticipation could take the form of a “spill-over” effect, explaining (at least partially) why non-sued firms also experience significant abnormal returns upon the announcements of class action lawsuits.

I construct a logistic model that combines litigation related variables, firm-specific characteristics, and potential damages:
(4) \[ Sued = \alpha_0 + \alpha_1 pre_{dummy} + \alpha_3 intensity_{foreign} + \alpha_4 intensity_{foreign}^2 + \]
\[ + \alpha_5 reg_{dummy} + \alpha_6 fin_{dummy} + \alpha_7 tech_{dummy} + \alpha_8 \log(assets) + \]
\[ + \alpha_9 ROA + \alpha_{10} MTBV + \alpha_{11} sharereturn + \alpha_{12} volatility + \]
\[ + \alpha_{13} sharereturn + \epsilon \]

The binary dependent variable, Sued, is equal to one if a firm is sued and zero otherwise. All determinants are as defined previously.

4. Regression analysis

After I test the significance of the cumulative abnormal return of the sued and non-sued foreign firms, further examination of correlation between the time-, event-, and firm-specific characteristics and the magnitude of the market responses to private class-action lawsuits is necessary.

For the sued firms, an OLS regression is conducted to test whether the explanatory variables are relevant for explaining the magnitude of market reactions, both locally and in the U.S. market. The dependent variable is the firm’s filing date announcement effect, expressed in terms of firm losses (CAR), over the event window of [-10, +1], similar to that chosen by Gande and Lewis (2009) and Gande and Miller (2012). As in the logistic model, I include proxies for the litigation environment and firm-specific factors. To the extent that country-specific legal environments and investment barriers may contribute to the market value implications of lawsuits, I also include proxies for country-level explanatory variables in the regression analysis. I measure home country legal strength using the three binary indicators defined previously: SADRI, RADRI, and ROLR. The geographic proximity and market
illiquidity ratio are used to proxy for information disadvantage and investment barrier. The heteroskedasticity-adjusted regression model I employ is as follows:

\[
(5) \quad CAR_{sued} = \\
\alpha_0 + \alpha_1 pre_{dummy} + \alpha_3 intensity_{foreign} + \alpha_4 intensity^2_{foreign} + \\
\alpha_5 reg_{dummy} + \alpha_6 fin_{dummy} + \alpha_7 tech_{dummy} + \alpha_8 \log(assets) + \\
\alpha_9 ROA + \alpha_{10} MTBV + \alpha_{11} illiquidity + \alpha_{12} \log(distance) + \\
\alpha_{13} legal\ environment + \varepsilon
\]

For the non-sued cross-listed firms, I apply a time-series cross-sectional OLS regression with standard errors clustered at the firm level, pooling together all non-sued firms of the 137 portfolios as mentioned previously. The dependent variable is the non-sued firm’s filing date announcement effect, expressed in terms of firm losses (CAR), over the window of [+1, +10] relative to the corresponding lawsuit-filing event. In addition to the explanatory variables employed in the sued firm regressions, I also consider matching variables that indicate whether a non-target firm is from the same industry and/or the same local country as the firm being sued. The country-level legal environment – measured through SADRI, RADRI, or ROLR – is interacted with these two matching variables because I want to examine whether market responses are more significant within the same industry/market, especially for non-sued companies from home countries with weak shareholder protection. The following multivariate regression model is adjusted for heteroskedasticity and feature standard errors clustered by firm.

\[
(6) \quad CAR_{non-sued} = \\
\alpha_0 + \alpha_1 pre_{dummy} + \alpha_3 intensity_{foreign} + \alpha_4 intensity^2_{foreign} + \\
\alpha_5 reg_{dummy} + \alpha_6 fin_{dummy} + \alpha_7 tech_{dummy} + \alpha_8 \log(assets) + \\
\alpha_9 ROA + \alpha_{10} MTBV + \alpha_{11} illiquidity + \alpha_{12} \log(distance) + \\
\alpha_{13} legal\ environment + \varepsilon
\]
\[ \alpha_{13} \text{legal environment} + \alpha_{14} \text{legal environment} \times \text{same country} + \alpha_{15} \text{legal environment} \times \text{same industry} + \epsilon \]

V. Main Findings

1. Filing date announcement effect: Sued firms

Figure 1 depicts the average cumulative abnormal returns (CARs) of 137 class action lawsuits, approximately 4 weeks before and 4 weeks after the lawsuit-filing dates, in the U.S. and local markets. \(^{17}\) This figure is quite interesting in several ways. First, it is apparent that target companies have experienced negative abnormal returns on average, not only in the U.S. but also in their home markets. Similar results are reported in Gande and Miller (2012). It is also interesting that most of the negative impact occurs within the short pre-event window of [-10, +1], whereas the abnormal returns seem to stabilize post-event (or even revert upwards). This finding corroborates the ideas of Gande and Lewis (2009), who suggest that an event window of [-10, +1] is sufficiently long to capture the cross-sectional variation between the trigger and filing date. \(^{18}\) Therefore, in further logistic and regression analyses concerning sued firms, I will focus on this event window.

Figure 2 further justifies the choice of focusing on CAR [-10, +1] for sued firms. It is similar to Figure 1, but with CARs calculated separately pre-event and post-event. This graph shows that the cumulative abnormal returns of target firms closely trend

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\(^{17}\) In total, 103 and 98 firm-event observations are available over the event window in the U.S. and local markets, respectively.

\(^{18}\) In the Robustness Check section, I provide a more detailed discussion concerning the potential impact of “trigger” events (including information leakage and misstated announcements). Essentially, the presence of such triggers does not alter my main findings.
together between U.S. and local markets. In addition, cumulative abnormal returns in both markets (U.S. and local) are significant pre-event but become flat and insignificant after the lawsuit-filing events.

Table 3 presents the event study results for the abnormal returns of sued foreign firms surrounding the filing dates of lawsuits targeting foreign issuers. The average CARs over the three selected pre-event windows are all significant, whereas the average CAR post-event is insignificant. This finding accords with our earlier observations that the valuation impact of private litigations is mainly concentrated in pre-event period. More specifically, over the event window of [-10, +1], the mean cumulative abnormal return is -6.91% in the U.S. market and -7.50% in the home market.

In summary, the overall results concerning target firms are consistent with \( H1 \). Shortly before and on the lawsuit-filing day, sued cross-listed firms experience significantly negative market reactions in both the U.S. and their home markets.

2. Filing date announcement effect: Non-sued firms

Figure 3 compares the CARs of sued and non-sued firms in the U.S. and local markets. Similar to target companies, return movements of non-used firms also share similar trends between U.S. and local markets. However, unlike the sued companies, non-sued firms are not negatively affected by potential upcoming litigations prior to the actual filing event of such lawsuits. After market participants become aware of the filed lawsuits (i.e., post-event), while the abnormal returns of target firms stabilize, U.S. investors begin to react negatively towards non-sued firms. This finding of post-event
negative market responses is, in my view, in agreement with the spill-over hypothesis of $H2b$.

**Table 4** presents the event study results for the abnormal returns of non-sued foreign issuers surrounding the lawsuit-filing dates. These results suggest that the cumulative abnormal returns of non-sued firms are much smaller, on an absolute scale, than those of the sued companies. Contrary to the bonding benefits argument ($H2a$) similar to that proposed in Silvers (2012), the results do not reveal significantly positive cumulative abnormal returns over the post-event. Instead, the post-event estimate is statistically significantly negative at the 5% level for both U.S. and local markets, supporting the spill-over hypothesis ($H2b$). Over the post-event window of [+1, +10], the mean cumulative abnormal return is -0.284% in the U.S. market and -0.251% in the home market.

3. **Propensity to be sued**

**Table 5** reports the difference in means for the full sample and for the subsamples of sued and non-sued firms regarding the determinants of a foreign issuer’s propensity to be sued. The share turnover is higher for sued versus non-sued firms, whereas the share return shows the opposite relationship. Moreover, the sued firms are significantly larger than the non-sued firms. Table 5 also indicates that the litigation environment affects the likelihood of lawsuits. Firms are significantly more likely to be
sued if they have previously been sued. Companies in the financial or in technology industries are more often targeted by private litigation lawsuits.\textsuperscript{19}

Table 6 presents the parameter estimates for the logistic regressions with extent of damages, firm-specific factors, and litigation environment as potential explanatory variables of lawsuit propensity. The p-values are adjusted for firm clustering.

The extent of damages is positively correlated with the lawsuit propensity, as expected. This result is supported by the significance of the variable share return and share turnover at the $p = 0.01$ level. Other firm characteristics are also shown to be correlated with a firm’s likelihood to be sued. The coefficient of firm size is positive, supporting the "deep pockets" hypothesis. In addition, “non-profitable” (lower return on assets) and “over-valued” (higher market-to-book value) firms are more likely to be sued. Although the coefficient signs of litigation environment variables accord with my expectations, none of them are statistically significant.\textsuperscript{20} The industry dummy variables all have the expected sign with only the technology dummy being statistically significant, which suggests that firms from certain industries are significantly more likely to be sued.

The overall findings from these two tables are consistent with those reported by Gande and Miller (2012) and Gande and Lewis (2009). The regression estimates agree with my predictions well. Furthermore, the determinants of the lawsuit likelihood for foreign firms are similar to those for U.S. firms (Gande and Lewis, 2009), which

\textsuperscript{19}In unreported tests (omitted for brevity), I also find that post-SOX and especially during the recent financial crisis, financial firms and larger firms have become even more likely to be sued, whereas firms from regulated industries are less likely to be targeted by class action lawsuits.

\textsuperscript{20}One possibility is that these litigation intensity variables are constructed at a litigation lawsuit level and thus have less explanatory power in firm-event panel analysis.
indicates that foreign firms are equally likely to be targets of class actions lawsuits as U.S. firms.

4. Regression results: Sued firms

Table 7 presents the regression results for the sued firms. Models 2-4 include proxies for country legal environment. Across all models, and in both markets (U.S. and local), the coefficient on RADRI is positive and statistically significant, which suggests that sued firms from countries with weak shareholder protection experience greater valuation loss related to class action lawsuits. Moreover, while profitable firms (better return on assets) experience less loss in local markets, small (larger logassets) and over-valued firms (higher market-to-book value) experience greater losses in U.S. markets. Similar to the logistic regression results, the previous lawsuit dummy is found to be insignificant. However, market participants respond more negatively when there is greater scrutiny of foreign issuers, as supported by the significance of the variable intensity_foreign at the p = 0.01 level in the U.S. markets and the 0.05 level in the local markets.

5. Regression results: Non-sued firms

Table 8 reports the multivariate results for the non-sued firms. To the extent that the dependent variables are non-sued firms’ post-filing losses, the estimates could also be interpreted as a partial anticipation effect (instead of the filing date announcement effect). Similar to the target firm results, profitable firms are less likely to be sued later
(significantly negative coefficient in the logistic regression); thus, they experience smaller capitalized shareholder losses conditional on future lawsuit penalty. Overvalued firms encounter the opposite situation. Larger firms, despite being more likely to be targeted by private litigation lawsuits, experience smaller losses in their home market. This negative relationship is consistent with the arguments of Gande and Lewis (2009) in that large firms are safer investments for (local) investors because these firms are better able to pay lawsuit penalties and the expected losses are smaller.

Across all the models, geographic proximity between the local market and the U.S. (logarithm of distance) is negatively correlated with losses for non-sued firms. This finding supports the conjecture that firms from countries located farther away have greater information and investment barriers; thus, U.S. investors pay less attention to such firms. As a result, the impact of this information disadvantage is smaller for non-sued firms in local markets than in the U.S. market, both in terms of significance and magnitude.

Consistent with the target regression results, the intensity_foreign variable is positively correlated with the losses, indicating greater market reaction when there exists closer scrutiny on foreign issuers. The industry dummy (e.g., technology and financial) shows a significantly negative correlation with the valuation losses compared to the results in the logistic and target regressions. Considering that such industries are more strictly monitored, potential lawsuit losses have already been compensated in the prices prior to a lawsuit being filed. Therefore, the spill-over effect is not as pronounced in these industries as in other industries.

The country legal environment may also contribute to the market value impact of private litigations, and the impact may be even stronger for firms from the same
home country and/or the same industry. As reported in Table 8, although the variable SADRI is significantly negative, the interaction terms with the same industry and same country are positive. In the U.S., non-sued firms from “poorly-governed” countries (i.e., countries with weak legal environments for protecting shareholder rights) experience lower average losses, possibly because U.S. investors previously recognized that these foreign companies are from “poorly-governed” countries and their prices have already been discounted, factoring in all sorts of risks, including litigation risk, before the private class action. As such, when investors observe lawsuits targeting foreign issuing companies, they would not have to further discount to as large of an extent. The country matching interaction term has a positive association with the filling date firm losses. That is, when both sued and non-sued firms are from "poorly-governed" countries, non-sued firms have larger losses. This finding is intuitive and consistent with the prediction that the spill-over effect is stronger among peer firms. The industry-matching interaction term shows the opposite effect, although less conclusively. One possible reason, which requires further investigation but is beyond the scope of this study, is that positive reaction due to “competitive effect” dominates negative reaction caused by the spill-over effect among non-sued industry peer firms.\textsuperscript{21}

Overall, the non-sued regression findings provide some support for (H3), in that the average firm losses of non-sued firms from the same “poorly-governed” home countries are more significant. However, the findings concerning industry peer firms are less clear.

\textsuperscript{21} “Competitive effect” might potentially explain the positive market reactions towards peer firms. Lang and Stulz (1992) find that when a firm announces bankruptcy, other firms become more competitive because of the more profitable opportunities created by the bankrupt firm.
VI. Robustness Tests

I have conducted a battery of additional tests to ensure the robustness of my findings. I discuss certain additional findings below. These results are not tabulated for brevity, but they are available upon request.

1. “Trigger events” and longer pre-event window

Karpoff et al. (2012) note several issues of using financial misconduct databases (including the SCAC used in this analysis). In particular, the mean (median) time-lag between “trigger events” and the recorded initial filing dates in SCAC has been found to be as long as 150 (23) calendar days. If the market is efficient, the abnormal returns (ARs) should start to respond at the trigger event of a lawsuit rather than at its filing event date. As such, it is necessary to check the “pre-event window” of a longer timespan to ensure the robustness of my main findings.

I use the event window of [-23, +1] for the target group robustness check. The 23 trading-day window is longer and thus covers the median time-lag (23 calendar days) noted by Karpoff et al. (2012). As indicated by Figure 4, the valuation impact mainly occurs within the [-10, +1] event window, supporting my choice of window in the main analysis, although market participants do seem to start reacting as early as day -23 (i.e., negative CAR). The overall cumulative abnormal return over this alternative, longer [-23, +1] window is significantly negative in both U.S. and local markets, ensuring the filing date announcement effects for the sued companies.
2. Non-sued firms: Gains vs. losses

One novel contribution of this study is that I find, on average, that non-sued firms experience negative market reactions (i.e., losses) after the investors of these firms become aware of lawsuits targeting other cross-listed foreign issuers. This finding is at odds with those presented in Silvers (2012) and Silvers and Elgers (2011), thus questioning the particular argument of bonding benefits they put forward. Given that for individual non-sued firms across all 137 events, there are both losses (52%) and gains (48%), it is worthwhile to examine the same non-sued regression models separately for non-sued firms who have gains (dependent variable = gains) and for firms that experience losses (dependent variable = losses).

Certain explanatory variables have coefficients of the same sign in these two sub-samples, which is unanticipated yet interesting in terms of offering additional insights. One possible explanation is the varying sensitivities of non-sued firms to these explanatory variables. For instance, the previous lawsuit dummy is positive in both sub-sample regressions, indicating that previously targeted companies are more sensitive to lawsuit events (i.e., their gains and losses are both magnified). Furthermore, log_assets is negative in both sub-sample regressions, suggesting that larger non-sued firms are more stable and therefore less sensitive to lawsuits (i.e., leading to smaller gains and losses). In the full-sample regression, neither variable is significant because their impacts on gains and losses cancel one another out.

Variables involving country-level shareholder protection show patterns consistent with the full-sample result that competitive effects (spill-over effects) exist in the same industry (in the same country) when the target firm is from a “poorly-governed” country. The “poorly-governed” country (based on SADRI) interaction with
same_industry is always positive and significant in the gain-sub-sample, which suggests that peer firms from the same industry experience greater gains (or smaller losses) if the target firm is also from a country with weak shareholder protection. Similarly, the “poorly-governed”*same_country interaction term is significantly positive in both the non-sued regression (SADRI) and the loss-sub-sample (SADRI and RADRI), indicating greater losses for non-sued firms when non-sued firms are from the same “poorly-governed” country as the sued company.

3. Impacts of SOX and the GFC

Prior studies have shown that following certain exogenous, systematic changes, there is a surge of both private litigations and public enforcement actions against foreign firms (e.g., Siegel, 2005; Silvers, 2012; Alanko, 2004). Based on this idea, I conducted sub-sample tests utilizing both the Sarbanes-Oxley act (SOX) and the recent global financial crisis (GFC). The full sample period is divided into pre-SOX, SOX-GFC, and GFC sub-sample periods. I find that during and after the GFC, in both U.S. and local markets, the average firm losses are larger and investors become increasingly sensitive to certain firm-specific characteristics, such as firm performance (return on assets) and market liquidity (illiquidity ratio). I also find results suggesting that SOX and GFC might have different impacts on the litigation losses. When a sued company is from a country with weak shareholder protection, non-sued firms from the same country experience smaller (greater) losses in the pre-SOX (SOX-GFC) era. During the GFC, when there is high uncertainty about economic and market conditions, investors are on average more sensitive to negative news, including litigation risks. As a result, the
impacts of litigations on non-sued firms are magnified during such difficult times. In addition, in this type of economic climate, litigations are generally undesirable, which mitigates the impact coming from relevant litigations only. In unreported regression results for the GFC era, the regression coefficients of litigation intensity variables and legal-matching interaction terms (i.e., SADRI*same_country) become insignificant for non-sued firms.

4. Additional robustness checks

On June 24, 2010, the Supreme Court of the United States issued a decision that the key provisions of Rule 10b-5 relating to civil liability for securities fraud do not apply to extraterritorial effects, thus, the transactions in the NAB shares took place abroad and in the ordinary shares are not subject to U.S. legal rules (Morrison case). Considering the potential impact of this case on the empirical analyses, I conduct robustness tests excluding litigation cases with filing date later than July 1, 2010 and all findings documented previously in this study still hold.

Jennings et al. (2011) argue that the outcome of litigations may vary between the dismissed cases and non-dismissed cases because dismissed cases may represent frivolous lawsuits or less severe miscreants. I thus re-run all my analyses, excluding dismissed cases, when examining the sued companies (Eq. 5) and the corresponding non-sued portfolios when testing the non-sued firms (Eq. 6). I find that litigation intensity and SADRI (a dummy indicating countries with poor shareholder protection environments) become more significant.
Because the frequency of class action lawsuits differs by industry, Gande and Miller (2012) define litigation intensity as the number of lawsuits that have been filed against other foreign firms in the same four-digit SIC code as the sued firm (intensity_industry_foreign). I thus replace intensity_foreign, which I use in my main regression models, with intensity_industry_foreign. In contrast to their findings, I find no statistical significance for intensity_industry_foreign in either sued or non-sued regression results.

The construction of non-sued foreign firms, utilizing a portfolio-based approach similar to that of Silvers (2012), mitigates potential cross-sectional dependencies that could bias the standard error estimates under the assumption that different events are uncorrelated, which is supported by the random nature of the class action lawsuits in Figure 5. However, we do see litigation events cluster around certain dates (within 10 days of each other), which would cause non-sued firm CARs to overlap and be non-independent. As suggest by Peterson (2008), double-clustering standard errors should be used for estimation with the presence of both time and firm effects. Nevertheless, clustering by time would result in the insignificance of key variables that are time-invariant (in particular, country-level variables). Considering the consistent significance of most of the key variables across all three clustering methods, I report the regression results with standard errors clustered by firm in the main findings, as adjusting the statistics by time clustering (by time and firm clustering) would lead to less significant results.
VII. Conclusion and Final Remarks

This paper set out to evaluate the short-term valuation impact of U.S. class action lawsuits on sued and non-sued foreign firms listed in the United States. I find that for foreign companies being sued in the U.S., their portion of stocks traded in the U.S. as well as that traded in the home country experience significant losses surrounding the lawsuit-filing dates, which suggests that private litigations are not economically insignificant. In addition, non-sued firms also experience significant negative investor reactions, providing evidence for the spill-over effect of U.S. legal actions. Furthermore, most of the determinants of the propensity to be sued and of the degree of abnormal returns are similar for both non-U.S. and U.S. firms, offering a strong indication that the private litigation lawsuits are not insufficient in the sense of either frequency or penalty. Although the findings in this study confirm the importance of the U.S. legal system, the increased regulatory oversight has been viewed as burdensome.

Similar to the findings of Gande and Miller (2012) and Silvers (2012), the magnitudes of event window CARs and the likelihood of being sued are associated with firm-, litigation- and country-specific characteristics, and the country-specific effects would be more significant if interacted with matching variables (non-sued companies from the same industry and/or country as the targeted companies).

To further this study, it would be interesting to extend the sample size by including more sued firms with available stock and firm information from other databases. One source of weakness in this study that may have affected the measurements was the variables related to the litigation level lawsuit intensity. Firm-level intensity variables could be created to have cross-sectional variation. Furthermore, one could delve deeper
into the analysis of what contributes to the market reactions of non-sued firms, given that this issue has not yet been explored in the literature (to the best of my knowledge).

This study can also serve as a base for related future research. For instance, future research could devise a long-term study considering how these particular litigations affect firm decisions – such as dividend policies and accruals management – for foreign companies cross-listed in the United States.
Reference


Jennings, Jared, Simi Kedia, and Shivaram Rajgopal, 2011, The deterrence effects of SEC enforcement and class action litigation, Working paper, SSRN:


Lang, Mark H., Karl V. Lins, and Darius P. Miller, 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.


Appendix A: Tables and Figures

TABLE 1
Frequency of U.S. Class Action Lawsuits

This table segments targeted firms into domestic and foreign firms, and provides a comparison of the incidences of lawsuits against both firm types. Numbers of lawsuits are sourced from SCAC dataset, whereas the numbers of total firms (domestic and foreign) are extracted from CRSP. The sample period is from 1996 to 2010, inclusive. Panel A reports the frequency of U.S. class action lawsuits. Panel B presents the difference in means for the subsamples and reports the p-value for whether the difference is statistically different from zero.

<table>
<thead>
<tr>
<th>year</th>
<th>Domestic lawsuits</th>
<th>Domestic Sued Firms</th>
<th>Total Firms</th>
<th>Domestic Sued (%)</th>
<th>Foreign lawsuits</th>
<th>Foreign Sued Firms</th>
<th>Total Firms</th>
<th>Foreign Sued (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1996</td>
<td>105</td>
<td>104</td>
<td>8950</td>
<td>1.16%</td>
<td>6</td>
<td>6</td>
<td>828</td>
<td>0.72%</td>
</tr>
<tr>
<td>1997</td>
<td>168</td>
<td>167</td>
<td>9095</td>
<td>1.84%</td>
<td>6</td>
<td>6</td>
<td>933</td>
<td>0.64%</td>
</tr>
<tr>
<td>1998</td>
<td>225</td>
<td>224</td>
<td>8915</td>
<td>2.51%</td>
<td>17</td>
<td>17</td>
<td>973</td>
<td>1.75%</td>
</tr>
<tr>
<td>1999</td>
<td>201</td>
<td>199</td>
<td>8602</td>
<td>2.31%</td>
<td>8</td>
<td>8</td>
<td>980</td>
<td>0.82%</td>
</tr>
<tr>
<td>2000</td>
<td>204</td>
<td>202</td>
<td>8245</td>
<td>2.45%</td>
<td>12</td>
<td>12</td>
<td>1050</td>
<td>1.14%</td>
</tr>
<tr>
<td>2001</td>
<td>456</td>
<td>434</td>
<td>7574</td>
<td>5.73%</td>
<td>41</td>
<td>40</td>
<td>1032</td>
<td>3.88%</td>
</tr>
<tr>
<td>2002</td>
<td>247</td>
<td>206</td>
<td>6945</td>
<td>2.97%</td>
<td>19</td>
<td>19</td>
<td>979</td>
<td>1.94%</td>
</tr>
<tr>
<td>2003</td>
<td>211</td>
<td>193</td>
<td>6554</td>
<td>2.94%</td>
<td>17</td>
<td>17</td>
<td>915</td>
<td>1.86%</td>
</tr>
<tr>
<td>2004</td>
<td>211</td>
<td>206</td>
<td>6437</td>
<td>3.20%</td>
<td>28</td>
<td>28</td>
<td>897</td>
<td>3.12%</td>
</tr>
<tr>
<td>2005</td>
<td>160</td>
<td>159</td>
<td>6438</td>
<td>2.47%</td>
<td>22</td>
<td>22</td>
<td>920</td>
<td>2.39%</td>
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<tr>
<td>2006</td>
<td>108</td>
<td>108</td>
<td>6511</td>
<td>1.66%</td>
<td>12</td>
<td>12</td>
<td>905</td>
<td>1.33%</td>
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<tr>
<td>2007</td>
<td>149</td>
<td>146</td>
<td>6750</td>
<td>2.16%</td>
<td>28</td>
<td>28</td>
<td>921</td>
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<tr>
<td>2008</td>
<td>195</td>
<td>177</td>
<td>6548</td>
<td>2.70%</td>
<td>28</td>
<td>28</td>
<td>838</td>
<td>3.34%</td>
</tr>
<tr>
<td>2009</td>
<td>146</td>
<td>139</td>
<td>6322</td>
<td>2.20%</td>
<td>21</td>
<td>19</td>
<td>806</td>
<td>2.36%</td>
</tr>
<tr>
<td>2010</td>
<td>149</td>
<td>146</td>
<td>6242</td>
<td>2.34%</td>
<td>27</td>
<td>26</td>
<td>826</td>
<td>3.15%</td>
</tr>
<tr>
<td>1996-2010</td>
<td>2935</td>
<td>2810</td>
<td>15188</td>
<td>18.50%</td>
<td>292</td>
<td>288</td>
<td>1889</td>
<td>15.25%</td>
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Panel B. Difference in Means

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<th>Domestic</th>
<th>Foreign</th>
<th>Difference in Means</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Sued%</td>
<td>2.34%</td>
<td>2.58%</td>
<td>2.10%</td>
<td>0.48%</td>
<td>0.2144</td>
</tr>
</tbody>
</table>
TABLE 2

Sample Description

This table reports the numbers of securities class action lawsuits across different industries, countries, security types, litigation types and case status. The sample period is 1996-2010, and the sued subsample consists of 137 dual-listed firms targeted by lawsuits. Panel A provides a year-wise breakdown of lawsuits across different industries. Panel B reports the number of lawsuits by litigation type in different years. Panel C and D present a break-down of securities class action lawsuits across different home countries and by case status, respectively.

<table>
<thead>
<tr>
<th>Panel A. Number of lawsuits by industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1996</td>
</tr>
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<td>1997</td>
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<tr>
<td>1999</td>
</tr>
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<td>2000</td>
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<td>2001</td>
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<td>2008</td>
</tr>
<tr>
<td>2009</td>
</tr>
<tr>
<td>2010</td>
</tr>
<tr>
<td>1996-2010</td>
</tr>
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</table>
### TABLE 2 (CONT’D)

#### Sample Description

**Panel B. Number of lawsuits by litigation type**

<table>
<thead>
<tr>
<th>Year</th>
<th>Restatement</th>
<th>Other accounting violations</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ADR</td>
<td>Direct-listing</td>
<td>ADR</td>
<td>Direct-listing</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Total</td>
<td>Total</td>
<td>Total</td>
</tr>
<tr>
<td>1996</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1997</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1999</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>2000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>2001</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>2002</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2003</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<td>1</td>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2005</td>
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<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<td>2007</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>2008</td>
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<tr>
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<td>0</td>
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<td>2010</td>
<td>0</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1996-2010</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>17</td>
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</table>
### Panel C. Number of lawsuits by home country

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<th>Country</th>
<th>ADR</th>
<th>Security</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ADR</td>
<td>Direct-listing</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>46</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td></td>
<td></td>
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<tr>
<td>India</td>
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<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
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<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Israel</td>
<td>2</td>
<td>10</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Republic of Ghana</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Republic of South Africa</td>
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<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russian</td>
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<td>3</td>
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<tr>
<td>Scotland</td>
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<td>1</td>
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<tr>
<td>Singapore</td>
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<tr>
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<td>Sweden</td>
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<td></td>
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<tr>
<td>Switzerland</td>
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<td>5</td>
<td>10</td>
<td></td>
<td></td>
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<tr>
<td>Turkey</td>
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<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>14</td>
<td>2</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>67</td>
<td>137</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Panel D. Number of lawsuits by case status

<table>
<thead>
<tr>
<th>Case status</th>
<th>Security</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>ADR</td>
</tr>
<tr>
<td>Case dismissed</td>
<td>30</td>
</tr>
<tr>
<td>Case ongoing</td>
<td>6</td>
</tr>
<tr>
<td>Case settled</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
</tr>
</tbody>
</table>

---

22 In the analysis later, in order to match with local market index as benchmark, firm from Scotland would be treated as United Kingdom.
TABLE 3
Lawsuit Filing Date Abnormal Returns for Sued Foreign Firms in the U.S. and Local Markets

This table presents the results of abnormal returns surrounding the filing dates of 137 securities class action lawsuits that are not subject to confounding events and time lag effects. Panel A reports daily abnormal returns (ARs), where date 0 refers to the lawsuit filing date as recorded in the SCAC database. Panel B reports cumulative abnormal returns (CARs) over selected event windows. The sample period is 1996-2010. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

<table>
<thead>
<tr>
<th>Event date</th>
<th>Mean abnormal returns (US) %</th>
<th>Mean abnormal returns (Local) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A. Daily abnormal returns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-10</td>
<td>0.00</td>
<td>-0.32</td>
</tr>
<tr>
<td>-9</td>
<td>0.26</td>
<td>-0.41</td>
</tr>
<tr>
<td>-8</td>
<td>-0.80</td>
<td>-0.21</td>
</tr>
<tr>
<td>-7</td>
<td>0.61 **</td>
<td>-0.08</td>
</tr>
<tr>
<td>-6</td>
<td>0.47</td>
<td>0.00</td>
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<td>-0.46</td>
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<tr>
<td>-4</td>
<td>-1.49 **</td>
<td>-1.03</td>
</tr>
<tr>
<td>-3</td>
<td>-0.84</td>
<td>0.24</td>
</tr>
<tr>
<td>-2</td>
<td>-1.54 **</td>
<td>-0.69</td>
</tr>
<tr>
<td>-1</td>
<td>-1.72</td>
<td>-3.10 **</td>
</tr>
<tr>
<td>0</td>
<td>-0.45</td>
<td>-0.32</td>
</tr>
<tr>
<td>1</td>
<td>-0.95 **</td>
<td>-1.15 *</td>
</tr>
<tr>
<td>2</td>
<td>1.07</td>
<td>1.39</td>
</tr>
<tr>
<td>3</td>
<td>-0.26</td>
<td>-0.13</td>
</tr>
<tr>
<td>4</td>
<td>0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>5</td>
<td>0.01</td>
<td>-0.79 *</td>
</tr>
<tr>
<td>6</td>
<td>-1.38 *</td>
<td>-0.28</td>
</tr>
<tr>
<td>7</td>
<td>0.15</td>
<td>0.19</td>
</tr>
<tr>
<td>8</td>
<td>0.36</td>
<td>-0.12</td>
</tr>
<tr>
<td>9</td>
<td>0.51</td>
<td>0.51</td>
</tr>
<tr>
<td>10</td>
<td>0.84 *</td>
<td>0.91 *</td>
</tr>
<tr>
<td>Panel B. Cumulative abnormal returns over selected event windows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[-10, +1]</td>
<td>-6.91 **</td>
<td>-7.50 ***</td>
</tr>
<tr>
<td>[-3, +1]</td>
<td>-5.50 ***</td>
<td>-5.02 **</td>
</tr>
<tr>
<td>[-1, +1]</td>
<td>-3.12 **</td>
<td>-4.57 **</td>
</tr>
<tr>
<td>[+1, +10]</td>
<td>0.43</td>
<td>0.58</td>
</tr>
</tbody>
</table>
TABLE 4

Lawsuit Filing Date Abnormal Returns for Non-sued Foreign Firms in the U.S. and Local Markets

This table presents results of abnormal returns surrounding the filing dates of 137 securities class action lawsuits that are not subject to confounding events and time lag effects. Panel A reports the portfolio-based average daily abnormal returns (ARs) of non-sued firms, where date 0 refers to the lawsuit filing date. Panel B reports the portfolio-based average cumulative abnormal returns (CARs) over selected event windows. The sample period is 1996-2010. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

<table>
<thead>
<tr>
<th>Event date</th>
<th>Mean abnormal returns (US) %</th>
<th>Mean abnormal returns (Local) %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A. Daily abnormal returns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-10</td>
<td>0.073 **</td>
<td>0.038 **</td>
</tr>
<tr>
<td>-9</td>
<td>-0.039</td>
<td>-0.016</td>
</tr>
<tr>
<td>-8</td>
<td>-0.016</td>
<td>-0.034</td>
</tr>
<tr>
<td>-7</td>
<td>0.017</td>
<td>0.006</td>
</tr>
<tr>
<td>-6</td>
<td>-0.011</td>
<td>-0.015</td>
</tr>
<tr>
<td>-5</td>
<td>0.082 *</td>
<td>-0.004</td>
</tr>
<tr>
<td>-4</td>
<td>-0.003</td>
<td>0.026</td>
</tr>
<tr>
<td>-3</td>
<td>-0.032</td>
<td>0.017</td>
</tr>
<tr>
<td>-2</td>
<td>-0.052</td>
<td>-0.029</td>
</tr>
<tr>
<td>-1</td>
<td>0.023</td>
<td>0.016</td>
</tr>
<tr>
<td>0</td>
<td>-0.016</td>
<td>0.003</td>
</tr>
<tr>
<td>1</td>
<td>-0.017</td>
<td>-0.003</td>
</tr>
<tr>
<td>2</td>
<td>-0.022</td>
<td>0.000</td>
</tr>
<tr>
<td>3</td>
<td>0.027</td>
<td>-0.019</td>
</tr>
<tr>
<td>4</td>
<td>-0.015</td>
<td>-0.037 *</td>
</tr>
<tr>
<td>5</td>
<td>-0.020</td>
<td>-0.011</td>
</tr>
<tr>
<td>6</td>
<td>-0.017</td>
<td>-0.002</td>
</tr>
<tr>
<td>7</td>
<td>-0.006</td>
<td>-0.036 *</td>
</tr>
<tr>
<td>8</td>
<td>-0.126 ***</td>
<td>-0.079 ***</td>
</tr>
<tr>
<td>9</td>
<td>-0.052 *</td>
<td>-0.036 *</td>
</tr>
<tr>
<td>10</td>
<td>-0.032</td>
<td>-0.027</td>
</tr>
<tr>
<td>Panel B. Cumulative abnormal returns over selected event windows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[-10, +1]</td>
<td>0.005</td>
<td>0.006</td>
</tr>
<tr>
<td>[-3, +1]</td>
<td>-0.087</td>
<td>0.004</td>
</tr>
<tr>
<td>[-1, +1]</td>
<td>-0.004</td>
<td>0.016</td>
</tr>
<tr>
<td>[+1, +10]</td>
<td>-0.284 **</td>
<td>-0.251 **</td>
</tr>
</tbody>
</table>
TABLE 5
Determinants of the Propensity to be Sued

This table presents the mean values of determinants, for the full sample and for the subsamples of sued and non-sued foreign firms. The full sample consists of 84,369 firm-date observations with all explanatory variables non-missing. The sued subsample consists of 63 lawsuits with all explanatory variables non-missing, and the non-sued subsample consists of 84,303 firm-date observations. This table also presents the difference in means for the subsamples and reports the p-value for whether the difference is statistically different from zero.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full-sample</th>
<th>Non-sued</th>
<th>Sued</th>
<th>Difference in Means</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>previous lawsuit dummy</td>
<td>0.032</td>
<td>0.032</td>
<td>0.159</td>
<td>-0.127</td>
<td>0.0083</td>
</tr>
<tr>
<td>intensity foreign</td>
<td>24.323</td>
<td>24.323</td>
<td>24.508</td>
<td>-0.185</td>
<td>0.8382</td>
</tr>
<tr>
<td>intensity foreign(squared)</td>
<td>643.26</td>
<td>643.3</td>
<td>656.1</td>
<td>-12.845</td>
<td>0.7683</td>
</tr>
<tr>
<td>regulation dummy</td>
<td>0.135</td>
<td>0.136</td>
<td>0.111</td>
<td>0.024</td>
<td>0.5722</td>
</tr>
<tr>
<td>financial dummy</td>
<td>0.134</td>
<td>0.134</td>
<td>0.318</td>
<td>-0.184</td>
<td>0.0029</td>
</tr>
<tr>
<td>technology dummy</td>
<td>0.11</td>
<td>0.11</td>
<td>0.286</td>
<td>-0.175</td>
<td>0.0033</td>
</tr>
<tr>
<td>log (assets)</td>
<td>7.053</td>
<td>7.051</td>
<td>9.414</td>
<td>-2.363</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>return on assets</td>
<td>-0.045</td>
<td>-0.045</td>
<td>-0.093</td>
<td>0.047</td>
<td>0.176</td>
</tr>
<tr>
<td>market to book value</td>
<td>2.396</td>
<td>2.396</td>
<td>2.003</td>
<td>0.393</td>
<td>0.3538</td>
</tr>
<tr>
<td>share return</td>
<td>0.148</td>
<td>0.148</td>
<td>-0.321</td>
<td>0.469</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>volatility</td>
<td>0.051</td>
<td>0.051</td>
<td>0.039</td>
<td>0.011</td>
<td>0.0001</td>
</tr>
<tr>
<td>share turnover</td>
<td>0.145</td>
<td>0.145</td>
<td>0.400</td>
<td>-0.255</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
TABLE 6
Estimation of the Propensity to be Sued

This table provides the results of a logistic regression that models the propensity to be sued. The dependent variable is equal to one if a firm is sued and zero otherwise. The standard errors are clustered by firm. The sample period is 1996-2010. The sample is comprised of all foreign firms listed in U.S. markets. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Predicted Sign</th>
<th>Estimate</th>
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<td>-11.704***</td>
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<tr>
<td></td>
<td></td>
<td>(56.04)</td>
</tr>
<tr>
<td>previous lawsuit dummy</td>
<td>+</td>
<td>0.106</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.04)</td>
</tr>
<tr>
<td>intensity foreign</td>
<td>+</td>
<td>0.022</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.03)</td>
</tr>
<tr>
<td>intensity foreign(squared)</td>
<td>-</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.17)</td>
</tr>
<tr>
<td>regulation dummy</td>
<td>-</td>
<td>-0.008</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>financial dummy</td>
<td>+</td>
<td>0.547</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.98)</td>
</tr>
<tr>
<td>technology dummy</td>
<td>+</td>
<td>1.353***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(13.96)</td>
</tr>
<tr>
<td>log (assets)</td>
<td>+</td>
<td>0.434***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(27.77)</td>
</tr>
<tr>
<td>return on assets</td>
<td>-</td>
<td>-2.324***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(26.73)</td>
</tr>
<tr>
<td>market to book value</td>
<td>+</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.00)</td>
</tr>
<tr>
<td>share return</td>
<td>-</td>
<td>-2.414***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(19.24)</td>
</tr>
<tr>
<td>volatility</td>
<td>+</td>
<td>-12.288</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1.64)</td>
</tr>
<tr>
<td>share turnover</td>
<td>+</td>
<td>2.640***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(66.27)</td>
</tr>
<tr>
<td>Pseudo R-Square</td>
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<td>0.1790</td>
</tr>
<tr>
<td>Observations</td>
<td></td>
<td>84,369</td>
</tr>
</tbody>
</table>
TABLE 7
Filing Date Effect: Regressions for Sued Firms

This table reports the filing date effect for sued foreign firms that are not subject to confounding events and time zone lag. The dependent variable is the filing date announcement effect, CAR, over the event window of [-10, +1]. The t-statistics shown in parentheses are adjusted for heteroskedasticity. The sample period is 1996-2010. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. Panel A provides the results in U.S. markets whereas Panel B reports the local market results.

<table>
<thead>
<tr>
<th>Variable</th>
<th>MODEL1</th>
<th>MODEL2</th>
<th>MODEL3</th>
<th>MODEL4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: U.S. markets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intercept</td>
<td>-33.253</td>
<td>-8.609</td>
<td>-10.948</td>
<td>-41.211</td>
</tr>
<tr>
<td></td>
<td>(-0.96)</td>
<td>(-0.26)</td>
<td>(-0.31)</td>
<td>(-1.14)</td>
</tr>
<tr>
<td>previous lawsuit dummy</td>
<td>7.203</td>
<td>7.130</td>
<td>7.544</td>
<td>6.830</td>
</tr>
<tr>
<td></td>
<td>(1.46)</td>
<td>(1.36)</td>
<td>(1.46)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>intensity foreign</td>
<td>5.385***</td>
<td>5.161***</td>
<td>5.591***</td>
<td>5.713***</td>
</tr>
<tr>
<td></td>
<td>(3.17)</td>
<td>(3.13)</td>
<td>(3.22)</td>
<td>(3.30)</td>
</tr>
<tr>
<td>intensity foreign(squared)</td>
<td>-0.106***</td>
<td>-0.099***</td>
<td>-0.110***</td>
<td>-0.111***</td>
</tr>
<tr>
<td></td>
<td>(-3.41)</td>
<td>(-3.33)</td>
<td>(-3.40)</td>
<td>(-3.50)</td>
</tr>
<tr>
<td>regulation dummy</td>
<td>0.540</td>
<td>-1.090</td>
<td>-1.359</td>
<td>0.662</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(-0.13)</td>
<td>(-0.16)</td>
<td>(0.08)</td>
</tr>
<tr>
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<td>3.848</td>
<td>0.437</td>
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<td>3.367</td>
</tr>
<tr>
<td></td>
<td>(0.45)</td>
<td>(0.05)</td>
<td>(0.15)</td>
<td>(0.40)</td>
</tr>
<tr>
<td>technology dummy</td>
<td>4.535</td>
<td>4.120</td>
<td>4.472</td>
<td>3.768</td>
</tr>
<tr>
<td></td>
<td>(0.53)</td>
<td>(0.51)</td>
<td>(0.53)</td>
<td>(0.43)</td>
</tr>
<tr>
<td>log (assets)</td>
<td>-2.807*</td>
<td>-2.953*</td>
<td>-3.064*</td>
<td>-2.959*</td>
</tr>
<tr>
<td></td>
<td>(-1.70)</td>
<td>(-1.87)</td>
<td>(-1.91)</td>
<td>(-1.76)</td>
</tr>
<tr>
<td>return on assets</td>
<td>8.573</td>
<td>6.559</td>
<td>8.780</td>
<td>6.843</td>
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<td></td>
<td>(0.83)</td>
<td>(0.62)</td>
<td>(0.85)</td>
<td>(0.65)</td>
</tr>
<tr>
<td>market to book value</td>
<td>1.947**</td>
<td>1.935**</td>
<td>1.667*</td>
<td>1.949**</td>
</tr>
<tr>
<td></td>
<td>(2.20)</td>
<td>(2.43)</td>
<td>(1.79)</td>
<td>(2.20)</td>
</tr>
<tr>
<td>illiquidity ratio</td>
<td>114.290</td>
<td>367.823</td>
<td>156.696</td>
<td>132.376</td>
</tr>
<tr>
<td></td>
<td>(0.30)</td>
<td>(0.89)</td>
<td>(0.43)</td>
<td>(0.34)</td>
</tr>
<tr>
<td>log distance</td>
<td>-0.659</td>
<td>-3.574</td>
<td>-3.492</td>
<td>0.035</td>
</tr>
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<td>(-0.14)</td>
<td>(-0.77)</td>
<td>(-0.73)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>RADRI</td>
<td>17.407**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.33)</td>
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<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td>(1.51)</td>
<td></td>
<td></td>
</tr>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>(-1.38)</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.065</td>
<td>0.117</td>
<td>0.080</td>
<td>0.059</td>
</tr>
<tr>
<td>Observations</td>
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<td>81</td>
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Adjusted R-squared
## Table 7 (Cont’d)

<table>
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<th>Variable</th>
<th>MODEL1</th>
<th>MODEL2</th>
<th>MODEL3</th>
<th>MODEL4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel B: Local markets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>intercept</td>
<td>-40.740</td>
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<td>-19.807</td>
<td>-34.101</td>
</tr>
<tr>
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<td>(-0.61)</td>
<td>(-1.12)</td>
</tr>
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<td>-0.089</td>
<td>-0.072</td>
<td>0.280</td>
<td>0.165</td>
</tr>
<tr>
<td></td>
<td>(-0.03)</td>
<td>(-0.02)</td>
<td>(0.07)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>intensity foreign</td>
<td>2.596**</td>
<td>2.374*</td>
<td>2.734**</td>
<td>2.323*</td>
</tr>
<tr>
<td></td>
<td>(2.02)</td>
<td>(1.87)</td>
<td>(2.08)</td>
<td>(1.81)</td>
</tr>
<tr>
<td>intensity foreign(squared)</td>
<td>-0.053**</td>
<td>-0.046*</td>
<td>-0.056**</td>
<td>-0.049*</td>
</tr>
<tr>
<td></td>
<td>(-2.01)</td>
<td>(-1.79)</td>
<td>(-2.05)</td>
<td>(-1.82)</td>
</tr>
<tr>
<td>regulation dummy</td>
<td>-4.525</td>
<td>-5.539</td>
<td>-5.763</td>
<td>-4.716</td>
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<tr>
<td></td>
<td>(-0.57)</td>
<td>(-0.73)</td>
<td>(-0.75)</td>
<td>(-0.62)</td>
</tr>
<tr>
<td>financial dummy</td>
<td>-3.278</td>
<td>-5.844</td>
<td>-4.770</td>
<td>-2.991</td>
</tr>
<tr>
<td></td>
<td>(-0.49)</td>
<td>(-0.87)</td>
<td>(-0.71)</td>
<td>(-0.45)</td>
</tr>
<tr>
<td>technology dummy</td>
<td>4.080</td>
<td>4.106</td>
<td>4.515</td>
<td>4.663</td>
</tr>
<tr>
<td></td>
<td>(0.62)</td>
<td>(0.66)</td>
<td>(0.70)</td>
<td>(0.69)</td>
</tr>
<tr>
<td>log (assets)</td>
<td>-0.864</td>
<td>-0.987</td>
<td>-1.170</td>
<td>-0.717</td>
</tr>
<tr>
<td></td>
<td>(-0.67)</td>
<td>(-0.80)</td>
<td>(-0.93)</td>
<td>(-0.54)</td>
</tr>
<tr>
<td>return on assets</td>
<td>-26.088*</td>
<td>-27.975*</td>
<td>-25.734*</td>
<td>-24.619*</td>
</tr>
<tr>
<td></td>
<td>(-1.82)</td>
<td>(-1.87)</td>
<td>(-1.76)</td>
<td>(-1.83)</td>
</tr>
<tr>
<td>market to book value</td>
<td>-0.315</td>
<td>-0.326</td>
<td>-0.563</td>
<td>-0.316</td>
</tr>
<tr>
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TABLE 8

Filing Date Effect: Regressions for Non-sued Firms

This table reports regression analysis results for non-sued firms that are not subject to confounding events and time zone lag. The dependent variable is the filing date announcement effect, CAR, over the event window of [+1, +10]. The t-statistics shown in parentheses are adjusted for heteroskedasticity, with standard errors clustered by firm. The sample period is 1996-2010. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. Panel A provides the results in U.S. markets whereas Panel B reports the local market results.
**TABLE 8 (CONT’D)**

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TABLE 8 (CONT’D)

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TABLE 9
Lawsuit Filing Date Abnormal Returns for Sued Foreign Firms in U.S. market and Local Markets over the Event Window of [-23, +1]

This table presents results of abnormal returns surrounding the filing dates of 137 private litigation lawsuits that are not subject to confounding events and time lag effects over the event window of [-23, +1]. Panel A reports abnormal returns for each day in the event window, where date 0 refers to the lawsuit filing date. Panel B reports cumulative abnormal returns over the event window of [-23, +1]. The sample period is 1996-2010. Superscripts *, ** and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

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<td>-16</td>
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<td>-15</td>
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<td>-0.95 **</td>
<td>-1.15 *</td>
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<td>[-23, +1]</td>
<td>-9.64 ***</td>
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FIGURE 1
Lawsuit Filing Date Abnormal Returns for Sued Foreign Firms in U.S. Market and Local Markets over the Event Window of [-20, +20]

This figure presents the daily abnormal returns for sued foreign firms in U.S. markets and local markets over the event window of [-20, +20]. The sample period for the event study is 1996-2010.
FIGURE 2
Lawsuit Filing Date Cumulative Abnormal Returns for Sued Foreign Firms in U.S. Market and Local Markets over the Event Window of [-10, +10]

This figure presents the pre- and post-filing date cumulative abnormal returns, over the event windows of [-10, 0] and [+1, +10] respectively. It depicts pre-filing and post-filing CARs of the sued foreign issuers in the U.S. and local markets. The sample period for the event study is 1996-2010.
FIGURE 3
Lawsuit Filing Date Cumulative Abnormal Returns for Targeted and Non-sued Foreign Firms in U.S. Market and Local Markets over the Event Window of [-10, +10]

This figure presents the pre- and post-filing date cumulative abnormal returns, over the event windows of [-10, 0] and [+1, +10] respectively. It depicts these CARs, separately for sued and non-sued foreign issuers in the U.S. and local markets. The sample period for the event study is 1996-2010.
This figure presents the filing date cumulative abnormal returns for sued foreign issuers in U.S. markets and local markets over the event window of [-23, +1]. The sample period for the event study is 1996-2010.
Figure 5 shows the cumulative abnormal returns of the non-sued portfolio of firms around the filing date of 137 securities class action lawsuits against foreign firms. The sample period for the event study is 1996-2010, inclusive.
## Appendix B: Variables and Definitions

<table>
<thead>
<tr>
<th>Variables and Definitions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of Damages</strong></td>
<td></td>
</tr>
<tr>
<td>Share turnover</td>
<td>Estimated using the procedure defined in Field, Lowry, and Shu (2005) over the one year estimation period preceding the lawsuit filing date. Estimated as average stock return measured over the one year estimation period preceding the lawsuit filing date.</td>
</tr>
<tr>
<td>Stock return</td>
<td>Estimated as daily standard deviation of the rate of return in the one year estimation window preceding the lawsuit filing date.</td>
</tr>
<tr>
<td>Stock volatility</td>
<td></td>
</tr>
<tr>
<td><strong>Firm specific variables</strong></td>
<td></td>
</tr>
<tr>
<td>Log of total assets</td>
<td>Natural logarithm of total assets of the firm (in millions of dollars)</td>
</tr>
<tr>
<td>Return on assets</td>
<td>Return on assets ratio/ profitability ratio from Datastream. Defined as the market value of the ordinary (common) equity divided by the balance sheet value of the ordinary (common) equity in the company (Worldscope item 03501) from Datastream.</td>
</tr>
<tr>
<td>Market to book ratio</td>
<td></td>
</tr>
<tr>
<td><strong>Country-Level Shareholder Protection</strong></td>
<td></td>
</tr>
<tr>
<td>SADRI</td>
<td>Take on the value of one for countries that have below-median scores based on Anti-Director Rights Index (ADRI) by Spamann (2010), and zero otherwise.</td>
</tr>
<tr>
<td>RADRI</td>
<td>Take on the value of one for countries that have below-median scores based on Revised Anti-Director Rights Index (ADRI) by Djankov et al. (2008), and zero otherwise.</td>
</tr>
<tr>
<td>ROLR</td>
<td>Take on the value of one for countries that have below-median scores based on Rule of law ranking by Kaufmann et al (2010), and zero otherwise.</td>
</tr>
<tr>
<td><strong>Other Country-Level Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Log distance</td>
<td>Natural logarithm of distance between each home country and United States.</td>
</tr>
<tr>
<td>Illiquidity ratio</td>
<td>A measure of the elasticity dimension of liquidity defined in Amihud, 2002.</td>
</tr>
<tr>
<td><strong>Litigation environment variables</strong></td>
<td></td>
</tr>
<tr>
<td>Previous lawsuit dummy</td>
<td>Takes on the value of one if a firm has been sued before, and zero otherwise.</td>
</tr>
<tr>
<td>Intensity foreign</td>
<td>Number of class-action lawsuits that have been filed against other foreign firms measured over the one year estimation period preceding the lawsuit filing date.</td>
</tr>
<tr>
<td>Intensity industry</td>
<td>Number of class-action lawsuits that have been filed against other firms in the same industry as the sued firm measured over the one year estimation period preceding the lawsuit filing date.</td>
</tr>
<tr>
<td>Intensity country</td>
<td>Number of class-action lawsuits that have been filed against other firms from the same country as the sued firm measured over the one year estimation period preceding the lawsuit filing date.</td>
</tr>
<tr>
<td>Intensity foreign industry</td>
<td>Number of class-action lawsuits that have been filed against other foreign firms in the same industry as the sued firm measured over the one year estimation period preceding the lawsuit filing date.</td>
</tr>
</tbody>
</table>

**Industry dummies**

| Regulation dummy | Takes on the value of one if a firm’s four-digit SIC is between 4000 and 4999, and zero otherwise. |
| Financial dummy | Takes on the value of one if a firm’s four-digit SIC is between 6000 and 6999, and zero otherwise. |
| Technology dummy | Takes the value of one if a firm’s four-digit SIC is within 2833-2836, 3570-3577, 3600-3674, 7371-7379 or 8731-8734, and zero otherwise. |