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Matteo P. Arena Marquette University, matteo.arena@marquette.edu

Stephen P. Ferris University of Missouri - Columbia

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# A Global Analysis of Corporate Litigation Risk and Costs

Matteo P. Arena Department of Finance, Marquette University, Milwaukee, WI Stephen P. Ferris Dean's Suite, University of Colorado Colorado Springs, CO

#### Abstract

We analyze a unique hand-collected international sample of 475corporate lawsuits involving 361 publicly-traded defendant firms headquartered in 16 developed countries to explore how country factors influence litigation risk, equity market value, lawsuit outcomes, and settlement costs. Unlike U.S.-focused studies, we do not find a significant relation between stock turnover, equity performance, and the probability of litigation. Defendant firms headquartered in civil law countries or countries with less efficient judiciary systems face lower litigation risk and costs as well as less share price decline at filing. Countries whose courts are less independent demonstrate a significant bias against foreign defendant firms.

## Keywords

International corporate finance, Corporate litigation, International law

### 1. Introduction

Although various studies analyze the effect of U.S. corporate lawsuits on shareholder value (e.g., <u>Bhagat et al.,</u> <u>1994</u>; <u>Gande and Lewis, 2009</u>) and extensive research examines the effect of <u>litigation</u> risk on corporate behaviors (e.g., <u>Lowry and Shu, 2002</u>; <u>DuCharme et al., 2004</u>; <u>Arena and Julio, 2015</u>), the law and finance literature lacks an empirical analysis of the international corporate litigation environment. In this study we address this omission by analyzing a unique hand-collected sample of global lawsuits to explore how national legal systems, practices, and courts influence the corporate legal experience during litigation.

Our study advances the law and <u>financial economics</u> literature by exploring for the first time the financial implication of global litigation. As corporate globalization progresses to establish itself as a major driver of economic growth, cross-border lawsuits have become widespread along with their relevance to the financial health of <u>multinational companies</u>. Our study provides novel evidence regarding how different institutional and legal characteristics across countries affect the corporate litigation environment. Specifically, we explore the effect of firm characteristics and country <u>legal practices</u> on the likelihood of litigation, the types of lawsuits filed, the <u>market reaction</u> to lawsuit filings, litigation outcomes, and settlement costs.

The dataset we use for our analysis consists of 482 corporate lawsuits filed between 1999 and 2008 against 361 publicly-traded firms <u>headquartered</u> in 16 different <u>developed countries</u>. We terminate our sample in 2008 to allow sufficient time for the suits to resolve and allow us to analyze final outcomes. Unlike other studies of corporate lawsuits, our sample is not restricted to class action securities litigation, but consists of a variety of lawsuits including patent, antitrust, fraud and labor lawsuits. Thus, our study is the first to analyze the effect of litigation not only across a number of countries, but also for different lawsuit types. We develop seven different hypotheses to motivate our empirical work. These hypotheses focus around the triggers for litigation and the national <u>determinants</u> of litigation risk, the nature of the capital market's response to a lawsuit filing, and the effect of court honesty and efficiency on litigation outcomes.

We obtain a number of interesting and useful findings from our empirical analysis. Globally, security lawsuits are less common than in the U.S. due to the lack of a foreign analogue to the SEC's Rule 10b-5. This SEC rule provides a right of action to investors against companies and directors for material misstatements that affect the secondary trading of securities. Foreign <u>corporate law</u> does not allow the initiation of <u>class action lawsuits</u> as easily as U.S. corporate law. When a lawsuit is initiated, the resulting settlement costs faced by defendant firms are also lower, providing less incentive to plaintiffs to initiate litigation (<u>Armour et al., 2009</u>). Unlike studies of U.S. lawsuits, we find that our international sample of lawsuits. Further, we observe that equity underperformance for these foreign firms does not significantly increase the probability of a lawsuit. We also show that the announcement of a lawsuit filing against a non-U.S. firm effects its share <u>price</u> less negatively than it does for U.S. firms.

Consistent with studies showing a different level of <u>legal protection</u> between <u>civil law</u> and <u>common law</u> <u>system</u> countries (e.g., La Porta et al., 1998), we find that differences in national institutional settings have a significant effect on litigation risk and the stock price reaction observed at the time of the lawsuit announcement. Specifically, we find that corporate litigation risk is lower for firms residing in civil law countries and countries with a less developed judiciary and legal system. The stock market reaction surrounding the announcement of a lawsuit filing is significantly more negative for defendant firms when the filing occurs in a common law country, in countries with a stronger rule of law, or countries with greater legal system integrity.

Finally, we determine that the legal system and the judiciary quality of the country in which the lawsuit is filed have a significant effect on the lawsuit's outcome. Everything else constant, defendant firms are more likely to lose their lawsuit or settle for higher amounts when the lawsuit is brought in countries with a common law heritage or a stronger rule of law. Further, we find that courts are more likely to rule against foreign defendant firms except in those countries where the judiciary has a tradition of independence and integrity. <u>Bhattacharya et al. (2007)</u> present evidence suggesting that U.S. firms have a home court advantage in U.S. federal courts. We find that this domestic bias in corporate lawsuits is a worldwide phenomenon, but can be mitigated by country-specific court impartiality.

We organize the remainder of this study as follows. Section <u>2</u> provides the development and discussion of our seven hypotheses which motivates our subsequent empirical analysis. Section <u>3</u> outlines our sample construction process and variable measurement. Section <u>4</u> provides summary statistics and an initial <u>univariate</u> <u>analysis</u>. Section <u>5</u> contains our examination of global litigation risk. Section <u>6</u> reports the results from our event study analysis while Section <u>7</u> describes our findings concerning litigation outcomes and costs. Section <u>8</u> presents a set of robustness tests while Section <u>9</u> concludes with a summary and a brief discussion.

## 2. Hypotheses development and discussion

U.S. federal <u>civil procedure</u> rules greatly facilitate the initiation of corporate lawsuits by various classes of stakeholders. Security <u>class action lawsuits</u> triggered by a decline in the stock <u>price</u> are extremely common in the U.S. and often result in significant settlement expenses for the defendant firm (<u>Arena and Julio, 2015</u>). Such lawsuits, however, occur less frequently outside the U.S (<u>Armour et al., 2009</u>). <u>Buschkin (2005)</u> notes that most foreign countries disapprove of the U.S. class action device as a way to punish firms. Indeed she explains that in many countries the legal system believes that governments, not private litigants, should regulate corporate conduct. <u>Sherman (2002)</u> claims that most other countries see the U.S. class action lawsuit as a "Pandora's box that they want to avoid opening." Thus, given the reluctance of other nations to encourage or even permit corporate class action lawsuits, a decline in share price should be less of a trigger for <u>litigation</u> outside the U.S. Therefore, we hypothesize:

#### Hypothesis 1

Stock underperformance and stock <u>turnover</u> do not significantly increase litigation risk for non-U.S. firms.

<u>Buschkin (2005)</u> argues that the large size of the damages awarded to plaintiffs in U.S. class action lawsuits offends "foreign notions of public policy". That is because most <u>civil law</u> countries believe that it is the role of the state to <u>control corporate</u> behavior. Lawsuits are seen as a mechanism to compensate victims for their losses, rather than punishing or deterring some corporate activity. U.S. law, and common law in general, believes that the threat of large civil damages resulting from lawsuits brought by private litigants can deter illegal or undesired activity. It can therefore serve as a substitute for <u>public policy</u>. Because of this fundamental difference in how class action litigation is viewed, we contend that firms are less likely to be sued in civil law countries. We hypothesize:

#### Hypothesis 2

Litigation risk is less for firms residing in civil law versus common law countries, everything else constant.

<u>Wallace (1998)</u> describes how judicial corruption damages <u>capital markets</u> since it "increases the cost of running businesses, distorts <u>public expenditures</u>, and deters foreign investors." It also compromises the ability of firms to contract since enforcement becomes problematic. This inability to contract is of special concern to investors and

other suppliers of corporate <u>capital</u> who rely on contracting to protect their rights and ensure a rate of return (<u>La Porta et al., 1997</u>; <u>Denis and McConnell, 2003</u>). Lawsuits filed in corrupt courts are unlikely to be successful because the judges are not impartial.

If, however, the judiciary reflects high standards of ethical and professional behavior and practice, then firms can reasonably anticipate their contracts will be enforced. Judicial independence from political <u>coercion</u> makes it more likely for the rule of law to hold and for a stronger enforcement of corporate contracts. Further, there is likely to be a higher level of <u>legal protection</u> available to shareholders and other investors. Consequently, investors should anticipate greater success if they decide to file suit in such an environment. Therefore, we hypothesize:

#### Hypothesis 3

Litigation risk is greater for firms residing in countries with an independent and non-corrupt judiciary, everything else constant.

The filing of a lawsuit is a negative event for a firm. If the suit is found to be meritorious, then the firm faces direct litigation costs in the form of a settlement or damage awards. Indirect costs, such as the opportunity cost of management's time and reputational damage, are also significant for most lawsuits (Karpoff and Lott et al., 1999). Bhagat et al. (1994); Bizjak and Coles (1995), and Bhagat et al. (1998) examine the wealth effects of interfirm lawsuits in the U.S. and discover that defendant firms experience a statistically significant negative price reaction at the time of the lawsuit filing. Gande and Lewis (2009) report significant negative stock price reactions to shareholder-initiated class action lawsuits in the U.S. Defendant firms outside the U.S. should also experience adverse movements in their share price upon announcement of a lawsuit filing because of the uncertainty regarding the size of the possible penalties. The reaction of these defendants, however, is likely to be less than that of their U.S. counterparts. This is due to more frequent judicial <u>dismissals</u> and smaller settlement amounts for lawsuits outside the U.S. as reported by <u>West (2001)</u> and <u>Armour et al (2009)</u>. We hypothesize the following concerning the global reaction to the filing of a lawsuit:

#### **Hypothesis 4**

A defendant firm's stock price significantly declines at the announcement of a lawsuit filing.

<u>Beck et al. (2003)</u> explain how there is a difference between common and civil law regarding the importance they attach to private property rights relative to the rights of the state. They contend that common law has evolved to protect private property against the state and thus is associated with a robust set of <u>shareholder</u> rights. In contrast, civil law developed to consolidate state power. <u>Mahoney (2001)</u> contends that the judiciary focus of civil law has strengthened state institutions while limiting the rights of individual investors.

Scholars such as <u>Priest (1977)</u>, <u>Rubin, 1977</u>, <u>Rubin, 1982</u>, and <u>Bailey and Rubin (1994)</u> describe how civil law is less flexible than common law since judicial discretion is limited. Civil law requires changes to statutory law for it to respond to innovations in the economy or marketplace. Common law, however, emphasizes <u>jurisprudence</u> in the resolution of cases and hence is inherently more malleable to changing business conditions or circumstances.

Because civil law offers less legal <u>recourse</u> to the private investor and civil law judges have less discretion in their decisions, firms in civil law countries face less risk of being found guilty when sued. This reduced likelihood of an adverse decision by a court will be reflected in the share price reaction at the announcement of a lawsuit filing in an efficient capital market (<u>Karpoff et al., 2008a</u>, <u>Karpoff et al., 2008b</u>). Thus we hypothesize:

#### Hypothesis 5a

Lawsuits filed in a civil law country are associated with a smaller announcement period stock price decline than those filed in common law countries.

For similar reasons, we expect that lawsuits brought in civil law courts are more likely to be dismissed or settled for smaller amounts. Consequently, we hypothesize:

#### Hypothesis 5b

Lawsuits filed in a civil law country are more likely to be dismissed or settled for a smaller amount than those filed in a common law country.

When a lawsuit is filed in a country with a stronger rule of law, an independent judiciary, and honest judges, investors can be more confident that any lawsuit will be decided on its merits. In such environments, lawsuits are less likely to be dismissed due to political connections, bribery, or convenience. Thus, the defendant faces the full set of risks associated with an adverse decision. The capitalized value of these future expected penalties unmitigated by any partisan intervention from the judiciary will be captured in the equity market's reaction to the filing announcement. Because the judiciary is able to assess the full range of possible penalties against the defendant when it is independent and free of corruption, we hypothesize:

#### Hypothesis 6

Lawsuits filed in countries with a strong rule of law or a more honest judiciary are associated with a greater announcement period stock price decline, an increased likelihood of a resolution favorable to the plaintiff, and a larger settlement amount.

There is an extensive literature in <u>social psychology</u> (Johnson, 1985; Stephan and Stephan, 1986; Kassin and Wrightsman, 1998) that documents a bias in jury decision-making. <u>Moore (2003)</u> observes that this can be explained by a similarity bias (<u>McPherson et al., 2001</u>), in-group bias (<u>Terry and Callan, 1998</u>; <u>Scheepers et al.,</u> 2006) or even <u>ethnocentrism</u> (<u>Van der Dennen, 1987</u>). The key observation in these explanations is that decision-makers favor individuals like themselves. Implied in these arguments is that these decision-makers discriminate against those who are different. Given the extensive psychology literature concerning affinity bias, it is reasonable to conjecture that courts of law have a negative bias against foreign defendant firms.

The empirical examination of judicial bias, however, is quite limited and is confined to U.S. lawsuits. <u>Bhattacharya et al. (2007)</u> find that stock market returns observed upon filing of a lawsuit in the U.S. is more negative for foreign defendants. They also discover that U.S. firms are less likely to lose in court; however, they do not find a difference in settlement costs. We argue that a bias in judicial decision-making is not confined to the U.S. Indeed, we believe that it is likely to be stronger in countries whose courts are less impartial. We hypothesize:

#### Hypothesis 7

Courts are biased against foreign corporate defendants.

This bias is likely to manifest itself in more negative announcement returns at the filing of the lawsuit and larger settlement or damages awarded to the domestic plaintiff. We also speculate that this <u>home bias</u> occurs less in countries where the courts are more independent and less corrupt.

## 3. Sample construction and variable measurement

#### 3.1. Data and sample design

Our sample consists of observations hand-collected from news sources through word searches on Lexis-Nexis and Factiva. We restrict our sample to <u>developed countries</u> for which news coverage by English news sources is provided. We recognize that this places certain limitations on our sample, but any large lawsuit involving a publicly-traded company is likely to be captured by our collection procedure. Specifically, the sample includes lawsuits in which the defendant is a publicly-traded firm <u>headquartered</u> in Canada, Australia, Japan or any of the <u>European Union</u> countries. The sample consists of lawsuits filed between 1998 and 2008. Because some corporate lawsuits reach resolution only after several years from the filing date, setting the last year of the lawsuit announcement at 2008 allows us to collect data regarding resolution for most of our sample lawsuits. Our data on lawsuit resolutions is current through 2014. Our sample does not include lawsuits with defendant firms headquartered in the U.S. Our study intends to complement the vast literature which exclusively focuses on corporate <u>litigation</u> risk and costs for U.S. firms. We note, however, that even though we exclude U.S. companies, our sample does include cross-border lawsuits which are filed in U.S. courts against non-U.S. firms with operations in the United States.

We obtain data concerning the lawsuit from two sources: news publication databanks and general internet sources. We collect news publication data through Factiva and LexisNexis. We select articles with keywords such as "firm", "company", "lawsuit", and "litigation". We read each article to determine whether it actually relates to corporate litigation. For those articles included in the dataset, we determine the earliest disclosure of their litigation through LexisNexis and general internet searches. We record the identity of the plaintiff and the defendant firm, the country of origin, as well as the jurisdiction of the lawsuit. We also record the nature of the lawsuit, describing the type of lawsuit that is being filed. Next we search both Factiva and LexisNexis to find announcements concerning resolution of these sample lawsuits. This is an observation-specific process since there are few keywords that can provide meaningful assistance. For lawsuits whose resolution remains unidentified in Factiva and Lexis-Nexis, we use an internet search engine approach to identify key words that are specific to the suit. For those lawsuits whose resolution still remains undetermined, we review official disclosures from the company, such as annual reports and shareholder letters. Finally, we identify which defendants are publicly traded through firm-specific research. We than manually match the publicly-traded defendant firm by firm name with the Worldscope and DataStream databases. After this data filtering, our final sample consists of 475 lawsuits spanning 361 unique firms headquartered in 16 different countries. Our sample is almost equally split between domestic lawsuits (55%) and cross-border lawsuits (45%).

While we perform a thorough and careful data collection from our news sources, we recognize that litigation coverage might be more complete for some countries. For example, the coverage of litigation in non-Anglo-Saxon countries might be less comprehensive due to incomplete reportage from English language media. This variation in coverage introduces unavoidable noise in the data which is common in cross-country empirical studies (e.g., <u>Henderson et al., 2006</u>). As argued by <u>Henderson et al. (2006</u>), the noise in the data, if anything, biases our tests against finding evidence of cross-sectional variations in our sample. Thus the findings of this study are not driven by the possibility of selection bias in the construction of our sample.

#### 3.2. Variable measurement

Our empirical analysis is based on a set of firm-specific, country-specific, lawsuit-specific, and industry-specific variables. We describe these variables and their sources in detail in the Appendix A. The main empirical tests of this study consist of a probit analysis for the estimation of litigation risk and outcome, a Tobit analysis on the factors that affect litigation costs, and a set of event studies designed to identify the different effects of firm and national characteristics on the equity response to the announcement of a lawsuit filing. Our country-specific

variables refer to the country where the firm is headquartered for the litigation risk analysis and to the country where the lawsuit is filed for the other multivariate tests.

The firm-specific variables are firm size (log of the market value of equity, log of total assets), <u>financial leverage</u>, cumulative stock price returns in the year preceding the lawsuit, a indicator variable equal to one when the stock price drops more than 10% in any day in the past 12 months (stock dive), share <u>turnover</u>, the return on assets, cumulative average <u>abnormal returns</u> (CAARs) surrounding the lawsuit filing date, and the number of previous lawsuits filed against the firm.

The country-specific variables includes a <u>civil law</u> dummy, a rule of law index, a judicial corruption index, an impartial courts index, an integrity of the legal system index, and a contract and law sub-index. Depending on the specific <u>multivariate analysis</u>, these country variables might refer to the country where the defendant firm is headquartered or the country where the lawsuit is filed. Additionally, we calculate a country-year litigation intensity variable as the number of corporate lawsuits filed against firms headquartered in the defendant country in the past three years.

We also estimate a set of industry and lawsuit specific variables. The industry-specific variables consist of regulated, financial, and technology industry indicator variables. The lawsuit-specific variables are: (1) an indicator equal to one when the lawsuit is filed in a court of a country different from the defendant firm's country, (2) an indicator variable equal to one if the lawsuit outcome is in favor of the plaintiffs, and (3) the dollar amount of the settlement or damages awarded.

The stock price reaction at the time of the lawsuit filing is measured as the cumulative average abnormal return (CAAR) for the announcement day and the two days surrounding it (i.e., day -1 to day +1). We calculate abnormal returns around the announcement date by estimating the market model for each stock over the day -300 to day -46 window relative to the announcement date.

## 4. Descriptive statistics and univariate analysis

Table 1 reports the distribution of our sample lawsuits across a variety of case characteristics. Panel A shows the annual distribution of sample lawsuits. The number of lawsuits per year varies from a low of 28 in 2000 to a high of 61 in the years 2003, 2005, and 2006. The second half of our sample period (2004–2008) contains a larger number of lawsuits than the first half of the sample period, 280 out of 482 lawsuits (58%). This trend is analogous to the increase in the number of corporate lawsuits in the U.S. (Zingales, 2006). The most common case resolution, as shown in Panel B, is through settlement (49.7%) followed by rulings in favor of the defendant firm (16.7%) and then those resolved in favor of the plaintiffs (14.8%). Panel C shows that the costs borne by the defendant firms are substantial on average. When excluding dismissed lawsuits, firms pay an average of \$175 million in settlement or awarded damages.

Table 1. Sample <u>Descriptive Statistics</u>. This table presents various time-series and cross-sectional distributions of the sample. Panel A presents the distribution of lawsuits by the year of the lawsuit filing. Panel B segments the sample by resolution type. Panel C presents the mean and median of <u>litigation</u> costs. Panel D presents the distribution of lawsuit types. Panel E reports the frequency distribution of the number of years from the lawsuit filing to its resolution.

Panel A: Year		
Year	Ν	Percentage
1999	31	6.43
2000	28	5.81
2001	33	6.85
2002	49	10.17

2003	61		12.66						
2003	54		11.2						
2004	61		12.66						
2005	61		12.66						
2007	49		10.17						
2008	55		11.41						
Panel B: Resolution			<u> </u>						
Resolution				N		Percer	ntage		
Settlement				182		49.73	litabe		
Ruled for defendant				61		16.67			
Ruled for plaintiff				51		14.75			
Dismissed				45		12.30			
Withdrawn				17		4.64			
Other				7		1.91			
Ongoing or Unknown				116					
Panel C: Litigation Costs									
Resolution							Mean		Median
Settlement or Damages							97.3		13.0
Settlement of Damages (exclud	ing (exc	luding dismis	sals)				175.2		47.0
Settlement or Damages/Assets							0.13		0.02
Settlement or Damages/Assets	(exclud	ing dismissals	5)				0.21		0.04
Award requested							3959.9		100
Settlement / Award requested							37.1%		7.4%
Panel D: Lawsuit Type							•		
Туре						N		Pe	erc.
Class Action						90	C	13	3.60
Patent/Copyright/Trademark la	W					86	5	12	2.99
Contract - Recovery / Enforcem						56	5	8.	46
Antitrust						55	5	8.	.31
Securities Law						52	2	7.	.85
Fraud						43	3	6.	50
Accounting, financial reporting						42	1	6.	19
Labor Law						34	4	5.	14
Mergers and Acquisitions						27	7	4.	08
Products Liability						24	4	3.	63
Directors and Officers Liability						23	3	3.	47
Injury						20			.02
Other						11	11	16	6.77
Panel E: Years to Resolution									
Years		Ν			Perc.				
0		73			27.37	7			
1		53			19.34	1			
2		39			14.23				
3 44 16.06									
4 24 8.76									
5		17			6.20				
6		10			3.65				
7		4			1.46				

>7	10	6.65
N/A	208	

This corresponds to nearly 21% of the value of the firm's total assets. The median value of settlement amounts is smaller, due to a few lawsuits that resolve through very large settlements.<sup>1</sup>

The type of lawsuit varies widely as shown in Panel D. We observe that class actions and patent lawsuits are relatively more common than other types of lawsuits. The percentage of <u>class action lawsuits</u> (13.6%), however, is considerably lower than for U.S. lawsuits involving domestic firms. Based on data from Audit Analytics <u>Litigation</u> over our sample period, about 30% of all U.S. corporate lawsuits are class action lawsuits. Panel E shows the time from the date of the lawsuit filing and its resolution that for lawsuits concluded by the end of 2014. For more than half of the lawsuits in our sample it takes at least two years to reach resolution. About 27% of the lawsuits take four years or longer to come to conclusion. The considerable length of the litigation process at the international level that is evidenced in Panel E is similar to considerable delay to reach settlements in US courts (<u>Sullivan, 2016</u>).

<u>Table 2</u> presents the distribution of lawsuits in our sample by the country where the defendant firm is <u>headquartered</u> (Panel A) and by the country where the lawsuit is filed (Panel B). We observe in Panel A that Canada has the most defendant firms in our sample with 33.8% of the observations. In aggregate, European firms make up approximately 40% of the sample. Despite our exclusion of U.S. firms, panel B shows that the majority of lawsuits are filed in U.S. courts.<sup>2</sup> Only about 28% of the lawsuits in our sample are filed in European courts.

Table 2. Lawsuit Distribution by Country. This table presents the distribution of sample lawsuits across countries. Panel A partitions the sample lawsuits by the country where the defendant firm is <u>headquartered</u>. Panel B divides the sample by the country where the lawsuit is filed. Panel C presents a country matrix of firm headquarters and the country of filing.

Panel A: Headquarter Country		
Country	N	Perc.
Canada	163	33.82
Japan	105	21.78
Australia	65	13.49
Germany	44	9.13
UK	42	8.71
France	15	3.11
Italy	10	2.07
Netherlands	8	1.66
Other European	30	6.23
Panel B: Country of Filing		
Country	N	Perc.
United States	160	33.68
Canada	100	21.05
Australia	44	9.26
Germany	41	8.63
Japan	38	8.00
UK	28	5.89
Italy	10	2.11
Netherlands	10	2.11
France	8	1.68
Spain	8	1.68

Other Europe	an					20			4.22			
Other						4			0.84			
Unknown						4		C	.84			
Panel C:												
Defendant												
and Filing												
Country												
Matrix												
Defendant	Country											
Country	of filing											
	Australia	Canada	France	Germany	Italy	Japan	Netherl.	UK	United	Other	Total	
									States			
Australia	43	2	0	0	0	0	0	2	14	3	64	
Canada	0	97	0	0	0	0	0	2	60	0	159	
France	0	0	5	3	0	0	1	2	3	1	15	
Germany	0	0	1	33	1	0	0	2	2	5	44	
Italy	0	0	1	1	7	0	0	0	0	1	10	
Japan	0	1	0	0	0	38	0	2	58	4	103	
Netherlands	0	0	0	0	1	0	6	0	1	0	8	
UK	1	0	1	2	0	0	1	12	20	5	42	
Other	0	0	0	2	1	0	2	6	2	17	30	
Total	44	100	8	41	10	38	10	28	160	36	475	

Panel C presents a matrix of lawsuits by defendant home country and the filing country. Unlike other firms, Japanese and British firms are sued more frequently in the U.S. than at home. We observe that Canadian firms have the most lawsuits filed in their country (97) as well as the largest number of lawsuits filed in the U.S. (60). Overall, our sample contains 215 cross-border lawsuits (45%) and 260 domestic lawsuits (55%).

In <u>Table 3</u> we investigate differences in litigation characteristics based on legal regime, litigation type, and the nature of the case resolution. Panel A of <u>Table 3</u> shows that direct litigation costs (i.e., settlements or awarded damages) normalized by total assets are significantly larger for lawsuits filed in common law countries. For example, excluding <u>dismissals</u>, the mean litigation costs standardized by total assets for common law litigation is 0.29. The corresponding value for <u>civil law</u> lawsuits is less than half with a value of 0.11. These results provide preliminary evidence consistent with Hypothesis 5b that settlements tend be smaller in civil law countries. We also observe that settlements and damages awarded to plaintiffs differ between domestic and foreign courts. When the monetary awards are standardized by total assets these differences lose their significance. This is likely due to the large size of the <u>multinational firms</u> that are sued in foreign courts.

Table 3. Lawsuit <u>Descriptive Statistics</u> by Legal Regime. This table presents univariate statistics by legal system and court <u>nationality</u>. Panel A present t-tests of the mean and Wilcoxon parametric tests for <u>litigation</u> costs (settlement or damages awarded), and litigation costs normalized by total assets. Panel B present the distribution of lawsuits by lawsuit type for lawsuits brought in common law versus <u>civil law</u> countries and for lawsuits brought in domestic versus foreign courts. Panel C present the distribution of lawsuits by resolution type for lawsuits brought in common law versus civil law countries and for lawsuits brought in domestic versus foreign courts.

Panel A: Litigation costs				
	Common	Civil	t-test	Wilcoxon
	Law	Law		

		Mean	Me	dian	Mean		Median	p-val	ue	p-value
Settlement or Damages		127	9		65		7	0.148		0.0351
Settlement of Damages (excl dismissals)	uding	200	62		142		27	0.174	14	0.1319
Settlement or Damages/Asse	ets	0.232	0.00	)2	0.081		0.000	0.088	32	0.0119
Settlement or Damages/Asse (excluding dismissals)	ets	0.291	0.00	)5	0.110		0.003	0.082	11	0.0487
(************		Domesti	с		Foreig	n		t-test		Wilcoxon
		Courts			Courts					
		Mean	Me n	dia	Mean		Median	p-val	ue	p-value
Settlement or Damages		52	6		148		19	0.038	9	0.0596
Settlement of Damages (exc dismissals)	luding	89	25		261		50	0.028	3	0.0000
Settlement or Damages/Ass	ets	0.167	0.0	01	0.151		0.002	0.901	.7	0.9019
Settlement or Damages/Ass		0.213	0.0	05	0.187		0.004	0.888	34	0.8874
(excluding dismissals)										
Panel B: Litigation type										
Туре		Commo	on Law	Civi	l Law	D	omestic Co	urts	For	eign Courts
Class Action		83		7		53	3		37	
		17.89%	, )	3.54	4%	14	4.89%		12.	25%
Patent/Copyright/Trademarl	k law	50	36			27			59	
		10.78%	, )	18.3	18%	7.	.58%			53%
Contract - Recovery / Enforce	ement	45		11		44			12	
		9.70%		5.5	6%	_	2.36%	3.97%		7%
Antitrust		37		18		1			38	
		7.97%		9.0	9%	_	.78%			58%
Securities Law		35		17		29			23	
		7.54%		8.5	9%	-	.15%		7.6	2%
Fraud		31		12		2			18	
		6.68%		6.0	6%	_	.02%		5.9	6%
Accounting, financial reporti	ng	20		21		2			14	
		4.31%			51%	-	.58%		4.6	4%
Labor Law		32		2		24			10	
<b>NA 1 1 1 1 1 1</b>		6.90%		1.0	1%	-	.74%			1%
Mergers and Acquisitions		12		15	20/	1			10	10/
Due du ete 11-1-11		2.59%		7.5	5%		.78%			1%
Products Liability		16		8	40/	13			11	40/
Directors and Officers Listin	->.	3.45%		4.04	+%	-	.65%	3.64%		4%
Directors and Officers Liabilit	Ly	17 3.66%		6	20/	14		<u>9</u> 2.98%		00/
Injuny		3.66%		3.03	370	3.	.93%		2.9	0 70
Injury		2.80%		7	10/	_	.97%		4.3	0/
Other		73		3.54	+/0	6			4.3	/0
		15.73%	<u></u>	-	19%	-	5 6.85%			89%
Fisher test p -value		0.000	J	19.	1970	_	.000		10.	0.70
Panel C: Resolution type		0.000		1		0.		I	L	
ranere. Nesolution type	Common L	aw	Civil Lav	v	Dome	stic	Courts	Fo	reigr	n Courts
Settlement	100	u vv	41	•	72	JUL	Courts	84	-	
Settlement	100		71		12			04		

	54.35%	36.61%	46.15%	52.83%
Ruled for Defendant	23	30	26	23
	12.50%	26.79%	16.17%	14.47%
Ruled for Plaintiff	26	23	31	21
	14.13%	20.54%	19.87%	13.21%
Dismissed	24	12	18	20
	13.04%	10.71%	11.54%	12.58%
Withdrawn	9	5	6	8
	4.89%	4.46%	3.85%	5.03%
Fisher test p-value	0.000		0.162	

Panel B of <u>Table 3</u> shows the distribution of litigation type across legal regimes (civil vs common) and court <u>nationality</u> (domestic vs foreign). Class action lawsuits are the most frequent type of litigation in common law countries (17.9%) while lawsuits in civil law countries are more likely to be about patent infringement cases (18.2%). Only 3.54% of lawsuits filed in civil law countries are class action lawsuits. This is broadly consistent with the observation noted earlier by <u>Buschkin (2005)</u> that many countries believe that governments, not individual litigants, should regulate corporate behaviors. The Fisher exact test shows that the distribution of litigation type is significantly different between common and civil law countries. When contrasting lawsuits filed in domestic versus foreign courts, Panel B shows that class action lawsuits are more frequent for lawsuits brought in domestic courts. Patent infringement cases are the type of lawsuit most commonly filed in foreign courts.

Panel C presents the distribution of lawsuit resolution across legal regimes. Even though settlement is the most likely outcome for lawsuits in both legal systems, it is more likely to occur for lawsuits brought in a common law country (54.4% versus 36.6%). A larger number of lawsuits are decided in favor of defendant firms in civil law than in common law countries (26.8% versus 12.5%). The Fisher test of <u>homogeneity</u> does not show a significant difference in the distribution of outcomes between lawsuits filed in domestic and foreign courts. Overall, the results presented in <u>Table 3</u> present preliminary evidence of significant differences in corporate litigation costs, type of litigation filed, and case resolution between common and civil law countries.

## 5. Predicted litigation risk

We predict the probability of <u>litigation</u> for each firm-year by applying the method of <u>Gande and Lewis</u> (2009) and <u>Kim and Skinner (2012)</u>. Specifically, we estimate the propensity to be sued by employing a <u>probit</u> <u>model</u> to generate the predicted probability of a firm being sued given various explanatory variables related to the size of potential damages in the case of a lawsuit, the litigation environment, and a set of firm-specific variables. The dependent variable is a binary indicator set to one if a firm is sued in a given year and zero otherwise. All the explanatory variables refer to the year preceding the lawsuit.

The sample for this probit estimation consists of our sample lawsuit observations matched with a set of Worldscope firm observations that are litigation free over the sample period. We align each of our sample firms with its match based on year, assets, and the market-to-book ratio. We do not match by industry and country because many of the <u>determinants</u> of litigation risk are measured at the country and industry levels.

We estimate several proxies for the size of potential damage awards. These include share <u>turnover</u>, <u>stock</u> <u>returns</u>, and firm size. High share turnover captures the idea that investors are more likely to purchase shares based on incorrect or misleading information and is positively related to actual damage awards (<u>Dyl</u>, <u>1999</u>). Jones and Weingram (1996) find evidence that firms with relatively high stock returns are less likely to be sued. The market value of equity is included since large firms are more capable of paying large settlements and therefore are more subject to litigation.

Comparable to <u>Gande and Lewis (2009</u>), we measure past litigation activity with an indicator variable equal to one in a given firm-year if a firm has been sued at least once in the previous five years. Since lawsuits tend to cluster in specific industries, we also follow <u>Lowry and Shu (2002</u>) and include a set of binary indicator variables to indicate whether a firm is classified as a regulated, financial, or technology firm. Firm-specific factors include the return on assets and <u>financial leverage</u>. These variables are meant to control for the firm's overall performance since strongly performing firms are less likely to be sued (<u>Bizjak and Coles, 1995</u>; <u>Bhagat et al.</u>, <u>1998</u>).

Unique to this study, our probit model includes a <u>civil law</u> indicator variable which assumes the value of one if the defendant firm is <u>headquartered</u> in a civil law country. As per Hypothesis 2, we expect litigation risk to be lower in civil law countries due to the weaker <u>legal protections</u> granted to investors and less overall litigation activity (<u>LaPorta et al., 1998</u>). We also include a country-level litigation intensity variable and various proxies for the quality of the legal system in the country where the defendant firm is headquartered (i.e., rule of law, impartial courts, integrity of legal system, contract and law subindex). Because the country of the lawsuit is not known pre-litigation, the model cannot include the country specific variables related to the nation where the lawsuit might be filed. Even though lawsuits against <u>multinational firms</u> are sometimes filed in countries different from those where the firm is headquartered, about 60% of our lawsuits are filed in the headquartering country. The legal and judiciary systems of the country where the firm is headquartered provide a legal discipline to the firm that affects the incidence of litigation independent from the national institutions of the country where the lawsuit is filed.

Table 4 reports the parameter estimates of these probit estimation specifications. Similar to the findings of <u>Gande and Lewis (2009)</u>, we find that the probability of being sued is positively and significantly related to the firm's size and previous litigation history. While studies on U.S. corporate litigation do not find a significant relation between <u>leverage</u> and litigation risk (e.g. <u>Arena and Julio, 2015</u>), our results show that internationally firms with more <u>debt</u> in their capital structure are more likely to be sued. Unlike U.S.-centric litigation risk studies, we do not find a significant relation between stock turnover, cumulative returns, or an extreme stock price drop and the probability of being sued. This result is consistent with Hypothesis 1.

Table 4. Probit Estimation of the Propensity to be Sued. This table reports estimates from a probit estimation of the propensity to be sued. The dependent variable is an event indicator variable that equals one in the year a lawsuit is initiated against a firm and zero otherwise. The independent variables refer to the year preceding the lawsuit filing. The Appendix describes the independent variables. P-values are reported in parenthesis. The p-values of statistically significant coefficients are reported in bold.

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	-0.5925	-0.5154	-0.4580	-1.1703	-0.3037	-1.0215
	(0.0184)	(0.0515)	(0.0847)	(0.0000)	(0.5254)	(0.2526)
Ln MV	0.0363	0.0513	0.0746	0.0742	0.0811	0.0761
	(0.0931)	(0.0740)	(0.0159)	(0.0182)	(0.0101)	(0.0141)
Leverage	0.3168	0.5058	0.4733	0.4738	0.3812	0.4802
	(0.0857)	(0.0789)	(0.0778)	(0.0945)	(0.0975)	(0.0912)
ROA	-0.0952	-0.1026	-0.1841	-0.0816	-0.1539	-0.1792
	(0.5761)	(0.5451)	(0.3339)	(0.6799)	(0.4184)	(0.3474)
Turnover	-12.5248	-13.2135	-27.4864	-3.0343	-15.9981	-26.7716
	(0.5163)	(0.4964)	(0.1816)	(0.8856)	(0.4622)	(0.1937)
Cumulative Returns	-0.0611	-0.0537	-0.0387	-0.0458	-0.0445	-0.0398
	(0.3880)	(0.4497)	(0.5961)	(0.5372)	(0.5028)	(0.5853)

Stock Dive	0.2091	0.1553	0.0898	0.0723	0.1205	0.0880
	(0.1904)	(0.1566)	(0.5868)	(0.6694)	(0.4734)	(0.5958)
Previous Lawsuit	0.8978	0.8142	0.8139	0.6984	0.8112	0.8082
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Civil Law		-0.4577	-0.5917	-0.3830	-0.2725	-0.5099
		(0.0000)	(0.0000)	(0.0016)	(0.0923)	(0.0009)
Litigation Intensity				0.0652		
				(0.0000)		
Rule of Law					3.0460	
					(0.0003)	
Impartial Courts					-0.9058	
					(0.0000)	
Integrity of Legal System						0.0808
						(0.0837)
Contract and Law Subindex						-0.0398
						(0.7091)
Regulated			0.1135	0.1973	0.0943	0.1077
			(0.4950)	(0.2451)	(0.5738)	(0.5181)
Financial			-0.5509	-0.4299	-0.5400	-0.5502
			(0.0000)	(0.0022)	(0.0000)	(0.0000)
Technology			0.6558	0.6873	0.6305	0.6579
			(0.0002)	(0.0001)	(0.0003)	(0.0002)
Industry Dummies	Yes	Yes	No	No	No	No
Pseudo R <sup>2</sup>	0.216	0.253	0.309	0.342	0.351	0.329
Ν	704	704	704	704	704	704

The sign and coefficients of the financial and technology industry dummies are another noticeable difference between our results and those of U.S. centric studies. In our analysis, international financial firms are less likely to get sued than their U.S. counterparts. Technology firms, however, are more likely to be sued. Consistent with Hypothesis 2, we find that defendant firms headquartered in civil law countries face lower litigation risk.

In the fourth model specification presented in <u>Table 4</u>, we include a litigation intensity variable that proxies for the corporate litigiousness of each country. It is calculated as the number of lawsuits filed against firms in each country over the previous three years. The coefficient of the litigation intensity variable is significantly positive, which shows the persistency of litigation. Models 5 and 6 further examine this issue by including country-level legal quality proxies. Among these proxies, the rule of law and the integrity of the legal system are significantly related to the probability of being sued. The significant coefficients for these judiciary and legal system variables are consistent with Hypothesis 3.

In panel A of <u>Table 5</u> we investigate the difference in litigation risk between legal systems. We accomplish this by averaging the predicted probabilities obtained from the coefficients of probit model (1) of <u>Table 4</u>, which does not include the civil law or rule of law variables as regressors. The mean (median) litigation risk for the sample and match companies headquartered in common law countries is 70.7% (73.1%). This is significantly higher than the corresponding mean (median) of 44.3% (40.6%) for firms headquartered in civil law countries. These results provide additional support for the validity of Hypothesis 2.

Table 5. Relative <u>Litigation</u> Risk by Sample Country. This table presents the mean and median of the predicted probabilities obtained from the <u>probit model</u> (I) of <u>Table 4</u> partitioned by legal system, rule of law, and defendant country.

	Litigation Risk	
	Mean	Median
Panel A: Legal Regime		
Common Law	0.707	0.731
Civil Law	0.443	0.406
t-test p-value	0.000	
Wilcoxon p-value		0.000
Panel B: Rule of Law		
Rule of Law, Bottom Quintile	0.457	0.404
Rule of Law, Top Quintile	0.691	0.745
t-test p-value	0.009	
Wilcoxon p-value		0.000
Panel C: Defendant Country		
Canada	0.747	0.766
Finland	0.685	0.709
United Kingdom	0.679	0.668
Ireland	0.670	0.660
Australia	0.654	0.680
Netherlands	0.514	0.468
Japan	0.481	0.417
Spain	0.426	0.433
Sweden	0.423	0.408
France	0.421	0.390
Czech Republic	0.420	0.420
Norway	0.390	0.426
Germany	0.388	0.397
Switzerland	0.387	0.380
Italy	0.366	0.340
Russia	0.352	0.400
Poland	0.352	0.323
Turkey	0.092	0.110

Consistent with Hypothesis 3, Panel B of <u>Table 5</u> shows that firms headquartered in a country located in the top quintile of the rule of law measure have a significantly higher mean (median) predicted probability of litigation risk than firms in countries residing in the bottom quintile.

Panel C of <u>Table 5</u> presents the mean (median) litigation risk by the defendant firm's country of incorporation in descending risk order. Canadian firms have the largest litigation risk. Four of the five countries with the highest level of litigation risk are common law countries: Australia, Ireland, Canada, and the U.K. It is important to note that these predicted probabilities do not provide an unconditional measure of a likelihood of litigation, but rather a relative one. For example, the mean predicted probability for Canadian firms (0.747) does not mean that a Canadian firm has, on average, a 74.7% probability to be sued next year. It means, instead, that Canadian firms are as twice likely to be sued as Italian firms, for which the predicted probability is 0.366.

## 6. Event study analysis

#### 6.1. Comparative CAARs

In this section we present the results of an event study of lawsuit announcements. There exists a rich literature concerning the stock market's reaction to the filing of corporate lawsuits against U.S. firms (e.g., <u>Karpoff and Lott et al., 1993</u>; <u>Bhagat et al., 1998</u>; <u>Gande and Lewis, 2009</u>). Our event study, however, is the first to analyze

the stock market's reaction to the announcement of lawsuits involving non-U.S. firms. This analysis offers the literature a deeper insight into how other legal and <u>judicial systems</u> influence the capital market's response to news of a lawsuit initiation.

We calculate <u>abnormal returns</u> around the announcement date by estimating the market model over the day -300 to day -46 window relative to the announcement date. In our analysis, we focus on cumulative average abnormal returns (CAARs) for the three-day period centered on the announcement date (day -1 through day +1), the two-day period that starts at the announcement date (day 0 through day +1), and a five-day period spanning days -2 through day +2. Many lawsuits are partially anticipated by the market because they are preceded by events that increase the probability of <u>litigation</u>. Consequently, consistent with <u>Gande and Lewis</u> (2009) we also calculate CAARs for a longer event period which spans day -10 through day +2.

<u>Table 6</u> presents our <u>univariate analysis</u> for these CAARs. Panel A presents our findings for the full sample. The negative stock <u>market reaction</u> around the time of the lawsuit announcement is consistently significant regardless of event window length and the statistical method used for the z-statistic calculation. The longest event window (day –10 through day +2) is characterized by the most negative CAAR (–1.16%). This might be due to a partial anticipation of the lawsuit announcement. It could also be a response to media coverage of the events that trigger the lawsuit filing. While significant, the negative CAARs are smaller in magnitude than those reported in recent studies focusing on U.S. corporate lawsuits. For instance, <u>Gande and Lewis (2009)</u> find that the average CAAR for U.S. firms at the time of the filing of a security <u>class action lawsuits</u> against them is –1.55% for the three-day window centered around the announcement day (i.e., day –1 to day +1). This is much more negative than the –0.49% we observe for our international sample. They report a loss of 1.20% for the day –10 to day +1 window, while we estimate a 1.16% decline for the slightly longer day –10 to day +2 window.<sup>3</sup> The significant price decline for the defendant firm' stock price at the announcement of a lawsuit filing is consistent with Hypothesis 4.

Table 6. Comparative CAARS by Court Classifications. This table presents cumulative average <u>abnormal</u> <u>returns</u> (CAARs) centered on the lawsuit announcement date (day 0) over selected event windows. We calculate the CAARs by means of a market model with an estimation period of 253 days that terminates 46 days before the announcement. Panel A presents the filing date effect for all the lawsuits in the sample. Panel B and panel C show CAARs for defendant firms of lawsuits filed in common law and <u>civil law</u> countries, respectively. Panels D and E present CAARs for defendant firms of lawsuits filed in domestic and foreign courts, respectively. Z is the z statistics of the <u>Patell (1976)</u> test while SCS Z is the z statistics of the <u>Boehmer et al. (1991)</u> test.

	CAAR	% Neg	Z	SCS Z
Panel A: Full Sample (N = 329)				
(0,1)	-0.60%	60.95%	-2.163	-1.987
(-2,2)	-0.51%	55.32%	-1.987	-1.896
(-1,1)	-0.49%	59.93%	-1.934	-2.060
(-10,2)	-1.16%	55.33%	-2.535	-2.232
Panel B: Common Law Courts (N = 165)				
(0,1)	-0.81%	60.57%	-1.441	-1.256
(-2,2)	-0.85%	56.12%	-1.873	-1.776
(-1,1)	-0.77%	55.26%	-1.888	-1.763
(-10,2)	-2.16%	54.99%	-1.729	-1.454
Panel C: Civil Law Courts (N = 164)				
(0,1)	-0.27%	57.58%	-1.421	-2.190
(-2,2)	-0.18%	52.12%	-0.987	-1.323
(-1,1)	-0.02%	59.79%	-0.349	-0.208
(-10,2)	-0.39%	50.01%	-0.653	-1.172
Panel D: Domestic Courts (N = 145)				

(0,1)	-0.73%	62.07%	-2.063	-2.011
(-2,2)	-0.72%	59.31%	-2.448	-2.353
(-1,1)	-0.59%	62.16%	-1.974	-1.982
(-10,2)	-1.04%	59.32%	-2.057	-2.034
Panel E: Foreign Courts (N = 184)				
(0,1)	-0.56%	52.76%	-1.798	-1.775
(-2,2)	-0.40%	60.82%	-1.878	-1.956
(-1,1)	-0.42%	58.11%	-1.724	-1.856
(-10,2)	-1.35%	52.70%	-1.997	-1.934

In panels B and C of <u>Table 6</u> we present the CAARs for the common and <u>civil law</u> subsamples, respectively. The stock market reaction for a lawsuit filed in common law countries is more negative. This result is consistent with Hypothesis 5a that capital markets respond less negatively to litigation occurring in civil law countries. Firm shareholders and other stakeholders in general have less <u>recourse</u> to the courts in civil law countries. The lower likelihood of a large settlement or damage payments by the defendant firms in civil law countries (<u>Table 3</u>) is likely to explain the less negative CAARs observed for announcements of lawsuits in civil law countries.

We next present the CAARs surrounding the announcement of a lawsuit in domestic (Panel D) and foreign (Panel E) courts. We find that the announcement returns for these defendant firms are of approximately equivalent magnitude and statistical significance, regardless of the court's jurisdiction. These initial findings are inconsistent with the presence of a domestic bias against foreign defendants (<u>Moore, 2003</u>).

#### 6.2. Multivariate analysis of CAARs

To better understand the cross-sectional nature of the CAARs surrounding the announcement of a lawsuit filing, we estimate a series of OLS regressions using the cumulative average abnormal returns calculated over the day -2 to day +2 window as the dependent variable. We provide the results of these regressions in <u>Table 7</u>.<sup>4</sup> All specifications include year <u>fixed effects</u>. Among the firm-specific variables, only the logarithm of the firm's equity market value and ROA are statistically significant. Larger firms are often the targets of lawsuits seeking high settlements. This might explain their more negative reaction to the lawsuit filing. Firms that are less profitable (i.e., lower returns on assets) experience a more negative stock return at the announcement of a lawsuit filing. Firms with reduced <u>profitability</u> have less cash available to settle or pay the awarded damages. Thus, they are more severely affected by the costs associated with a lawsuit. The civil law indicator variable is significantly positive. Firms <u>headquartered</u> in common law countries experience significantly more negative CAARs at the announcement of a lawsuit. This confirms the results presented in <u>Table 6</u> and is consistent with Hypothesis 5.

Table 7. Cross Sectional Regressions of Announcement Period CAARs. This table presents fixed effects regressions with the day –2 through day +2 CAARs as the dependent variable. The event date of the CAARs (day 0) is the day in which the lawsuit against the firm is filed. All specifications include year fixed effects. All independent variables are discussed in the Appendix. P-values are reported in parenthesis. The p-values of statistically significant coefficients are reported in bold.

	(1)	(2)	(3)	(4)	(5)
Intercept	0.1191	0.1153	0.0827	0.1404	0.0116
	(0.0749)	(0.0872)	(0.4432)	(0.3527)	(0.9275)
Ln MV	-0.0101	-0.0106	-0.0070	-0.0085	-0.0068
	(0.0976)	(0.0698)	(0.1556)	(0.0822)	(0.1177)
Leverage	-0.0494	-0.0487	-0.0498	-0.0455	-0.0440
	(0.4530)	(0.4598)	(0.4697)	(0.4996)	(0.5247)
ROA	0.2967	0.2940	0.2730	0.2886	0.2834

	(0.0006)	(0.0007)	(0.0020)	(0.0010)	(0.0015)
Turnover	1.3285	1.3844	3.2593	1.6364	2.0896
	(0.6909)	(0.6791)	(0.3279)	(0.6332)	(0.5500)
Cumulative Returns	-0.0126	-0.0127	-0.0147	-0.0160	-0.0160
	(0.4378)	(0.4338)	(0.3453)	(0.3339)	(0.3409)
Previous Lawsuit	0.0496	0.0493	0.0405	0.0433	0.0396
	(0.0294)	(0.0308)	(0.0896)	(0.0597)	(0.0970)
Litigation Intensity	0.0019	0.0019	0.0045	0.0049	0.0044
	(0.0953)	(0.0986)	(0.0807)	(0.0651)	(0.0662)
Civil Law	0.0466	0.0448			
	(0.0287)	(0.0385)			
Bribery Judiciary			-0.0070		-0.0781
			(0.3441)		(0.2332)
Rule of Law			-0.0676		-0.0340
			(0.0861)		(0.0678)
Impartial Courts			0.0178		0.0340
			(0.3360)		(0.1678)
Integrity Legal System				-0.0240	
				(0.0645)	
Contract and Law Subindex				0.0334	
				(0.1043)	
Foreign Court		-0.2429	-0.0400	-0.0268	-0.1940
		(0.1583)	(0.1205)	(0.1728)	(0.0476)
Impartial x Foreign Court					0.1246
					(0.0585)
Regulated	-0.0214	-0.0183	-0.0161	-0.0123	-0.0171
	(0.4626)	(0.5390)	(0.6066)	(0.6875)	(0.5898)
Financial	-0.0372	-0.0340	-0.0423	-0.0399	-0.0525
	(0.1875)	(0.2401)	(0.1514)	(0.1701)	(0.1368)
Technology	-0.0628	-0.0639	-0.0704	-0.0699	-0.0654
	(0.0190)	(0.0170)	(0.0109)	(0.0117)	(0.0213)
Adj. R <sup>2</sup>	0.077	0.078	0.105	0.108	0.144
Ν	337	337	337	337	337

Firms that have been defendants in other lawsuits over the previous three years and firms sued in countries characterized by a greater litigation intensity experience less negative CAARs. These results offer new evidence about a litigation anticipation effect based on the litigiousness of the country where the lawsuit is filed. This occurs even after controlling for the firm's litigation history. A lawsuit filed against a firm in a country with fewer corporate lawsuits is less likely to be anticipated by investors and thus generates more negative CAARs. While <u>Gande and Lewis (2009)</u> offer evidence of an anticipation effect for U.S. firms, our study shows an international version of this effect.

In models (3) through (5) of <u>Table 7</u> we include a set of country-level legal variables. In model (3) the coefficient for the rule of law variable is significantly negative. This suggests that investors anticipate corporate lawsuits in countries with a stronger rule of law to have a lower likelihood of <u>dismissal</u> which is consistent with Hypothesis 6. Similarly, in model (4), the integrity of the legal system of the country in which the lawsuit is filed is significantly negative. A legal system characterized by higher levels of integrity is more likely to be insulated from corporate pressures or the lure of corruption, leading investors to anticipate larger settlement costs for defendant firms. This result is also consistent with Hypothesis 6.

In model (5) we introduce an interaction term between the court impartiality index and the foreign court indicator variable. The foreign court indicator is significantly negative, while the interaction variable is significantly positive. These results support Hypothesis 7 and suggest that investors anticipate a bias against foreign companies. The positive coefficient for the interaction term, however, implies that this bias is reduced if the lawsuits are filed in courts having greater impartiality.

#### 7. Lawsuit outcome

In this section we investigate the fir and country factors that affect the outcome of corporate lawsuits and settlement costs. To proceed with this examination, we group lawsuit resolutions into two groups: (1) those in favor of the defendant firm and, (2) those in favor of the plaintiff. We construct a lawsuit outcome variable that assumes the value of one if the case is settled by the defendant firm or ruled in favor of the plaintiff, and a value of zero if the suit is dismissed, withdrawn, or ruled in favor of the defendant firm. <u>Table 8</u> presents the results of a <u>probit regression</u> using this <u>litigation</u> outcome indicator as the dependent variable.

Table 8. Decision <u>Probit Regressions</u>. This table presents probit regressions with an indicator variable equal to one if the <u>litigation</u> outcome is against the defendant (rule for plaintiff or settlement) and zero if it is in favor of d the defendant (dismissal, withdrawal, or ruled for defendant) as dependent variable. All specifications include year <u>fixed effects</u>. All independent variables are discussed in the Appendix. P-values are reported in parenthesis. The p-values of statistically significant coefficients are reported in bold.

	(1)	(2)	(3)	(4)	(5)
Intercept	0.6030	0.6559	1.2637	-0.0143	0.1351
	(0.0860)	(0.0654)	(0.1059)	(0.9896)	(0.8902)
Ln MV	0.0242	0.0342	0.0433	0.0293	0.0545
	(0.5583)	(0.4209)	(0.3257)	(0.4938)	(0.2236)
Leverage	-0.9120	-0.9565	-0.9026	-0.9655	-0.8288
	(0.0760)	(0.0646)	(0.0949)	(0.0642)	(0.1270)
ROA	-2.4698	-2.5418	-2.0086	-2.3527	-2.1174
	(0.0163)	(0.0131)	(0.0529)	(0.0215)	(0.0420)
Turnover	-19.0493	-20.4731	-38.0832	-31.525	-34.3642
	(0.5681)	(0.5396)	(0.2855)	(0.3446)	(0.3375)
Cumulative Returns	0.1356	0.1378	0.1161	0.1513	0.1337
	(0.3574)	(0.3480)	(0.4064)	(0.3159)	(0.3942)
Previous Lawsuit	0.0187	0.0138	0.0855	0.0792	0.0551
	(0.9160)	(0.9379)	(0.6525)	(0.6501)	(0.7743)
Civil Law	-0.3550	-0.4019			
	(0.0490)	(0.0339)			
Bribery Judiciary			-0.2123		-0.2542
			(0.0321)		(0.0193)
Rule of Law			1.8259		1.5866
			(0.0833)		(0.0986)
Impartial Courts			-0.5823		-0.3579
			(0.0560)		(0.2862)
Integrity Legal System				0.1420	
				(0.1451)	
Contract and Law Subindex				-0.1331	
				(0.4195)	
Foreign Court		0.1693	0.1474	0.1793	1.9005
		(0.3393)	(0.5325)	(0.6891)	(0.0420)
Impartial x Foreign Court					-1.4423

					(0.0491)
Regulated	0.0975	0.0554	0.0147	-0.0124	-0.0323
	(0.6915)	(0.8246)	(0.9569)	(0.9601)	(0.9068)
Financial	-0.1717	-0.2262	-0.3644	-0.2871	-0.4613
	(0.4669)	(0.3519)	(0.1682)	(0.2435)	(0.0901)
Technology	0.3402	0.3377	0.2347	0.3157	0.2717
	(0.1384)	(0.1411)	(0.3278)	(0.1750)	(0.2593)
Pseudo R <sup>2</sup>	0.097	0.101	0.231	0.106	0.268
Ν	278	278	278	278	278

The results show that two firm characteristics are important for explaining international litigation outcomes. First, we determine that <u>leverage</u> is consistently negative and statistically significant in four of our five model specifications. Firms with greater leverage must preserve their cash to service their <u>debt</u> and thus are more likely to mount an aggressive legal defense against expensive claims for settlement or damages. Second, firms that are more profitable are likely to attract higher rates of litigation simply because they have a greater capacity to pay. To the extent that many of these suits are frivolous or lack credible standing, they are more likely to be dismissed or withdrawn.

Table 8 also presents evidence regarding the importance of country and firm factors in explaining lawsuit outcomes. As evidenced by the results in models (1) and (2) of Table 8, lawsuits filed in civil law courts are less likely to result in an outcome against the defendant firm. This result is consistent with Hypothesis 5b and the overall reduced level of corporate litigation risk in civil law jurisdictions. Models (3) and (4) introduce proxies for the judicial and legal quality of the country where the lawsuit is filed. Courts operating in countries with a stronger rule of law tend to favor stricter legal interpretations. Consequently, we find that their decisions are more likely to resolve against the defendant firm. In countries where the courts are more impartial, it is easier for private businesses to challenge government actions or regulation. Consequently, in these countries we find that the outcome more commonly favors the defendant firm. In model (5) we introduce an interaction between the impartial court index and the foreign court indicator variable. In this specification the impartial court index variable is statistically insignificant while the foreign court indicator is significantly positive. The interaction term has a statistically significant negative coefficient. This result is consistent with Hypothesis 7 and implies that courts might be biased against non-domestic defendant firms except in those countries whose courts are more impartial.

In <u>Table 9</u> we present the results from a set of <u>Tobit regressions</u> that analyze the effect of firm and country specific factors on the costs associated with damages or settlements awarded. We estimate Tobit regressions because we include dismissed and withdrawn cases, for which the settlement variable assume the value of zero. Similar to the results presented in <u>Table 8</u>, the coefficients for leverage and ROA are significantly negative. The coefficient for stock <u>turnover</u> is significantly positive across all model specifications. These results suggest that trading activity is more pronounced for lawsuits that resolve with large settlements.

Table 9. <u>Regression Analysis</u> of Settlement Awards. This table presents <u>Tobit regressions</u> with the amount paid by the defendant firm to the plaintiffs (either settlement or awarded damages) as the dependent variable. The dependent variable is set to zero in case of <u>dismissal</u>, withdrawal, or ruling in favor of the defendant firm. All independent variables are discussed in the Appendix. P-values are reported in parenthesis. The p-values of statistically significant coefficients are reported in bold.

	(1)	(2)	(3)	(4)	(5)
Intercept	0.2027	0.1472	0.2094	0.0775	0.1253
	(0.0001)	(0.0008)	(0.0307)	(0.6394)	(0.3172)
Ln MV	-0.0171	-0.0147	-0.0140	-0.0148	-0.0128

	(0.0013)	(0.0082)	(0.0135)	(0.0104)	(0.0263)
Leverage	-0.1957	-0.1947	-0.1877	-0.2014	-0.1855
	(0.0014)	(0.0018)	(0.0030)	(0.0017)	(0.0034)
ROA	-0.2175	-0.2106	-0.1786	-0.2115	-0.1787
	(0.000)	(0.0000)	(0.0000)	(0.000)	(0.0000)
Turnover	10.9622	11.0287	11.4528	9.4280	11.9407
	(0.0061)	(0.0060)	(0.0070)	(0.0228)	(0.0051)
Cumulative Returns	0.0078	0.0072	0.0081	0.0084	0.0081
	(0.4099)	(0.4478)	(0.3956)	(0.3900)	(0.3968)
Previous Lawsuit	0.0195	0.0400	0.0186	0.0214	0.0167
	(0.3825)	(0.5322)	(0.4300)	(0.3509)	(0.4782)
Civil Law	-0.0705	-0.0581			
	(0.0055)	(0.0209)			
Bribery Judiciary			-0.0193		-0.0202
			(0.1445)		(0.1267)
Rule of Law			0.3015		0.3018
			(0.0191)		(0.0190)
Impartial Courts			-0.0912		-0.0792
			(0.0172)		(0.0471)
Integrity Legal System				0.0219	
				(0.1900)	
Contract and Law Subindex				-0.0270	
				(0.2440)	
Foreign Court		0.0130	0.0255	0.0187	0.1894
		(0.8951)	(0.4232)	(0.7550)	(0.0467)
Impartial x Foreign Court					-0.1273
					(0.0341)
Regulated	-0.0329	-0.0256	-0.0246	-0.0384	-0.0298
	(0.2994)	(0.2994)	(0.4852)	(0.2496)	(0.4021)
Financial	-0.0509	-0.0475	-0.0531	-0.0550	-0.0645
	(0.0726)	(0.1064)	(0.0995)	(0.0741)	(0.0587)
Technology	-0.0151	-0.0104	-0.0045	-0.0104	-0.0047
	(0.6028)	(0.7217)	(0.8800)	(0.7300)	(0.8742)
Pseudo R <sup>2</sup>	0.101	0.099	0.239	0.114	0.241
Ν	278	278	278	278	278

Except for the *Bribery Judiciary* variable, the significance of the country legal variables are comparable to those presented in <u>Table 8</u>. If the lawsuit is brought in a country with a stronger rule of law, the settlements and damages tend to be higher. This finding is consistent with our Hypothesis 6. In those countries where the courts are less impartial, we observe higher levels of settlement and damages being awarded when the defendant firm is foreign. These findings are consistent with Hypothesis 7 and the presence of a bias against foreign defendant firms in these courts.

#### 8. Robustness tests

Despite the exclusion of U.S. defendant firms from our sample, about one third of the sample lawsuits are litigated in U.S. courts (Panel B, <u>Table 2</u>). We verify that our results, and in particular, those for common law countries are not purely driven by these U.S. lawsuits by undertaking two further analyses. First, in unreported tests we replicate the <u>multivariate regressions</u> of <u>Tables 4</u>, 7, 8, and 9 by including a U.S. court indicator variable, which assumes the value of one if the <u>litigation</u> is filed in the U.S. and zero otherwise. This variable is not

significant in any specification while the sign and significance of the other variables persist. Second, we replicate our event study and multivariate tests by excluding U.S. lawsuits from our sample. We observe in unreported tables that our results are also robust to this exclusion. Overall, these robustness test dispel any concern that U.S. lawsuit drive our findings.

Many litigation studies focus solely on security <u>class action lawsuits</u>. While this choice is often motivated by data availability, it is also due to the popularity of this type of litigation in the U.S. As we have shown earlier, securities class action lawsuits are much less common outside the U.S. We test, however, for a possible class action effect in our results by including a security class action indicator variable in unreported regressions. The coefficient for this variable is statistically insignificant, while the other variables maintain their sign and significance. We obtain similar results when we re-estimate our tests and exclude security class action lawsuits from our sample. Overall, we conclude that our findings are not driven by security class litigation.

## 9. Summary and discussion

Although the corporate <u>litigation</u> environment has been extensively studied in both the finance and legal literatures, it has been undertaken only through the lens of the U.S. legal system. Yet, there are a number of factors which suggest that the patterns and practices observed in the U. S do not apply globally. Differences in legal codes and traditions (LaPorta et al., 1998), levels of efficiency and integrity in the legal and <u>judicial</u> systems (Langseth et al., 1997; Djankov et al., 2008) and even cultural attitudes towards the rule of law and authority (Almqvist, 2005; Licht et al., 2007) are likely to produce a divergence in corporate litigation experiences from U.S. practices. Our study address this omission in our understanding of business litigation by examining a unique hand-collected sample of 482 corporate lawsuits distributed over 16 <u>developed countries</u>. The findings from this study directly contribute to a deeper understanding of how litigation is experienced by firms internationally and might suggest legal strategies for both plaintiff and defendant firms with an international exposure.

Our most important findings are focused around seven hypotheses which we develop to explain differences in the global corporate litigation experience. The first three hypotheses examine litigation triggers and what national factors influence litigation risk. We discover that unlike U.S. firms, stock underperformance and <u>turnover</u> do not significantly increase the risk of litigation. These litigation triggers appear to be exclusively a U.S. phenomenon. Consistent with the observations of other researchers on the nature of common and <u>civil</u> law (La Porta et al., 1997, 1998; Buschkin, 2005), we find that litigation risk is less for firms residing in civil law versus common law countries. Finally, we examine the role that judicial integrity and efficiency have upon the litigation experience of firms. We determine that litigation risk is greater for firms residing in countries with an independent and non-corrupt judiciary. This result is consistent with work in finance and developmental economics describing a linkage between a high integrity legal system, <u>capital market</u> development, and economic growth (La Porta et al., 1997).

Our next set of hypotheses examine the capital market response to the announcement of a lawsuit filing. We find that there is a significant <u>price</u> decline throughout our sample when a lawsuit filing is announced. Although this result is not unexpected, the cross-sectional variability in the magnitude is a new result. While significant, the negative announcement period returns are smaller than those reported for firms in the U.S. Indeed, we find that capital markets respond less negatively to litigation occurring in civil law countries. This result might be explained by another of our findings that large damage awards or settlements are less likely in civil law countries.

Our final set of hypotheses concerns the effect that court honesty and efficiency have on litigation outcomes. We find that lawsuits filed in countries with a strong rule of law or a more honest judiciary are associated with a deeper announcement period stock price decline, a higher likelihood of resolution in favor of the plaintiff, and a larger settlement. These results are also broadly consistent with work in <u>institutional economics</u> (Weingast, 1995; Williamson, 2000; Rodrik et al., 2004) on the role of sound national institutions in fostering <u>economic</u> <u>development</u>. Finally, we discover that when courts are less independent or fail to be impartial, there is a bias against foreign defendants. The result of this bias is that foreign firms suffer higher settlement costs.

Overall, this study presents novel evidence on the significant effect that country-specific institutional characteristics have on the corporate litigation experience. It confirms the importance of country-level factors in explaining corporate behaviors and practices. It also reinforces arguments that there are limits to globalization and that <u>convergence</u> in global business practices might be more constrained than generally believed (<u>Coffee</u>, <u>1999</u>; <u>Denis and McConnell</u>, <u>2003</u>).

## Appendix A. Variable Definitions and Sources

The legal country-level variables (i.e., <u>Civil Law</u>, Rule of Law, Impartial Courts, Integrity of Legal System, Contract and Law Subindex, Bribery Judiciary) refer to either the country of the defendant firm or the country of the lawsuit, depending on the regression. In the tables we distinguish them by attaching "- firm" or "-court" to the variable name, respectively.

Variable	Definition	Source
Assets	Total assets of the firm expressed in millions of dollars	Worldscope
Bribery Judiciary	<ul> <li>This indicator is based on responses to the following public opinion survey question from the</li> <li>Transparency International Global Corruption</li> <li>Barometer: In the past 12 months have you had</li> <li>contact with the legal system or judiciary, and if so, paid a bribe in any form to the institution in</li> <li>question? The indicator is the percentage of</li> <li>respondents who answered that they have paid a bribe.</li> </ul>	Transparency International
Civil Law	Indicator equal to one if the country has a civil law legal system.	Factbook list of legal systems
Contract and Law Subindex	Index (from 1 to 7) constructed as an average of the responses to four questions from the World Economic Forum's Executive Opinions Survey. 1) Is the judiciary in your country independent from political influences of members of government, citizens or firms? 2) Are financial assets and wealth clearly delineated and well protected by law? 3) Is your government neutral among bidders when deciding among public contracts? 4) Does organized crime impose significant costs on business? An average of 94 Chief Executive Officers or top-level managers are polled in each country.	World Economic Forum
Cumulative Returns	Cumulative stock returns for the year preceding the lawsuit filing.	Datastream
Financial	Indicator equal to one if the defendant firm is a financial firm.	Worldscope

Foreign Court	Indicator equal to one if the lawsuit is brought in a court of a different country than the defendant firm	Factiva/Lexis-Nexis
Impartial Courts	<ul> <li>headquarters' country.</li> <li>Index (from 0 to 10) that measures if a trusted legal framework exists for private businesses to challenge the legality of government actions or regulation.</li> </ul>	The Fraser Institute
Impartial × Foreign Court	Interaction variable between Impartial Courts and Foreign Court.	The Fraser Institute/Factiva/Lexis-Nexix
Integrity of Legal System	Index (from 0 to 10) that captures the efficiency and integrity of the legal system, particularly as it pertains to the treatment of foreign firms.	Political Risk Services
Leverage	Total debt divided by total assets.	Worldscope
Litigation Intensity	Number of corporate lawsuits filed against firms headquartered in the defendant country in the past three years.	Factiva/Lexis-Nexis
Ln MV	Natural logarithm of the firm's market capitalization expressed in millions of dollars	Datastream
Previous Lawsuit	Indicator equal to one if the defendant firm was the defendant of another lawsuit in the previous three years.	Factiva/Lexis-Nexis
Regulated	Indicator equal to one if the defendant firm is in a regulated industry.	Worldscope
ROA	Operating profits divided by total assets.	Worldscope
Rule of Law	Index (from -2.5 to 2.5) that considers perceptions of crime, the effectiveness of the judiciary, and the enforceability of contracts. The measure is constructed using data drawn from dozens of data sources produced by international organizations, risk-rating agencies, think-tanks, and private organizations.	The World Bank
Stock Dive	Indicator variable equal to one if the stock price dropped more than 10% on at least one day in the past 12 months after controlling for the country market index, and zero otherwise.	Datastream
Technology	Indicator equal to one if the defendant firm is a technology firm.	Worldscope
Turnover	Average stock turnover for the year preceding the lawsuit filing.	

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<sup>1</sup>Our sample includes 13 lawsuits that concluded with settlements surpassing \$1 billion. The largest settlement in our sample is \$3 billion. It was paid by the U.K. firm GlaxoSmithKline to settle criminal charges for promoting its antidepressant drugs for unapproved uses and failing to report safety data about one of their diabetes medicines.

<sup>2</sup>In our multivariate analysis we indirectly and incompletely control for U.S. courts through indicator variables representing civil vs common law and foreign courts. In unreported robustness tests we also include a U.S. court indicator variable. The results do not significantly differ from those presented in the tables.

<u>3Romano (1991)</u> in the first comprehensive analysis of U.S. shareholder class action suits finds little evidence of significant price reactions at the initiation of lawsuits (i.e., -0.41%). Her study, however, covers a much earlier time period (1966–1987) and contains only 66 lawsuits.

<sup>4</sup>We replicate this test with the days (-1, 0) and days (0, +1) event windows. The results are similar to those presented in <u>Table 7</u>.