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The impact of climate litigation risk on  
firms' cost of bank loans

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## Abstract

Using a novel worldwide dataset of 5,264 syndicated loans issued to 329 firms from 2006 to 2021, we study how climate-related litigation risk affects firm's cost of borrowing. We find robust empirical evidence that firms targeted by climate lawsuits pay significantly higher spreads on their bank loans. These effects are more pronounced for firms with weaker environmental performance and higher ESG controversies. The results suggest that lender's view climate litigation as a material risk factor, which is increasingly priced into debt contracts.

**Keywords:** climate lawsuits, bank loans, loan spreads, litigation risk

**JEL Classification:** G21, G32, Q56, K32

## Non-technical Summary

This study examines the impact of climate-related litigation risk on bank lending practices. In recent years, there has been a notable increase in legal actions targeting firms to challenge their adverse contributions to climate change. This reflects a broader global effort to hold corporations responsible for their adverse environmental impacts. Although substantial attention has been devoted to climate risks in general, the specific financial implications of climate-related lawsuits have been rather underexplored in the academic literature, particularly how they influence banks' lending decisions. This paper investigates whether banks perceive climate litigation risk as a material financial risk and whether they adjust the loan terms in response thereto.

To address this question, we investigated a dataset comprising 5,264 bank loans issued to 329 firms worldwide between 2006 and 2021. We document each firm's involvement in climate-related lawsuits, including the frequency of such legal actions, and link this information to the corresponding loan data. The findings provide strong empirical support that banks do incorporate climate litigation risk considerations into their lending decisions. Firms involved in climate lawsuits face, on average, interest rates that are approximately 4% higher than those charged to firms without such legal exposure. In addition, these firms typically receive smaller loan amounts and shorter loan maturities, suggesting a broader pattern of risk aversion on the side of lenders.

Financial penalties are especially pronounced for firms with poor environmental performance or a history of environmental, social, and governance (ESG) controversies. Furthermore, banks appear particularly sensitive to novel or unprecedented types of climate litigation act, likely due to the heightened legal uncertainty that is inherent in such cases. In general, our results provide new insight into how the growing prevalence of climate litigation is shaping corporate finance. They underscore that climate-related legal challenges represent not only reputational risks, but also substantial financial risks that affect firms' access to capital. These findings have important implications for corporate decision makers, investors, policymakers, and others concerned with the response of the financial sector to climate change.

# 1 Introduction

In this study, we examine whether, and to what extent, climate-related lawsuits influence firms' cost of capital. Specifically, we investigate whether banks perceive climate litigation risk as a relevant consideration and incorporate it into the pricing and structuring of corporate loan contracts. This question is particularly salient considering the recent surge in climate litigation, which reflects a broader global shift towards environmental accountability and sustainable business practices. Despite the growing prominence of climate lawsuits, their financial implications remain underexplored (NGFS, 2021; European Central Bank, 2023). Regulatory bodies have intensified efforts to require companies to disclose climate-related risks - including litigation risk - through frameworks such as the Task Force on Climate-related Financial Disclosures (Financial Stability Board, 2017)<sup>1</sup>

In parallel, climate change has been recognized not only as a serious threat to sustainable development (UNESCO, 2021) and global health (Organization, 2014), but also as a potential source of systemic financial risk. These concerns have prompted policymakers and financial institutions to embed climate considerations into financial decision-making. In response to the increasing climate crisis, many governments have committed to achieving net-zero emissions by 2050 and limiting global warming to 1.5°C, in line with the Paris Agreement. Sustainable finance has thus emerged as a critical mechanism for supporting climate goals, with initiatives such as the United Nations Environment Programme Finance Initiative (UNEP FI) and the Equator Principles (EP) playing an increasingly prominent role in guiding bank lending practices.

Given the inherent difficulty in hedging climate litigation risk, an important question arises as to how investors incorporate this source of risk into their pricing decisions. In order to investigate this risk and get quantitative measures, we extract pricing information from bank loans. In parallel with the rise of socially responsible investing, there has been a notable expansion in environmentally conscious lending practices (Chava, 2014; Javadi and Masum, 2021) and emerging evidence indicates that banks are increasingly attentive to the risks associated with climate-related litigation (Richardson et al., 2023; Ma et al., 2022). However, the relationship between climate lawsuits and the cost of capital, in Europe, remains underexplored as yet. The existence of this knowledge gap is rather surprising, given that climate litigation risks have profound implications for firm financing, as evidenced by studies showing that lenders price in anticipated risks through higher loan costs (Solana, 2020; Karpoff et al., 2005).

Understanding the financial and operational implications of climate litigation is therefore critical, particularly for firms operating in sectors with elevated exposure to environmental and regulatory risks. Banks and financial institutions play a central role in this context, engaging directly with

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<sup>1</sup>For more details, see: Financial Stability Board, 2017, <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf>.

firms through lending, deposit-taking, and investment activities. However, this involvement also exposes banks themselves to litigation-related risks, which can erode stakeholder confidence, provoke adverse market reactions, and materially reduce firm value (Bardos et al., 2013; Levy et al., 2018; Prince and Rubin, 2002). Importantly, the banking literature has long established that banks, as delegated monitors, possess access to proprietary borrower-specific information that is typically unavailable to external investors. This privileged informational position allows banks to assess borrower risk and repayment capacity more effectively (Javadi and Masum, 2021). Consequently, to the extent that climate litigation is perceived by investors as an economically significant risk factor, we hypothesize that banks are likely to incorporate this risk into their credit evaluation and loan pricing decisions for firms involved in climate-related lawsuits.

Our measure of climate litigation risk is based on the established view that a climate lawsuit event represents the firm's initial disclosure of this legal action to the capital market, following the approach developed by (Wei et al., 2011). Consistent with (Richardson et al., 2023), we compute a dummy variable denoted as 1 if the firm is exposed to at least one climate-related lawsuit in a given year and 0 otherwise. Although this dummy variable captures the presence of climate litigation risk, it can overlook important variation in the intensity and frequency of legal exposure. To address this concern and enhance the robustness of our results, we construct an alternative continuous measure of climate litigation exposure, defined as the natural logarithm of the cumulative number of climate-related lawsuits involving a given firm. This specification allows us to differentiate between firms with minimal legal exposure (e.g., a single case) and those subject to recurring or sustained litigation related to climate issues. By incorporating both binary and continuous measures, we aim to capture a broader spectrum of climate litigation risk while mitigating concerns related to measurement error and information loss that may arise from reducing a continuous phenomenon to a dichotomous variable.

Each individual loan in our sample we have extracted from the Dealogic database. We then identify the dates of climate lawsuit events associated with the borrowing firm using the Sabin Center for Climate Change Law Database and match them to our constructed measures of climate litigation risk. Our final dataset comprises 5,264 unique bank loans extended to 329 distinct firms worldwide over the period 2006 to 2021.

Supporting the view that climate litigation risk is a relevant risk factor for lenders, we find a robust positive association between our measures of climate litigation risk and loan spreads that is both statistically and economically significant. Loan spreads of firms involved in climate lawsuits events are about 3.89% larger than those of firms not involved. This finding is also robust to different model specifications, including fixed effects of the borrower, year, country, and loan type characteristics. Further, firms with poor environmental performance and higher exposure to ESG controversies are expected to exhibit greater exposure to climate litigation. Consequently, if lenders perceive climate litigation as a material risk factor, its adverse effects should be more

pronounced for firms with weaker environmental profiles and elevated concerns related to ESG. We explore these cross-sectional differences and our empirical results are consistent with this expectation.

Specifically, our findings indicate that the effect of climate-related litigation on loan pricing is significantly amplified for firms characterized by weak environmental performance (“brown” firms) and those with a high incidence of ESG-related controversies. We further examine whether specific characteristics of climate lawsuits - such as the stage of the legal process (filings versus decisions), the degree of novelty, the country of origin, and whether the plaintiff is a government entity differentially influence the cost of bank loans. Among these, we find that only novel climate lawsuits are associated with a significant increase in borrowing costs, suggesting that legal uncertainty and precedent-setting may potentially amplify lenders’ risk perception. Finally, we explore the broader implications of climate litigation by analyzing its relationship with non-price loan contract provisions, such as loan amounts, maturity, secured tranches, and lenders. Our findings reveal that climate litigation is negatively associated with loan amounts and loan size, further underscoring the financial impact of climate litigation on firms’ borrowing terms.

Our paper contributes to several themes covered by the existing academic literature. First, it contributes to a rapidly growing literature investigating the impact of climate litigation risk on firms and financial markets (Karpoff et al., 2005; Wei et al., 2011; Richardson et al., 2023; Ma et al., 2022). Although prior studies have examined the impact of environmental lawsuits in the United States and China (Richardson et al., 2023; Ma et al., 2022), the legal and institutional framework in these countries differs markedly from that of Europe. These differences limit the external validity of their findings and complicate the generalization of results from the U.S. and Chinese corporate loans markets to western institutional contexts, such as those in Europe. To our knowledge, our paper is the first study to empirically examine the effect of climate-related lawsuits on the cost of bank lending, offering novel evidence at both the European and global levels. Our main findings provide a more comprehensive picture of the adverse impact of climate litigation risk on firms’ cost of capital. Thus, our findings can be of interest to academia, industry decision makers, practitioners, and policymakers alike.

Second, our paper contributes to the growing body of evidence on the financial consequences of climate litigation risk. Although prior research has emphasized the effects of physical climate risk (Hong et al., 2019; Wei et al., 2011; Painter, 2020), regulatory uncertainty (Chava, 2014; Fard et al., 2020), and transition risks associated with climate-related innovation (Beyene et al., 2021; Bolton and Kacperczyk, 2021) the role of legal action - particularly in the form of climate-related lawsuits - has received comparatively less attention. Our findings indicate that lenders are sensitive to litigation-driven climate risk and incorporate this concern into loan pricing by demanding a premium to compensate for the heightened legal and reputational uncertainty.

Third, this study contributes to the literature on the determinants of the cost of bank loans. Our results reflect the sensitivity of banks to climate litigation risk and further strengthen the evidence on environmentally sensitive lending as provided by (Richardson et al., 2023) and (Ma et al., 2022). We show that the risks associated with climate litigation also affect the pricing and other non-pricing features of loans. We highlight the negative relationship between climate lawsuits and non-price loan contract provisions, specifically loan amounts and maturity.

The remainder of this paper is organized as follows. In Section 2 we review the literature and develop our main hypotheses. Section 3 discusses the data. We report our main empirical findings in Section 4 and conduct a subsample analysis in Section 5. We provide robustness checks of our results in Section 6 and investigate the impact of climate risk on other contractual features of loans in Section 7. We discuss alternative explanations in Section 8 and conclude in Section 9.

## 2 Literature Review and Hypothesis Development

Our paper contributes to the literature on the impact of climate lawsuits on the cost of bank loans. Previous research centres on quantifying the financial market reactions towards companies being subject to litigation around different lawsuit events. These studies are, predominantly, focusing on lawsuit filings or announcements (Dulak and Gnabo, 2024). There are different strands of the existing literature that we contribute to in our paper. First, we contribute to the literature on the financial risks associated with climate change, focusing not on physical and transition risks (Delis et al., 2024; Hong et al., 2019; Bolton and Kacperczyk, 2021), but on quantifying the impact of climate litigation risk, for which the existing literature is still scarce. Despite a growing interest for climate change-related financial risks, the only study to deal with climate litigation and cost of bank loans is (Richardson et al., 2023). This category of risk was however given the same importance as the other two by Mark Carney in his 2015 speech ‘Breaking the Tragedy of the Horizon - climate change and financial stability’ (Carney, 2015) and has become more prominent for corporations and financial institutions in recent years (Dulak and Gnabo, 2024). Out of the 2,180 climate-related lawsuits documented by the Sabin Center for Climate Change Law between 1990 and December 2022, a substantial proportion - 1,557 cases - were filed after 2015 (Setzer and Higham, 2023). This marked increase in climate litigation underscores rising concerns about its potential implications for corporations and financial institutions e.g., NGFS (2021). Furthermore, our research is part of the academic debate on the relationship between legal disputes and bank financing conditions, developing along two main strands of literature. The first area of focus concerns studies analysing the impact of litigation on corporate financial performance, with a focus on equity returns (Arena and Ferris, 2018). This research explores different categories of lawsuits, such as financial fraud,

environmental violations, and anti-competitive practices. The second strand of literature to which our study relates concerns intra-industry spillover effects, that is, the impact that isolated events - such as scandals, lawsuits, or bankruptcies - can have on other firms within the same sector (Barko et al., 2023). This phenomenon is particularly relevant in the banking context, as credit institutions, being lenders with a limited risk perspective, tend to adopt a cautious approach when assessing the creditworthiness of firms exposed to legal disputes. Previous studies show that banks respond to legal risk signals by increasing loan costs or imposing more stringent conditions, such as additional collateral requirements and shorter maturities (Bharath et al., 2008; Graham et al., 2008). Building on these findings, we extend the analysis to climate litigation, investigating whether banks adopt similar risk-mitigation strategies in response to climate lawsuits. In our study, using a novel and worldwide climate lawsuits events database, we aim to fill this knowledge gap in the literature by examining whether and to what extent climate litigation risk affects the cost of bank loans. Since these disputes can lead to significant legal expenses, settlements, and reputational damage, banks may incorporate such risks into their credit pricing models, with important implications for firms' financial decisions. Furthermore, existing studies on climate litigation and financial impacts are often limited to a single country or focus on specific economic or geographic regions, such as the United States. For example, Richardson et al. (2023) using a US sample of 7,684 loans from 1,409 firms between 1995-2015 finds that environmental lawsuits are positively correlated with higher loan costs, with a one standard deviation increase linked to a 2.07 basis point rise in costs. Furthermore, Ma et al. (2022), using a hand-collected dataset on environmental violations in China over the period 2008–2020, find that firms breaching environmental regulations face significantly higher bond financing costs. However, climate litigation risk varies significantly across jurisdictions due to differences in legal frameworks, regulatory environments, enforcement mechanisms, and societal attitudes toward environmental responsibility. Building on these considerations, to the best of our knowledge, this study is the first to examine the relationship between climate litigation risk and the cost of bank loans using a cross-country analysis on a global scale. By adopting this broader perspective, we aim to provide a more comprehensive understanding of how legal and regulatory disparities influence banks' risk assessment and lending conditions in response to climate lawsuits. As shown by the above literature review, there is broad consensus that climate litigation risks and costs might yield to an increase in firms' cost of capital. Given that bank loans constitute a critical - often the primary - source of external finance and considering that banks are sophisticated economic agents uniquely positioned to monitor borrowers and accurately assess risk, we posit that banks incorporate climate litigation risks into their lending decisions. This leads to the cross-sectional implication of our main hypothesis:

*H1: Firms involved in climate-lawsuits face significantly higher bank loan costs than firms not subject to such legal actions.*

## 3 Data and Empirical Design

### 3.1 Loan Data

We obtain global loan-level syndicated loan data from Dealogic. Our main dependent variable is the “all-in-spread-drawn” (AISD, henceforth “Spread”) that is paid over the London Interbank Offered Rate (LIBOR). It comprises all types of fees charged by the lender, including commitment fees (paid on unused amounts of loan commitments), utilization fees (paid on the drawn amount once a threshold has been exceeded), and fixed upfront fees. Berg et al. (2016) show the importance of fees in the overall pricing of loans. Each loan is identified as a distinct observation, and the price and non-price terms are fixed at the facility level. For each facility, we use the AISD to measure the cost of bank loans and is provided by Dealogic directly. In order to reduce the effect of outliers in our regression models, and consistent with Newton et al. (2020), we winsorize the sample for margins below the 1st percentile and above the 99th percentile. Firms with negative AISD are dropped. We also control for the size of the loan amount, the maturity of the loan facility, and whether or not a loan is leveraged and subordinated. Finally, we control the most common types of facility, including Term Loan A, revolvers, and others<sup>2</sup>.

As reported in Table 1, an average firm in our sample pays a loan spread of about 185 basis points. The average loan facility has a size of about \$1836 million, matures in about 5 years, and has about 12 participants in the loan syndicate.

### 3.2 Corporate governance, Balance Sheet, and ESG data

We have drawn firm-level corporate governance and firm-level ESG profile variables from Refinitiv. Firm-level financial data are obtained from DataStream. Table 1 shows the summary descriptive statistics of corporate governance, ESG, and firm-level financial data variables. We match the financial, governance, and ESG profile variables of the firms using the Refinitiv Identification Code (RIC) and the ISIN code. Then, following Altunbaş et al. (2010), to obtain borrower-specific characteristics, we hand-matched the borrower or borrower’s parent name to the Refinitiv Eikon and Datastream firm. Detailed information on all variables, their sources, and measurements is provided in Table A.1 in the Appendix.

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<sup>2</sup>A term loan provides a fixed lump sum disbursed upfront, which is repaid in scheduled installments over a specified period. It is more rigid in structure, making it suitable for long-term investments or financing fixed assets. A revolving credit facility allows borrowers to draw, repay, and redraw funds up to a pre-approved credit limit, like an overdraft or credit card. Interest is typically charged only on the amount drawn. This structure offers high flexibility and is well suited for managing short-term liquidity needs or working capital requirements.

### 3.3 Measuring Climate Lawsuits

We manually compile climate litigation events from the U.S. Climate Change Litigation and Global Climate Change Litigation databases, as provided by the Sabin Center for Climate Change Law. The Sabin Center maintains two separate databases, one for US litigation and one for “global” litigation, i.e, all cases outside the US. Together, these databases contain more than 2000 cases before judicial and quasi-judicial bodies that involve material issues of climate change science, policy, or law<sup>3</sup>. Following Sato et al. (2024), we exclude from our sample those cases where climate change is only incidental to main issues that are excluded from the Sabin database. We identify cases involving publicly listed companies in the US and Europe while non-traded companies are excluded from our sample<sup>4</sup>. Furthermore, cases filed in countries where risk factors are unavailable were dropped.

Our sample of filings includes 357 corporation-event observations between 2006 and 2021 in the US (319), and Europe<sup>5</sup> (38) with 279 filings events and 78 decisions (see Figure 1). Many companies are involved either in a single event or in more than one event (see Table A.2 in the Appendix), explaining why the number of unique firms targeted is limited to 71. Furthermore, among the 279 corporate filing events, 120 are novel (43.01%). To assess novelty, we use the classification of Sato et al. (2024). Firstly, the legal arguments are classified as “*novel*” in cases such as *Milieudefensie v. Shell* (see Appendix Supplementary Information), in which claimants relied on business and human-rights standards to argue that a corporation has an obligation to reduce carbon emissions from its global operations. Secondly, for cases such as *County of San Matteo v. Chevron*, one of the earliest cases in which the US subnational governments use Heede’s Carbon Majors<sup>6</sup> research as the basis for legal action against one or more major carbon-emitting companies. Thirdly, we consider whether a novel argument was applied against a new industry, as in the case of *Deutsche Umwelthilfe (DUH) v. BMW and Deutsche Umwelthilfe (DUH) v. Mercedes-Benz AG*<sup>7</sup>.

Moreover, out of the 279 corporate filing events, 170 cases (60.93%) have a government body as the plaintiff, while 256 cases (91.76%) originate from the United States. Additionally, we also collected 78 court decisions. Court decisions, which may include final judgments, significant interim judgements or procedural matters, or settlement decisions, are of course not always negative for the companies. Each decision can be either positive or negative for the targeted corporation. Positive decisions are often decisions where the case is dismissed (Sato et al., 2024).

<sup>3</sup>Data are available at: <https://climatecasechart.com>

<sup>4</sup>The firms’ countries of domicile are: United States, Canada, Germany, United Kingdom, Norway, Austria, Italy, Switzerland, Spain, France, Netherlands, Poland, and Ireland.

<sup>5</sup>Notably, in our sample, all climate lawsuits filed in Europe are directed solely at European companies.

<sup>6</sup>According with Dulak et al. (2024) where one or more of the companies are listed by Heede (2014), we classify the case as a Carbon Major case (Energy, utilities, and materials the so-called Carbon Majors).

<sup>7</sup>More detailed information about the novelty, are provided in the Appendix Supplementary information.

Among the 78 decisions, we identify 51 positive (65.38%) decisions for the corporation and 27 being negative (34.62%). Table 1 shows the sectoral distribution of filing and decisions company-events. Unsurprisingly, a significant proportion of corporate climate litigation has been directed at major emitters, particularly those operating within the Energy, Utilities, and Materials sectors - collectively referred to as the 'Carbon Majors'. The list of target-event observations for lawsuit filings and decisions (positive and negative) can be found in Tables A.2 in Appendix. The final climate lawsuit sample obtained is cross-referenced with the database of Dulak and Gnabo (2024), and Sato et al. (2024).

Finally, we match the firms' climate lawsuits event with our Dealogic loan, Refinitiv, and Datastream data based on the borrower's parent name, ISIN code and event dates. If any, we dropped observations with missing borrowers' corporate governance and environmental profile variables. If the firm financial-accounting data are missing for the current year ( $t_0$ ) we replace them with the previous non-missing values ( $t-1$ ), see e.g., Brogaard et al. (2017).

According to Wei et al. (2011), a climate lawsuit event describes the firm's initial disclosure of a climate lawsuit to the capital market<sup>8</sup>. Then, following Richardson et al. (2023), we compute a dummy variable and `Climate_Lawsuits`, denoted as 1 if the firm is exposed to a climate lawsuit, and 0 otherwise. This climate lawsuits measure has a mean value of 0.037. Thus, 3.70% of the firm-year observations in our sample face climate lawsuits (Table 2). The final dataset contains 5,264 individual bank loans issued to 329 unique worldwide firms from 2006 to 2021.

### 3.4 Empirical design

We empirically examine the impact of climate-related lawsuits on loan spreads using a panel fixed effects regression model, which addresses correlated omitted variable bias (Wooldridge, 2010):

$$\begin{aligned} \text{Log}(\text{Spread})_{s,i,b,j,t} = & \alpha_0 + \beta \text{Climate\_Lawsuits}_{i,t-1} + \gamma \text{Loan Controls}_{s,t-1} + \\ & + \psi \text{Governance Controls}_{i,t-1} + \delta \text{Firm Controls}_{i,t-1} + \\ & + \phi_i + \gamma_t + \theta_j + \omega_s + \delta_b + \varepsilon_{s,i,b,j,t} \end{aligned} \quad (1a)$$

The unit of observation is loan facility. The dependent variable,  $\text{Log}(\text{Spread})$ , is the natural logarithm of the loan spread, which is the all-in-drawn spread over the London Interbank Offered Rate (LIBOR) of the syndicated loan  $s$  for borrowing firm  $i$  operating in country  $b$  supplied by

<sup>8</sup>Lawsuit filings and court decisions are typically unforeseen events. Information regarding legal actions generally becomes publicly available only upon their official announcement, often through a press release or press conference on the date of filing marking the first public disclosure of the claim. Even in cases where investigations are ongoing and publicly acknowledged, the precise timing of a filing is rarely disclosed in advance. Likewise, the dates of court rulings are rarely announced in advance, and the substance of judicial decisions remains unknown until formally issued

the lead bank of the syndication  $j$ , at time (year)  $t$ .

Climate\_Lawsuits is our main variable of interest, the firm-level climate litigation profile, measured by a dummy variable that is denoted as 1 if the firm is exposed to a climate lawsuit and 0 otherwise. Climate\_Lawsuits denotes the initial disclosure by a firm of climate-related litigation to the capital market (Wei et al., 2011). The coefficient of interest is  $\beta$ . A positive and statistically significant  $\beta$  would suggest an adverse impact of climate lawsuits on the cost of bank loans and would be consistent with our main hypothesis.

Following the literature (e.g., Graham et al. (2008); Chava (2014)), we also include a wide range of control variables that could potentially affect the cost of bank loans, and which would influence firms' demand for bank credit and banks' commercial evaluation of the credit riskiness of the loan contract to the borrowing firms. The first set of control variables is related to loan characteristics. Following Graham et al. (2008), we control for loan amount and maturity to account for variations in loan size and duration, which influence credit risk, borrowing costs, and contractual terms.

The second set of control variables is related to corporate governance variables. Firm-specific corporate governance environment, including board size, board independence, board diversity, board industry expertise, and CEO duality. These measures closely relate to the seriousness of the principal agency problem between the shareholders and the management team of the firms and, therefore, would incentivize firms to use debt as a tool to mitigate the misalignment of interest between these two parties (Altunbaş et al., 2019).

The third set of controls for the characteristics of the borrower includes asset size, profitability, liquidity risk measure, and operational efficiency measures. It is important to control for size because, on the one hand, larger firms have less trouble accessing external financing and have fewer information asymmetry problems. Therefore, they are likely to have a lower cost of bank loans. On the other hand, due to their sheer size, larger firms can borrow more and as a result, they may have higher borrowing costs. This leads to leverage as another firm-level control variable. Leverage is one of the main inputs in Merton (1974) distance to default formula; thus, firms with higher leverage ratio have a higher default risk. All else equal, these firms are expected to have a higher cost of bank loans, making it imperative to control for leverage (Javadi and Masum, 2021). We also control for firms' profitability (RoA) because profitable firms have a lower chance of default and are expected to pay lower spreads on their loans. We also include firm-specific financial statement performance ratio including liquidity risk measure (operating cash flow to total sales ratio, leverage (debt to total assets), and operational efficiency (asset turnover)). Finally, we control for firm-specific systematic risk (Beta derived from standard Capital Asset Pricing Model).

In order to address issues of endogeneity (i.e., reverse causality), we follow the literature (e.g.,

Altunbaş et al. (2010)). Our analysis incorporates lagged variables for climate lawsuits, loan data, ESG profiles, and balance sheet characteristics. Detailed information on all variables, their sources, and measurements is provided in Table A.1 in the appendix.

We introduce firm fixed effects ( $\varphi$ ) to account for the unobserved heterogeneity between firms. We also include the time (year) fixed effect ( $\gamma$ ) to capture the world-wide economic environment. Furthermore, we also include fixed effects of the bank (lending) ( $\theta$ ) to capture all types of unobservable bank-specific time invariant factors relevant for the risk preference and organizational culture of the first lead arranger of each facility. Previous studies have shown that the time-invariant characteristics of banks have a significant impact on their lending decisions and have been used in their model specifications (e.g. Gropp and Heider (2010); Kroszner and Strahan (2001); Goss and Roberts (2011)). We also account for facility loan characteristics ( $\omega$ ) to capture heterogeneity in loan structures, credit risk, and contractual terms, ensuring a more precise estimation of the relationship between climate lawsuits and borrowing conditions.

Finally, we also consider country-fixed effects ( $\delta$ ) to account for the heterogeneity of credit riskiness across borrowing firms due to the production characteristics and country-level institutional setting.

## 4 Baseline Results

### 4.1 The impact of firm-level climate lawsuit profile on the cost of bank loans

We first report the empirical findings for the impact of climate lawsuits of borrowing firms on the spread in syndicated loans, testing our hypothesis (H1) above. The results of Equation 1(a) where the climate litigation profile of borrowing firms is measured by the `Climate_Lawsuits` variable is presented in Table 3. To check the robustness and stability of the estimated coefficients on the main variables, i.e., the climate litigation profile of the borrowing firms, we start from a model which includes the climate lawsuits (Column 1), and gradually add additional variables into the regressions<sup>9</sup>.

As shown in Table 3, the estimated coefficient on `Climate_Lawsuits` is positive and statistically significant in the model that only contains the climate litigation profile and gradually controls for the deal characteristics (Column 1 - Column 7). The finding remains qualitatively consistent in the model specification when firms-level corporate governance (Column 8-9) and financial performance ratios and market value ratios (Column 10 - Column 11) are controlled for. The findings suggest that firms involved in climate lawsuits, pay higher interest rates when borrowing

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<sup>9</sup>For robustness purpose, we report in Column 1 of Table 3 the results without incorporating a one-period lag ( $t-1$ ) in the firm's climate litigation profile.

in the syndicated loan market. In addition, the result appears to be economically significant. The economic magnitude of the Climate.Lawsuits coefficient in Column 11 of Table 3, when the baseline model was augmented with full set of control variables, indicates that, given that the Log(Spread) coefficient is 0.0382 ( $p < 0.05$ ) firms exposed to at least one climate-related legal action experience, have a 3.89% increase in their loan spread<sup>10</sup>.

The estimated coefficients on the loan characteristics (Column 6 - Column 11) in the baseline specification - specifically Deal Amount and Maturity - are both statistically significant and negatively associated with loan price (1% significance level). The findings are comparable to those found in previous studies by Altunbaş et al. (2019) and Graham et al. (2008). The results indicate that lenders systematically adjust contractual structures in response to perceived climate litigation risk. Specifically, they reduce credit limits and shorten loan maturities, consistent with efforts to enhance risk mitigation in the presence of heightened legal and regulatory uncertainty.

Turning to the augmented models with corporate governance controls, we find Ind\_Board to be positively related to the loan price. We also find that corporate governance of borrowing firms (in Column 11), Board.Diversity and Board.Skills, have a negative relationship with loan price (1% significance level). These results are in line with empirical evidence that indicates that better corporate governance quality could mitigate information asymmetry problems and therefore lower the cost of debt financing (Ghouma et al., 2018).

Regarding firm-level financial performance and market value ratio (in Column 11), the results show that borrowing firms with higher profitability (ROA) face lower loan prices. Furthermore, larger firms (Size) have lower loan spreads. In short, the coefficients of the control variables in all specifications have the expected sign and are consistent with the existing literature (Altunbaş et al., 2019; Chava, 2014; Bradley and Roberts, 2015).

## 5 Cross-sectional analyses

We also perform a cross-sectional analysis to explore potential channels through which climate lawsuits might influence bank loan costs. Specifically, we examine three distinct mechanisms: (i) the firm's environmental profile, (ii) exposure to ESG-related controversies, and (iii) the specific characteristics of the climate lawsuits. This analysis allows us to assess whether firms involved in climate litigation cases face higher borrowing costs due to increased perceived climate and

<sup>10</sup>The coefficient of Climate.Lawsuits is significantly positively related to log(Spread) This means that when a firm is exposed to a climate lawsuit, its loan spread increases. Since our dependent variable is in log form, the coefficient translates into a percentage change in the loan spread using the formula: %change =  $e^\beta - 1$ . In our case,  $e^{0.0382} - 1 \approx 0.03895 = 3.895\%$ . This implies that a firm exposed to a climate lawsuit experiences an increase of approximately 3.895% in its loan spread.

environmental risks, reputational damage associated with ESG controversies, or variation in the nature and severity (filings vs decisions) of the lawsuits.

## 5.1 Environmental Profile

The positive relationship between climate lawsuits and bank loan costs might also be significantly influenced by a firm's environmental performance profile. Firms with weaker environmental profile often exhibit limited transparency in their climate-related disclosures, increasing lenders' uncertainty regarding borrower risk and thus prompting higher loan spreads. In order to address this hypothesis, we postulate that a firm's environmental risk profile serves as an essential moderator, intensifying the relationship between climate-related litigation and the cost of bank loans. Moreover, banks generally demonstrate higher informational opacity compared to bond markets, restricting external stakeholders - such as depositors, regulators, and environmental advocates - from effectively evaluating and disciplining banks' environmental lending practices. This opacity weakens market discipline mechanisms and allows banks to pursue lending relationships based predominantly on short-term profitability considerations, potentially encouraging environmentally harmful firms. Goss and Roberts (2011) highlight that banks might continue relationships with polluting firms because of immediate profitability, underscoring a possible short-term bias in lending decisions. In addition, firms operating in highly polluting industries are often classified as environmentally sensitive and high-risk due to their frequent targeting by environmental regulations and vulnerability to adverse environmental events (i.e., Wu et al. (2023)). We expect that firms with stronger environmental performance will experience a mitigated decline in loan accessibility, whereas those in heavily polluting industries will face greater restrictions.

To empirically test our hypothesis, we classify firms in our sample as Strong Polluter (Less Polluter), if they are above (below) the median level of CO<sub>2</sub> emissions, see also Altunbaş et al. (2022b). Table 4 reports our regression results, showing that the coefficient on *Climate\_Lawsuits* is significantly positive ( $p < 0.10$ ) for firms characterized by higher environmental risk (poor environmental performance), whereas it is insignificant for firms with better environmental profiles (Columns 1-2). These findings support our hypothesis that poor environmental performance exacerbates the positive relationship between climate lawsuits and firm's bank loan spreads.

## 5.2 ESG controversies

We also examine whether ESG controversies impact the positive relationship between climate litigation and bank loan costs. Incorporating environmental, social, and governance (ESG) criteria into corporate management and investment decisions has increasingly become essential due to stakeholders' heightened expectations regarding sustainability practices (Gillan et al., 2021).

ESG considerations extend beyond purely economic and financial measures, encompassing a firm's broader impacts and responsibilities. ESG controversies typically arise from corporate events or practices linked to a firm's operations or products that generate significant reputational risks through adverse environmental, social, or governance outcomes. These controversies can severely damage the corporate reputation, often resulting in higher perceptions of risk among stakeholders, including financial institutions. Consequently, companies involved in ESG-related controversy are likely to experience a decline in stakeholder confidence and increased regulatory and public scrutiny, which may adversely affect their financial performance and reduce their financial attractiveness to investors (Aouadi and Marsat, 2018). Specifically, ESG controversies, stemming from adverse corporate events or operational practices, signal elevated managerial and operational risks to lenders, which can significantly influence loan pricing decisions. Lenders may interpret ESG controversies as indicators of inadequate corporate governance, compromised operational oversight, and increased reputational risks, prompting them to demand higher loan spreads to compensate for perceived increases in borrower risk (DasGupta, 2022).

To empirically test our conjecture, we classify firms in our sample as ESG\_Contro\_High (ESG\_Contro\_Low), if they are above (below) the median level of ESG Controversies score from Refinitiv<sup>11</sup> which aggregates information on 23 distinct controversy topics (for example, Business ethics controversies; Tax fraud controversies; Human rights controversies; Management compensation controversies; Consumer controversies; Environmental controversies; Shareholder rights controversies; Employee health and safety controversies). ESG controversy scores range from 0 (indicating significant controversies) to 100 (no controversies), reflecting the extent of firms' engagement in controversial practices (LSEG Data and Analytics, 2022).

Table 4 reports our regression results, showing that the coefficient on Climate\_Lawsuits is significantly positive ( $p < 0.10$ ) for firms with greater exposure to ESG-controversies, while it is insignificant for firms with a better ESG controversies score (Columns 3-4). These findings align with our conjecture that firms exposed to ESG controversies amplify the positive correlation between climate lawsuits and bank loan spreads.

### 5.3 Impacts of lawsuit-specifics on loan spread

In this section, we examine the conjecture that the relationship between climate litigation and corporate borrowing costs may be influenced by specific characteristics of climate lawsuits. To investigate this, we focus on loan facilities that have been affected by climate lawsuits. We first generate four dummy variables for each specific climate lawsuit (Type\_Lawsuit, Novel\_Lawsuit, Europe, and Government\_Plaintiff). Then we interact these dummy variables. Subsequently, we

<sup>11</sup>For a list of all controversy measures that make up the ESG controversy category score, please refer to: [https://www.refinitiv.com/content/dam/marketing/en\\_us/documents/methodology/refinitiv-esg-scores-methodology.pdf](https://www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/refinitiv-esg-scores-methodology.pdf)

replace `ClimateLawsuits` with the dummies that we created. This model allows us to control for the differences across the specific's lawsuits. First, climate litigation reflects the long-term nature of climate-environmental risk, as legal actions addressing adverse climate-environmental actions often seek to hold corporations accountable for damages that may escalate over decades rather than just a few years. Then, we examine whether lenders differentiate between climate lawsuit filings and final decisions when pricing climate litigation risk into corporate borrowing costs. Specifically, we investigate whether firms subject to a climate lawsuit at the filing stage experience a greater or lesser increase in loan spreads compared to firms with climate lawsuits that have reached a final decision. At the filing stage, the outcome of the lawsuit remains highly uncertain, and the probability of a severe financial penalty or regulatory mandate is still speculative. Climate litigation often takes years to reach an ending, and many cases are dismissed, settled, or resolved with minimal financial consequences for the defendant. As a result, lenders may only partially adjust credit spreads at this stage, as the risk remains indeterminate. In contrast, once a court decision is reached, particularly an adverse ruling, lenders face greater certainty regarding financial penalties, compliance obligations, or regulatory consequences. This shift from uncertainty to concrete financial exposure leads to a more pronounced increase in loan spreads, as lenders price in the heightened default risk, operational constraints, and regulatory compliance costs associated with an unfavorable verdict. Therefore, borrowing firms involved in decisions are expected to face higher loan spreads compared to those involved in filings. We explore these cross-sectional variations and report the results in Table 5. Focusing on the coefficient in Column 5 (`TypeLawsuit`), the difference between filing and final decisions is statistically insignificant. This finding indicates that lenders do not systematically differentiate between firms based on the stage of litigation, suggesting that even initial filings may already incorporate substantial legal risk into credit terms. Second, we examine whether firms subject to novel climate lawsuits face different loan spreads compared to those sued with traditional cases. Novel lawsuits introduce new legal arguments that may establish precedents, expanding corporate liability for climate-related damages, or imposing new compliance requirements. Unlike traditional climate lawsuits, which operate within established legal frameworks, novel cases create legal volatility that investors and lenders find difficult to anticipate or quantify. Therefore, companies seeking loans while facing novel climate lawsuits are more likely to experience adverse effects. Thus, borrowing firms involved in new climate litigation cases are expected to face higher loan spreads compared to those already involved in existing, yet open cases.

We use `NovelLawsuit` in Table 5. Results are consistent with our conjecture. The coefficient on `NovelLawsuit` presented in Column 5 is positive and statistically significant ( $p < 0.05$ ). This finding suggests that lenders perceive firms facing new types of climate litigation as riskier borrowers. This effect is likely driven by legal uncertainty, market reactions, reputational concerns, and the potential for regulatory changes. As a result, firms involved in novel lawsuits experience higher loan spreads, reflecting increased credit risk as assessed by lenders. Third, we examine

whether firms facing climate lawsuits in European jurisdictions experience different loan spreads compared to those sued in the United States, due to structural differences in legal and regulatory frameworks. The predictability of European legal systems, which operate within well-defined regulatory structures such as the EU Green Deal and the Corporate Sustainability Reporting Directive, provides greater clarity regarding corporate climate obligations. Moreover, European firms tend to be more aligned with de-carbonization policies, meaning that climate-related legal rulings are less likely to impose significant operational adjustments. Since many firms already integrate sustainability strategies into their business models, legal decisions in Europe often reinforce, rather than drastically alter, existing corporate climate commitments. Furthermore, European banks actively incorporate sustainability criteria into their lending decisions, fostering a financial environment where firms involved in climate litigation are not necessarily viewed as high-risk borrowers. Instead, such firms may be perceived as potential candidates for green financing, including sustainability-linked loans (SLLs) and ESG-aligned credit instruments, which could mitigate the negative financial consequences of litigation. Taken together, these factors suggest that European-originated climate lawsuits are less likely to result in significant increases in loan spreads, particularly when compared to similar litigation in the United States, where legal outcomes tend to be less predictable and financial penalties more severe. The results in Table 5, Column 5 indicate that climate lawsuits originating in Europe do not significantly affect loan spreads. This finding suggests that legal and regulatory uncertainty from European lawsuits is lower than in other jurisdictions. As a result, financial institutions do not perceive these lawsuits as materially affecting firms' creditworthiness. Finally, we examine whether the adverse financial impact of climate litigation is expected to be more pronounced for firms facing government-initiated lawsuits. When a government entity - being at the national, state, or local level - files a lawsuit against a corporation, the case is generally perceived as carrying greater legal and financial weight compared to litigation initiated by private parties. Government-initiated climate lawsuits amplify reputational risks by attracting greater media attention and investor scrutiny, which can lead to stock price declines, reduced investor confidence, and restricted access to financing. As lenders perceive these cases as more severe and policy-driven, they could demand a higher risk premium, increasing credit spreads and borrowing costs for affected firms. Consequently, the financial impact of climate litigation is expected to be more pronounced for firms facing government-led lawsuits due to their greater legal, financial, and reputational risks. The empirical results in Table 5, Column 5 indicate that lawsuits where the government is the plaintiff do not have a significant impact on loan spreads. This finding suggests that lenders do not systematically adjust credit risk pricing in response to climate litigation initiated by public authorities. One possible explanation is motivated by the fact that government-initiated lawsuits, particularly in the context of environmental and climate regulation, tend to follow established legal and regulatory frameworks. Unlike lawsuits filed by private entities or activist groups, which may introduce legal uncertainty and potential precedent-setting outcomes, government litigation often seeks compliance with existing policies rather than punitive finan-

cial damages. As a result, financial institutions may not perceive these cases as introducing significant new risks that would necessitate adjustments in loan pricing.

## 6 Robustness Checks

### 6.1 Continuous climate litigation exposure

To ensure the robustness of our findings, we replace, in the baseline specification, the dummy variable with the total number of climate-related lawsuits in which a firm is involved. This allows us to check for the intensity or frequency of such legal exposure and to account for the skewed distribution of lawsuits. Then, to examine whether the intensity of climate litigation is associated with firm outcomes, we construct a continuous measure of litigation exposure based on the natural logarithm of the total number of climate-related lawsuits in which a firm is involved. This approach enables us to distinguish between firms with marginal involvement in litigation (e.g., a single case) and those facing persistent or repeated legal challenges related to climate issues. By incorporating a continuous measure of climate litigation exposure, we gain a more granular understanding of how varying degrees of legal pressure may influence firms' behaviour or performance. This alternative specification also serves to mitigate concerns about measurement error and the potential loss of variability and nuance that may result from reducing a naturally continuous variable to a dummy variable.

The results presented in Table 6 are consistent with our baseline model and further corroborate our results. Furthermore, these results provide further evidence that climate-related legal risks are meaningfully associated with the cost of bank loans. The empirical results in Table 6, Column 5 suggest that the coefficient estimate of 0.066 implies that a 1 percent increase in climate-related litigation faced by firms is associated with a 0.066% increase in the cost of bank loans, as measured by the loan spread<sup>12</sup>. This result reinforces our baseline results and suggests that lenders perceive heightened climate-related legal risk as a material factor influencing the pricing of corporate debt.

<sup>12</sup>In a log-log regression model, the coefficient represents the elasticity of the dependent variable with respect to the independent variable. In detail:  $\text{Log}(\text{Spread})_{s,i,b,j,t} = 0.066 \cdot \text{Log}(\text{ClimateLitExposure})_{i,t-1} + \gamma \cdot \text{LoanControls}_{s,t-1} + \psi \cdot \text{GovernanceControls}_{i,t-1} + \delta \cdot \text{FirmControls}_{i,t-1} + \varphi_i + \gamma_t + \theta_j + \omega_s + \delta_b + \varepsilon_{s,i,b,j,t}$ . Taking the derivative of  $\text{Log}(\text{ClimateLitExposure})$  with respect to  $\text{Log}(\text{Spread})$ , we get:  $\frac{\partial \text{Log}(\text{Spread})}{\partial \text{Log}(\text{ClimateLitExposure})} = 0.066$ , meaning that a 1% increase in  $\text{ClimateLitExposure}$  leads to a 0.066% increase in  $\text{Log}(\text{Spread})$ , ceteris paribus.

## 6.2 Instrumental variable approach

In this final robustness check, we further address potential endogeneity concerns. Although we have already mitigated the risk of reverse causality using one-year lagged firm-level variables, we strengthen our identification strategy by employing an instrumental variable (IV) approach. Specifically, we implement a two-stage least squares (2SLS) regression approach to isolate the exogenous variation in climate lawsuits, thereby extracting their causal impact on firm outcomes. The main challenge in using 2SLS is the identification of exogenous IVs that are not correlated with the dependent variable (Altunbaş et al., 2022a). The primary goal of employing the 2SLS approach is to isolate the exogenous variation in climate lawsuits, thereby mitigating potential biases arising from endogenous influences. By using an instrument that is correlated with these variables but not directly with the dependent variable -  $\text{Log}(\text{Spread})$  - we aim to obtain a more accurate estimate of their causal effects. This approach ensures that the estimates reflect the true impact of climate lawsuits on cost of bank loans, thus strengthening the robustness of our results and addressing potential biases inherent in our original estimations. Following Laeven and Levine (2009), we employ as an instrumental variable for climate lawsuits the industry-year-median number of climate lawsuits, calculated as the average number of lawsuits faced by all other firms in the same *industry* and *year*, excluding firm  $i$ <sup>13</sup>. This instrument captures exogenous variation arising from industry-level exposure to climate-related legal actions-reflecting broader regulatory, societal, or reputational pressures that are common across firms in the same sector. By excluding firm  $i$  from the calculation, we mitigate concerns about reflection bias and ensure that the instrument is not driven by firm-specific shocks. This approach helps isolating the component of climate litigation that is exogenous to firm  $i$ 's unobservable characteristics, thereby addressing endogeneity concerns. Column 1 of Table 7 reports the results of the first-stage regression, where our dependent variable ( $\text{ClimateLitExposure}$ ) is regressed on the explanatory variables that we use throughout the paper. In line with the requirements for a valid instrument,  $\text{Avg\_Industry\_ClimateLawsuits\_Events}$  is positively correlated with  $\text{ClimateLitExposure}$  and statistically significant at the 1% level (Column 1), suggesting the validity of the IV. Moreover, the instrument employed is strong, as shown by the Kleibergen-Paap and Cragg-Donald test statistics (Cragg and Donald, 1993; Stock and Yogo, 2005). Column 2 of Table 7 displays the results for the second-stage regression, which makes use of the predicted number of climate lawsuits from the first-stage regression ( $\text{ClimateLitExposure-predicted}$ ) to estimate the cost of bank loans. The results are similar (although stronger in magnitude) to those obtained in the baseline regression (Column 11), again suggesting a direct relationship between the climate lawsuits and the level of cost of bank loans.

<sup>13</sup>Several studies have used this instrument (see, e.g., Altunbaş et al. (2017)). Furthermore, to facilitate interpretation, we apply a log transformation to the variable, which is then used in our regression analyses.

## 7 Other loan contractual features

Our results up to this point provide evidence that lenders view climate litigation as a risk factor and therefore charge higher spreads on loans issued to firms that are comparatively more exposed to this risk. However, as pointed out in prior research (Richardson et al., 2023) in addition to directly increasing the cost of loans, lenders have the option to change other contractual features of their loans to mitigate the risk associated with their borrowers. Specifically, they can shorten the maturity, and reduce the size of their loans. Thus, in this section, we conduct additional analyses to investigate the extent to which climate lawsuits influence these alternative aspects of bank loan contracts. Specifically, we utilize firm fixed effects regressions to examine how climate lawsuits relate to the loan maturity, measured as the natural logarithm of loan maturity, as well as the loan amount, measured by the natural logarithm of the total loan facility. We also explore security requirements (Secured), a dummy variable, denoted as 1 if the bank loan is secured, and 0 otherwise. Firm fixed effects probit regression analysis tests the relationship between climate lawsuits and Secured (Graham et al., 2008). Finally, we also examine the number of lenders Log(Lenders), measured as the natural logarithm of the number of participants in a syndicated loan (Javadi and Masum, 2021). We report the results in Table 8. We find that banks shorten the maturity of their loans by about 7.52%<sup>14</sup>, when a borrowing firm is exposed to climate lawsuits compared to those that are not. Furthermore, the size of the loan syndicate is also about 12.54% smaller for exposed firms<sup>15</sup>. This result provides further evidence that lenders view climate litigation as a risk factor and that investors apply exclusionary filters based on climate litigation risk. Finally, the coefficients for Secured and Log(Lenders) are insignificant, suggesting that banks prioritize in setting the loan amount and maturity provisions over reducing lending when loans are secured for climate lawsuits.

## 8 Discussion and Alternative Explanations

We have found strong evidence that the cost of bank loans is higher for firms involved in climate-related lawsuits compared to firms that are not. Through a battery of robustness tests, we show that the positive relationship between loan spreads and climate litigation risk is likely to be driven by firms' involvements in episodes that lead to climate lawsuits. These findings naturally

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<sup>14</sup>The coefficient of `ClimateLawsuits` is significantly negatively related to `Log(Maturity)`, meaning that when a firm is exposed to a climate lawsuit, its loan maturity decreases. Since the dependent variable is in log form, the coefficient translates into a percentage change in maturity using the formula:  $\% \text{ change} = e^{\beta} - 1$ . In our case,  $e^{-0.0793} - 1 \approx -7.52\%$ .

<sup>15</sup>The coefficient of `ClimateLawsuits` is significantly negatively related to `Log(DealAmounts)`, meaning that when a firm is exposed to a climate lawsuit, its loan size decreases. Since the dependent variable is in log form, the coefficient translates into a percentage change in loan size using the formula:  $\% \text{ change} = e^{\beta} - 1$ . In our case,  $e^{-0.1339} - 1 \approx -12.54\%$ .

give rise to two important questions: (i) *Why are banks concerned about a borrower's exposure to climate litigation risk?* and (ii) *What specific climate lawsuits are banks primarily worried about?* Given that our analysis focuses on the relationship between climate litigation risk and loan pricing, climate lawsuit events emerge as the most immediate and plausible concern from a lender's perspective. It is therefore reasonable to posit that banks are particularly apprehensive about the potential increase of a firm's financial leverage induced either directly through legal liabilities or indirectly via reputational damage. Consequently, both would eventually induce higher financial risk. In response, lenders may charge a risk premium to borrowers facing elevated climate litigation exposure. We further investigate this mechanism as a potential driver of lender behavior and present evidence that supports this interpretation. By documenting consistent results for carbon-intensive firms and those with higher levels of ESG controversies, we demonstrate the robustness of our findings. Our findings indicate that banks are increasingly incorporating climate-related litigation risk into their credit assessments, reflecting a broader shift driven by both regulatory developments and investor demand for sustainable finance. This evolution underscores the growing role of financial institutions in promoting environmental accountability and managing climate-related financial risks within the credit allocation process. In Model 2 of Table 3, we find a positive and statistically significant relationship between climate litigation risk and the cost of bank loans. This relationship remains robust even in Model 11, where we augment the specification to include a comprehensive set of corporate governance variables, as well as financial and loan facility controls. The consistency of this effect suggests that climate litigation risk independently contributes to higher borrowing costs, beyond firm-level fundamentals and contract-specific characteristics. In Model 1 of Table 4, we restrict the sample to firms identified as strong polluters. Even within this high-risk environmental group, we continue to observe a positive and significant relationship between climate litigation risk and loan spreads. In Model 3 of the same table, we further narrow our focus to firms with high levels of ESG controversies. Within this subsample as well, climate litigation risk is priced by lenders, with significance at the 10% level, indicating that reputational and governance concerns that are linked to ESG controversies may reinforce lenders' sensitivity to legal risk. Turning to the nature of the lawsuits, Model 1 of Table 5 examines whether the litigation stage (initial filing versus final decision) affects loan pricing. The results show that the difference between these stages is statistically insignificant, suggesting that lenders respond to the presence of litigation risk at the time of filing and do not wait for case resolution to adjust credit terms. This implies that even early-stage legal exposure carries substantial weight in lenders' risk assessments. In Model 2 of Table 5, we investigate whether novel climate lawsuits - as defined in Section 3.3 - are associated with a differential impact on loan spreads relative to more conventional forms of litigation.

Novel lawsuits may impose heightened uncertainty due to their potential to broaden corporate liability or regulatory obligations. Consistent with this conjecture, we find that novel

lawsuits are significantly associated with higher loan spreads, with statistical significance at the 5% level. By contrast, Model 5 of Table 5 shows that novel climate lawsuits originating in Europe do not significantly affect loan spreads. This finding suggests that legal and regulatory uncertainty in European jurisdictions is perceived to be lower, and hence less pronounced on firms' creditworthiness. Similarly, we assess whether government-initiated lawsuits pose a greater financial threat. Model 5 also shows that lawsuits where the plaintiff is a government entity do not have a statistically significant effect on loan pricing, indicating that the identity of the litigant may not, in itself, be a key driver of lender behaviour. Finally, Table 8 provides further evidence that climate litigation risk affects not only the pricing of bank loans but also non-price contractual terms. Specifically, we observe a significant negative association between climate litigation exposure and loan maturity (Model 1), as well as loan amount (Model 2). These results suggest that lenders make broader adjustments to contractual structure in response to perceived climate litigation risk, shortening maturities and reducing credit limits as additional risk-mitigation strategies. From a policy point of view, our findings underscore the increasing importance of climate litigation risk as a financially material factor shaping corporate access to credit. First, this study provides novel empirical evidence on the economic consequences of climate-related lawsuits, extending the literature by adopting a cross-country perspective an area that has remained largely unexplored. Second, we document a significant relationship between climate litigation risk and non-price loan contract terms, with affected firms receiving smaller loan amounts and facing shorter maturities. The latter result highlights that the impact of climate-related legal exposure extends beyond pricing to the broader structure of financial contracts. Third, our analysis offers critical insights into how financial institutions evaluate firms' exposure to climate litigation and integrate this information into credit decisions. The observed "market penalty" and hence market discipline associated with climate litigation risk illustrates the need to align financial incentives with long-term environmental objectives. Policymakers can leverage these insights to design regulatory mechanisms that promote more robust climate risk disclosure and support ESG-aligned lending practices aimed at channeling capital toward lower-carbon, more sustainable business models. For firms, our findings emphasize the strategic necessity of embedding environmental and legal risk management within corporate governance frameworks to secure and maintain favourable financing conditions.

## 9 Conclusions

We provide empirical evidence that climate litigation is perceived by lenders as a material risk factor and is reflected not only in the loan spreads they charge but also in other contractual features of loan agreements. Leveraging the economic link between firms and their customer base, we further document that a firm's cost of borrowing is adversely affected by its customers' exposure to climate litigation risk. Subsample analyses reveal that the impact of climate liti-

gation is primarily driven by firms with weak environmental performance and a high incidence of ESG controversies, suggesting that lenders are particularly sensitive to sustainability-related reputational and regulatory risks. Moreover, we observe a significant negative association between climate litigation exposure and non-price loan terms, such as loan maturity and amount, indicating broader contractual adjustments beyond pricing alone. Our findings contribute to the literature in several ways. First, we provide novel insights into the economic effects of climate litigation, addressing a gap in prior research. Second, we highlight the relationship between climate lawsuits and non-price loan contract provisions, specifically loan amounts and maturity. Third, we offer critical insights into how banks assess firms' exposure to climate litigation risk, which has important implications for managerial and board-level decision-making regarding climate lawsuits. The results reveal that lenders are increasingly integrating climate-litigation risks into credit risk assessments, driven by regulatory pressures and market demands for sustainable finance. This integration underscores the evolving role of financial institutions in promoting environmental accountability and mitigating climate-related financial risks. From a policy perspective, our findings emphasize the need for regulatory frameworks that enhance transparency and encourage proactive risk management. The observed deterioration in financing conditions for firms subjected to climate-related litigation underscores the imperative to incentivize the adoption of low-carbon strategies and to proactively manage environmental liabilities. Policymakers can leverage these insights to design mechanisms that align financial markets with climate objectives, such as enhanced disclosure requirements and support for sustainable lending practices. For firms, these findings underscore the need to integrate environmental and legal risk management into corporate strategies to secure cost-effective financing. Lenders, in turn, can refine ESG-aligned credit models to better support the transition to a sustainable, low-carbon economy. Future research should explore the long-term implications of these dynamics on financial stability, corporate behavior, and global climate goals, providing further evidence of the interaction between environmental accountability and economic outcomes.

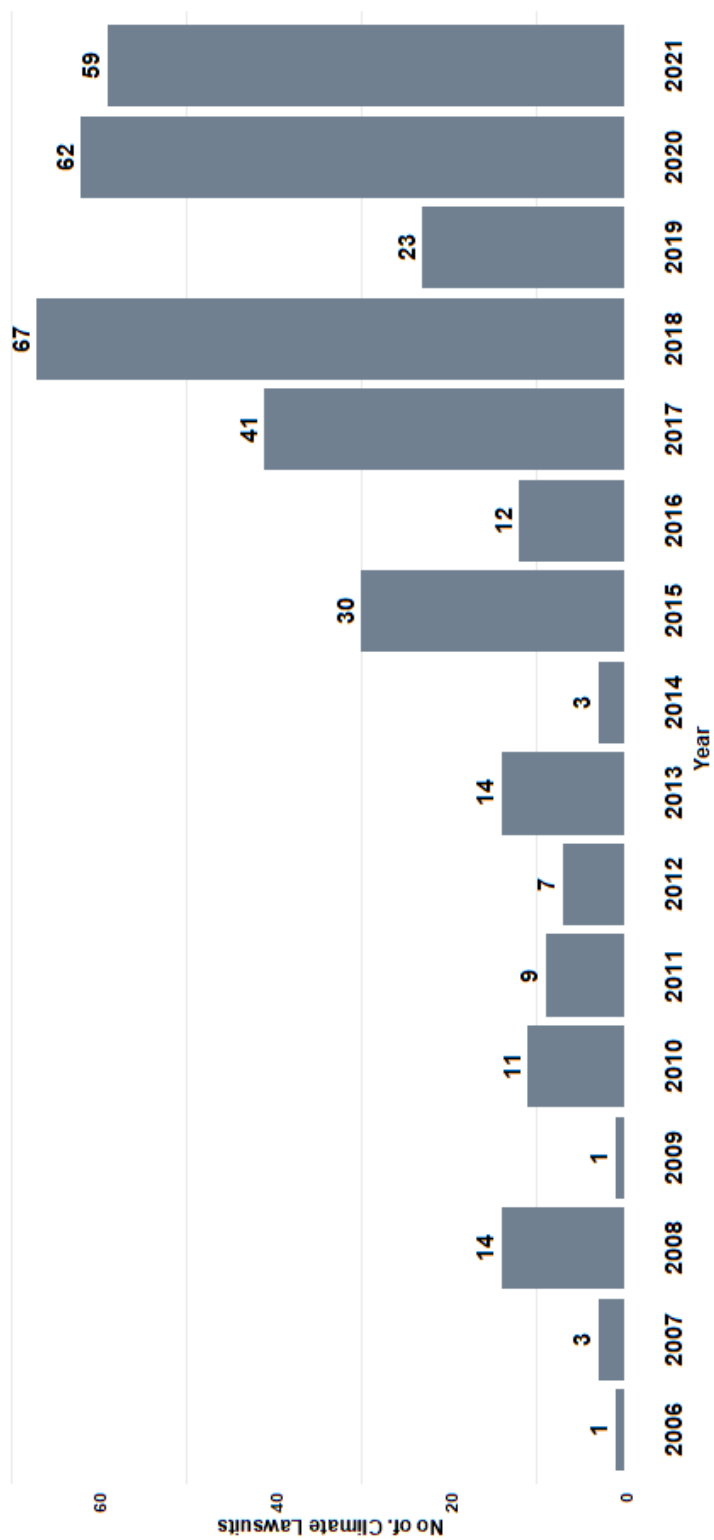
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**Figure 1: Number of Climate Lawsuits.**

The figure displays the annual number of climate-related lawsuits filed globally (US and EU) between 2006 and 2021.

**Table 1: Summary Statistics.**

This table reports summary statistics of different variables from our main dataset constructed based on a cross-section of 5264 different loan facilities (data source: Dealogic) issued to 329 worldwide unique firms during the years 2006 to 2021. Table A.1 (appears in Appendices) provides detailed descriptions and sources of all variables.

| Variable                                       | Obs. | Mean     | Std. Dev. | Min     | Max      |
|------------------------------------------------|------|----------|-----------|---------|----------|
| <b>Panel A. Dependent Variables</b>            |      |          |           |         |          |
| Spread (basis points)                          | 5264 | 184.705  | 143.177   | 15      | 800      |
| <b>Panel B. Climate Lawsuits Variables</b>     |      |          |           |         |          |
| Climate.Lawsuits                               | 5264 | 0.037    | 0.188     | 0       | 1        |
| ClimateLitExposure (log)                       | 5264 | 0.034    | 0.193     | 0       | 2.398    |
| Type.Lawsuit                                   | 1065 | 0.792    | 0.405     | 0       | 1        |
| Novel.Lawsuit                                  | 1065 | 0.482    | 0.499     | 0       | 1        |
| Europe                                         | 1065 | 0.262    | 0.439     | 0       | 1        |
| Government.Plaintiff                           | 1065 | 0.312    | 0.463     | 0       | 1        |
| <b>Panel C. ESG Variables</b>                  |      |          |           |         |          |
| Log(CO2)                                       | 5264 | 11.210   | 4.347     | 2.630   | 19.060   |
| Strong.Polluter                                | 5264 | 0.514    | 0.499     | 0       | 1        |
| ESG.Controversies.Score                        | 5264 | 79.763   | 31.098    | 0       | 100      |
| <b>Panel D. Loan Features Variables</b>        |      |          |           |         |          |
| Deal Amount (\$ million)                       | 5264 | 1836.351 | 3356.288  | 1       | 56900.99 |
| Maturity (years)                               | 5264 | 4.676    | 2.484     | 0.270   | 27.02    |
| Maturity (log)                                 | 5264 | 1.393    | 0.604     | -1.309  | 3.296    |
| Lenders                                        | 5264 | 11.665   | 10.104    | 2       | 64       |
| Secured.Loan                                   | 5264 | 0.223    | 0.416     | 0       | 1        |
| Subordinated.Loan                              | 5264 | 0.012    | 0.109     | 0       | 1        |
| Leveraged.Loan                                 | 5264 | 0.232    | 0.422     | 0       | 1        |
| Loan.Sponsor                                   | 5264 | 0.062    | 0.241     | 0       | 1        |
| Investment.Grade                               | 5264 | 0.701    | 0.458     | 0       | 1        |
| Term.Loan                                      | 5264 | 0.354    | 0.478     | 0       | 1        |
| <b>Panel E. Corporate Governance Variables</b> |      |          |           |         |          |
| Board.Size                                     | 5264 | 10.973   | 3.249     | 5       | 20       |
| Ind.Board                                      | 5264 | 68.884   | 23.601    | 0       | 100      |
| Board.Diversity                                | 5264 | 18.599   | 12.728    | 0       | 64.29    |
| Board.Skills                                   | 5264 | 48.521   | 23.267    | 0       | 100      |
| CEO.duality                                    | 5264 | 0.346    | 0.475     | 0       | 1        |
| <b>Panel F. Firm Characteristics</b>           |      |          |           |         |          |
| Size (log)                                     | 5264 | 16.385   | 2.158     | 10.226  | 23.06    |
| Cashfl.Sales                                   | 5264 | 17.292   | 16.799    | 0       | 290      |
| Debt.Ta                                        | 5264 | 29.457   | 19.642    | 0       | 199.13   |
| Beta                                           | 5264 | 1.123    | 0.758     | -5.43   | 4.99     |
| RoA                                            | 5264 | 4.859    | 11.275    | -122.47 | 157.56   |
| Asset.Turnover                                 | 5264 | 0.807    | 0.818     | 0       | 16.516   |

**Table 2: Number of Events per Industry.**

This table shows the distribution of climate litigation events with respect to industries, going from the most targeted to the least targeted.

| Industry <sup>1</sup>                         | NAICS2 | Events     |           |            |
|-----------------------------------------------|--------|------------|-----------|------------|
|                                               |        | Filing     | Decisions | All        |
| Mining, Quarrying, and Oil and Gas Extraction | 21     | 198        | 35        | 233        |
| Manufacturing                                 | 31     | 45         | 16        | 61         |
| Utilities                                     | 22     | 20         | 15        | 35         |
| Transportation                                | 48     | 7          | 8         | 15         |
| Retail-Wholesale Trade                        | 44-45  | 6          | 2         | 8          |
| Finance and Insurance                         | 52     | 3          | 2         | 5          |
| <b>Total</b>                                  |        | <b>279</b> | <b>78</b> | <b>357</b> |

<sup>1</sup> Industry classification is based on the North American Industry Classification System (NAICS):  
[https://tbed.org/industry/index.php?tablename=naics\\_vw&function=search&execute\\_search=1&search\\_from\\_filter=1](https://tbed.org/industry/index.php?tablename=naics_vw&function=search&execute_search=1&search_from_filter=1)

**Table 3: Baseline regression results.**

This table presents the regression results of Equation (1). The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to worldwide based non-financial firms. The dependent variable is Log(Spread) and the analysis is conducted at the loan facility level. Climate Lawsuits is a dummy variable and denoted as 1 if the firm is exposed to a climate lawsuit, and 0 otherwise. Borrower FE is firms fixed effect. Year FE is time fixed effect. Bank (lending) FE is bank fixed effect. Country FE is country fixed effect and DCC FE is deal loan characteristics fixed effect (Lenders, Secured Loan, Subordinated Loan, Leveraged Loan, Loan Sponsor, Investment, Term Loan). The variables' definitions and summary statistics are presented in Table 1 and in Table A.1 (Appendices). Standard errors are double-clustered by both firm and year and are reported in parentheses. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% level, respectively.

| Dependent variable: Log(Spread) | (1)                   | (2)                   | (3)                   | (4)                   | (5)                   | (6)                    | (7)                    | (8)                   | (9)                    | (10)                   | (11)                   |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|
| Climate_Lawsuits (t)            | 0.0781***<br>(0.0188) |                       |                       |                       |                       |                        |                        |                       |                        |                        |                        |
| Climate_Lawsuits (t-1)          |                       | 0.0624***<br>(0.0199) | 0.0526***<br>(0.0195) | 0.0462***<br>(0.0199) | 0.0362*<br>(0.0195)   |                        | 0.0445**<br>(0.0181)   |                       | 0.0431**<br>(0.0181)   |                        | 0.0382**<br>(0.0178)   |
| Deal_Amount                     |                       |                       |                       |                       |                       | -0.0247***<br>(0.0049) | -0.0242***<br>(0.0049) |                       | -0.0241***<br>(0.0049) |                        | -0.0176***<br>(0.0049) |
| Maturity                        |                       |                       |                       |                       |                       | -0.0645***<br>(0.0088) | -0.0638***<br>(0.0088) |                       | -0.0633***<br>(0.0088) |                        | -0.0603***<br>(0.0086) |
| Board_Size                      |                       |                       |                       |                       |                       |                        |                        | -0.0312<br>(0.0248)   | -0.0263<br>(0.0235)    |                        | -0.0376*<br>(0.0229)   |
| Ind_Board                       |                       |                       |                       |                       |                       |                        |                        | 0.0222***<br>(0.0085) | 0.0207**<br>(0.0082)   |                        | 0.0262***<br>(0.0080)  |
| Board_Diversity                 |                       |                       |                       |                       |                       |                        |                        | -0.0059<br>(0.0045)   | -0.0121***<br>(0.0043) |                        | -0.0107**<br>(0.0042)  |
| Board_Skills                    |                       |                       |                       |                       |                       |                        |                        | -0.0092*<br>(0.0051)  | -0.0113**<br>(0.0048)  |                        | -0.0058<br>(0.0046)    |
| CEO_Duality                     |                       |                       |                       |                       |                       |                        |                        | -0.0020<br>(0.0125)   | -0.0119<br>(0.0114)    |                        | -0.0023<br>(0.0111)    |
| Size                            |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0300***<br>(0.0073) | -0.0166**<br>(0.0069)  |
| Cashfl_sales                    |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0178***<br>(0.0059) | -0.0049<br>(0.0054)    |
| RoA                             |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0134**<br>(0.0052)  | -0.0112**<br>(0.0048)  |
| Beta                            |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0247*<br>(0.0148)   | -0.0174<br>(0.0132)    |
| Asset_Turnover                  |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0402<br>(0.0308)    | -0.0139<br>(0.0276)    |
| Leverage                        |                       |                       |                       |                       |                       |                        |                        |                       |                        | 0.0016<br>(0.0059)     | 0.0064<br>(0.0054)     |
| Intercept                       | 2.7427***<br>(0.0526) | 2.7475***<br>(0.0550) | 2.7479***<br>(0.0031) | 2.6861***<br>(0.0562) | 2.7484***<br>(0.0031) | 2.9584***<br>(0.0348)  | 2.9524***<br>(0.0348)  | 2.7809***<br>(0.0658) | 3.0045***<br>(0.0701)  | 3.3436***<br>(0.1249)  | 3.2360***<br>(0.1353)  |
| Borrower FE                     | No                    | No                    | Yes                   | No                    | Yes                   | Yes                    | Yes                    | Yes                   | Yes                    | Yes                    | Yes                    |
| Year FE                         | No                    | No                    | No                    | Yes                   | Yes                   | Yes                    | Yes                    | No                    | Yes                    | No                     | Yes                    |
| Bank (lending) FE               | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| Country FE                      | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| DCC FE                          | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| Obs.                            | 5264                  | 4935                  | 4935                  | 4935                  | 4935                  | 4935                   | 4935                   | 4935                  | 4935                   | 4935                   | 4935                   |

**Table 4: Regression results - Cross-sectional analyses.**

This table presents the regression results of Equation (1). The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to worldwide based non-financial firms. The dependent variable is Log(Spread) and the analysis is conducted at the loan facility level. Climate\_Lawsuits is a dummy variable and denoted as 1 if the firm is exposed to a climate lawsuit, and 0 otherwise. Borrower FE is firms fixed effect. Year FE is time fixed effect. Bank (lending) FE is bank fixed effect. Country FE is country fixed effect and DCC FE is deal loan characteristics fixed effect (Lenders, Secured\_Loan, Subordinated\_Loan, Leveraged\_Loan, Loan\_Sponsor, Investment, Term\_Loan). The variables' definitions and summary statistics are presented in Table 1 and in Table A.1 (appears in Appendices). Standard errors are double-clustered by both firm and year and are reported in parentheses. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% level, respectively.

| Dependent variable: Log(Spread) | Strong_Polluter<br>(1) | Less_Polluter<br>(2)   | ESG_Contro.High<br>(3) | ESG_Contro.Low<br>(4)  |
|---------------------------------|------------------------|------------------------|------------------------|------------------------|
| Climate_Lawsuits                | 0.0418*<br>(0.0229)    | -0.0636<br>(0.0451)    | 0.0651*<br>(0.0394)    | 0.0044<br>(0.0224)     |
| Deal_Amount                     | -0.0681***<br>(0.0077) | -0.0504***<br>(0.0067) | -0.0388***<br>(0.0113) | -0.0619***<br>(0.0061) |
| Maturity                        | 0.0409***<br>(0.0128)  | -0.0391***<br>(0.0121) | -0.0371**<br>(0.0183)  | 0.0447***<br>(0.0109)  |
| Board_Size                      | 0.0348<br>(0.0376)     | -0.0852***<br>(0.0284) | -0.0634<br>(0.0463)    | -0.0286<br>(0.0298)    |
| Ind_Board                       | 0.0153<br>(0.0122)     | 0.0296***<br>(0.0113)  | 0.0132<br>(0.0209)     | 0.0088<br>(0.0097)     |
| Board_Diversity                 | 0.0005<br>(0.0069)     | -0.0102*<br>(0.0052)   | -0.0279***<br>(0.0104) | -0.0023<br>(0.0050)    |
| Board_Skills                    | 0.0020<br>(0.0079)     | 0.0021<br>(0.0057)     | -0.0075<br>(0.0110)    | -0.0011<br>(0.0058)    |
| CEO_Duality                     | -0.0248<br>(0.0190)    | 0.0082<br>(0.0142)     | 0.0063<br>(0.0244)     | -0.0064<br>(0.0148)    |
| Size                            | -0.0023<br>(0.0137)    | -0.0310***<br>(0.0079) | -0.0672***<br>(0.0149) | -0.0015<br>(0.0087)    |
| Cashfl_sales                    | -0.0131<br>(0.0102)    | -0.0073<br>(0.0061)    | 0.0025<br>(0.0113)     | -0.0149**<br>(0.0070)  |
| RoA                             | -0.0072<br>(0.0083)    | -0.0122**<br>(0.0056)  | -0.0069<br>(0.0100)    | -0.0149**<br>(0.0061)  |
| Beta                            | -0.0271<br>(0.0225)    | -0.0002<br>(0.0174)    | -0.0542*<br>(0.0313)   | -0.0120<br>(0.0168)    |
| Asset_Turnover                  | 0.0575<br>(0.0464)     | -0.1811***<br>(0.0377) | -0.2456***<br>(0.0743) | -0.0021<br>(0.0335)    |
| Leverage                        | 0.0247*<br>(0.0144)    | 0.0066<br>(0.0053)     | 0.0068<br>(0.0193)     | 0.0014<br>(0.0068)     |
| Intercept                       | 3.3583***<br>(0.2675)  | 3.4231***<br>(0.1593)  | 4.5484***<br>(0.3023)  | 3.2105***<br>(0.1696)  |
| Borrower FE                     | Yes                    | Yes                    | Yes                    | Yes                    |
| Year FE                         | Yes                    | Yes                    | Yes                    | Yes                    |
| Bank (lending) FE               | Yes                    | Yes                    | Yes                    | Yes                    |
| Country FE                      | Yes                    | Yes                    | Yes                    | Yes                    |
| DCC FE                          | Yes                    | Yes                    | Yes                    | Yes                    |
| Obs.                            | 2550                   | 2385                   | 1519                   | 3416                   |

**Table 5: Regression results - Climate lawsuits characteristics.**

This table presents the regression results of climate lawsuits characteristics. The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to worldwide based non-financial firms. The dependent variable is Log(Spread) and the analysis is conducted at the loan facility level. Climate\_Lawsuits is a dummy variable and denoted as 1 if the firm is exposed to an environmental lawsuit, and 0 otherwise. Type\_Lawsuit is a dummy variable and denoted as 1 if the firm is exposed to a filing climate lawsuit, and 0 otherwise. Novel\_Lawsuit is a dummy variable and denoted as 1 if the firm is exposed a novel climate lawsuit, and 0 otherwise. Europe is a dummy variable and denoted as 1 if the climate lawsuit is filed in Europe, and 0 otherwise. Government\_Plauntiff is a dummy variable and denoted as 1 if the plaintiff is a government body, and 0 otherwise. Borrower FE is firms fixed effect. Year FE is time fixed effect. Bank (lending) FE is bank fixed effect. Country FE is country fixed effect and DCC FE is deal loan characteristics fixed effect (Lenders, Secured\_Loan, Subordinated\_Loan, Leveraged\_Loan, Loan\_Sponsor, Investment, Term\_Loan). The variables' definitions and summary statistics are presented in Table 1 and in Table A.1 (appears in Appendices). Standard errors are double-clustered by both firm and year and are reported in parentheses. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% level, respectively.

| Dependent variable: Log(Spread)      | (1)                   | (2)                   | (3)                   | (4)                   | (5)                   | (6)                   | (7)                   | (8)                   | (9)                   | (10)                  | (11)                  | (12)                  |
|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Type_Lawsuit                         | 0.0674<br>(0.0519)    |                       |                       |                       | -0.0104<br>(0.0477)   | -0.0192<br>(0.0963)   | -0.0004<br>(0.0956)   | -0.0052<br>(0.0897)   | -0.0108<br>(0.0792)   | -0.0006<br>(0.0767)   | -0.0091<br>(0.0792)   | 0.0135<br>(0.1065)    |
| Novel_Lawsuit                        |                       | 0.1052**<br>(0.0478)  |                       |                       | 0.1319**<br>(0.0519)  | 0.0999<br>(0.1206)    | 0.1306<br>(0.0747)    | 0.1312*<br>(0.0742)   | 0.1535<br>(0.0877)    | 0.1045<br>(0.1149)    | 0.1318<br>(0.0765)    | 0.1476<br>(0.2026)    |
| Europe                               |                       |                       | -0.0147<br>(0.0303)   |                       | 0.0146<br>(0.0496)    | 0.0247<br>(0.0775)    | 0.0398<br>(0.1082)    | 0.0136<br>(0.0768)    | 0.1047<br>(0.1255)    | 0.0201<br>(0.0701)    | 0.0109<br>(0.0826)    | 0.0985<br>(0.1732)    |
| Government_Plauntiff                 |                       |                       |                       | 0.0417<br>(0.0533)    | 0.0925<br>(0.0621)    | 0.0967<br>(0.1222)    | 0.0911<br>(0.1221)    | 0.1152<br>(0.2425)    | 0.1030<br>(0.1274)    | 0.0635<br>(0.1673)    | 0.0896<br>(0.1262)    | 0.1276<br>(0.2970)    |
| Type_Lawsuit * Novel_Lawsuit         |                       |                       |                       |                       |                       | 0.0379<br>(0.0965)    |                       |                       |                       |                       |                       | -0.0247<br>(0.1264)   |
| Type_Lawsuit * Europe                |                       |                       |                       |                       |                       |                       | -0.0458<br>(0.0999)   |                       |                       |                       |                       | 0.0095<br>(0.0756)    |
| Type_Lawsuit * Government_Plauntiff  |                       |                       |                       |                       |                       |                       |                       | -0.0251<br>(0.1643)   |                       |                       |                       | -0.0582<br>(0.1776)   |
| Novel_Lawsuit * Europe               |                       |                       |                       |                       |                       |                       |                       |                       | -0.1359<br>(0.1085)   |                       |                       | -0.1368<br>(0.1837)   |
| Novel_Lawsuit * Government_Plauntiff |                       |                       |                       |                       |                       |                       |                       |                       |                       | 0.0547<br>(0.1218)    |                       | 0.0512<br>(0.1322)    |
| Europe * Government_Plauntiff        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 0.0878<br>(0.1296)    | -0.0483<br>(0.3513)   |
| Intercept                            | 4.8774***<br>(0.3683) | 5.0010***<br>(0.3665) | 4.9811***<br>(0.3712) | 4.8726***<br>(0.3826) | 4.7900***<br>(0.3960) | 4.7784***<br>(0.5871) | 4.8140***<br>(0.5817) | 4.7919***<br>(0.5778) | 4.8414***<br>(0.5754) | 4.8120***<br>(0.6238) | 4.7974***<br>(0.5922) | 4.8653***<br>(0.5949) |
| Deal Controls Variables              | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Corporate Governance Variables       | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Firm's specifics Variables           | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Borrower FE                          | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Year FE                              | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Bank (lending) FE                    | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| DCC FE                               | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   | Yes                   |
| Obs.                                 | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  | 1065                  |

**Table 6: Robustness results - Continuous climate litigation exposure.**

This table presents the regression results of Equation (1). The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to worldwide based non-financial firms. The dependent variable is Log(Spread) and the analysis is conducted at the loan facility level. ClimateLitExposure is the log of the number of climate lawsuits per firm per year. Borrower FE is firms fixed effect. Year FE is time fixed effect. Bank (lending) FE is bank fixed effect. Country FE is country fixed effect and DCC FE is deal loan characteristics fixed effect (Lenders, Secured Loan, Subordinated Loan, Leveraged Loan, Loan Sponsor, Investment, Term Loan). The variables' definitions and summary statistics are presented in Table 1 and in Table A.1 (appears in Appendices). Standard errors are double-clustered by both firm and year and are reported in parentheses. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% level, respectively.

| Dependent variable: Log(Spread) | (1)                   | (2)                   | (3)                   | (4)                   | (5)                   | (6)                    | (7)                    | (8)                   | (9)                    | (10)                   | (11)                   |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|
| ClimateLitExposure (t)          | 0.1045***<br>(0.0186) |                       |                       |                       |                       |                        |                        |                       |                        |                        |                        |
| ClimateLitExposure (t-1)        |                       | 0.1064***<br>(0.0197) | 0.0989***<br>(0.0195) | 0.0912***<br>(0.0199) | 0.0836***<br>(0.0196) |                        | 0.0764***<br>(0.0184)  |                       | 0.0747***<br>(0.0184)  |                        | 0.0660***<br>(0.0183)  |
| Deal_Amount                     |                       |                       |                       |                       |                       | -0.0247***<br>(0.0049) | -0.0237***<br>(0.0048) |                       | -0.0236***<br>(0.0049) |                        | -0.0173***<br>(0.0049) |
| Maturity                        |                       |                       |                       |                       |                       | -0.0645***<br>(0.0088) | -0.0634***<br>(0.0088) |                       | -0.0628***<br>(0.0088) |                        | -0.0599***<br>(0.0086) |
| Board_Size                      |                       |                       |                       |                       |                       |                        |                        | -0.0312<br>(0.0248)   | -0.0257<br>(0.0234)    |                        | -0.0371<br>(0.0229)    |
| Ind_Board                       |                       |                       |                       |                       |                       |                        |                        | 0.0222***<br>(0.0085) | 0.0211***<br>(0.0082)  |                        | 0.0266***<br>(0.0080)  |
| Board_Diversity                 |                       |                       |                       |                       |                       |                        |                        | -0.0059<br>(0.0045)   | -0.0116***<br>(0.0043) |                        | -0.0103***<br>(0.0042) |
| Board_Skills                    |                       |                       |                       |                       |                       |                        |                        | -0.0092*<br>(0.0051)  | -0.0114**<br>(0.0047)  |                        | -0.0059<br>(0.0046)    |
| CEO_Duality                     |                       |                       |                       |                       |                       |                        |                        | -0.0020<br>(0.0125)   | -0.0118<br>(0.0113)    |                        | -0.0019<br>(0.0111)    |
| Size                            |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0300***<br>(0.0073) | -0.0152**<br>(0.0069)  |
| Cashfl_sales                    |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0178***<br>(0.0059) | -0.0049<br>(0.0053)    |
| RoA                             |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0134**<br>(0.0052)  | -0.0112**<br>(0.0048)  |
| Beta                            |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0247*<br>(0.0148)   | -0.0186<br>(0.0132)    |
| Asset_Turnover                  |                       |                       |                       |                       |                       |                        |                        |                       |                        | -0.0402<br>(0.0308)    | -0.0071<br>(0.0277)    |
| Leverage                        |                       |                       |                       |                       |                       |                        |                        |                       |                        | 0.0016<br>(0.0059)     | 0.0062<br>(0.0054)     |
| Intercept                       | 2.7419***             | 2.7462***             | 2.7465***             | 2.6861***             | 2.7470***             | 2.9584***              | 2.9478***              | 2.7809***             | 2.9953***              | 3.3436***              | 3.2050***              |
| Borrower FE                     | No                    | No                    | Yes                   | No                    | Yes                   | Yes                    | Yes                    | Yes                   | Yes                    | Yes                    | Yes                    |
| Year FE                         | No                    | No                    | No                    | Yes                   | Yes                   | Yes                    | Yes                    | Yes                   | Yes                    | Yes                    | Yes                    |
| Bank (lending) FE               | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| Country FE                      | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| DCC FE                          | No                    | No                    | No                    | No                    | No                    | No                     | No                     | No                    | No                     | No                     | Yes                    |
| Obs.                            | 5264                  | 4935                  | 4935                  | 4935                  | 4935                  | 4935                   | 4935                   | 4935                  | 4935                   | 4935                   | 4935                   |

**Table 7: Regression results – Instrumental variable approach.**

This table presents the regression results of Equation (1). The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to worldwide based non-financial firms. *Avg\_Industry\_ClimateLawsuits\_Events* is the log of the average number of lawsuits faced by all other firms in the same industry and year, excluding firm *i*. *ClimateLitExposure* is the log of the number of climate lawsuits per firm per year. *Spread* is the log of all-in-drawn interest paid by borrowers annually over LIBOR in basis points. *Borrower FE* is firm fixed effect; *Year FE* is year fixed effect; *Bank FE* is bank fixed effect; *Country FE* is country fixed effect; *DCC FE* is deal loan characteristics fixed effect (including Lenders, Secured\_Loan, Subordinated\_Loan, Leveraged\_Loan, Loan\_Sponsor, Investment, Term\_Loan). Variable definitions and summary statistics are in Table 1 and Appendix Table A.1. Standard errors are double-clustered by firm and year, reported in parentheses. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

|                                     | ClimateLitExposure<br>(1) | Log(Spread)<br>(2)   |
|-------------------------------------|---------------------------|----------------------|
| Avg_Industry_ClimateLawsuits_Events | 0.065***<br>(0.018)       |                      |
| ClimateLitExposure-fitted           |                           | 0.109**<br>(0.048)   |
| Deal_Amount                         | -0.009**<br>(0.004)       | -0.032***<br>(0.005) |
| Maturity                            | -0.003*<br>(0.002)        | 0.007***<br>(0.002)  |
| Board_Size                          | 0.000<br>(0.020)          | -0.024<br>(0.025)    |
| Ind_Board                           | 0.001<br>(0.007)          | 0.026***<br>(0.008)  |
| Board_Diversity                     | 0.007**<br>(0.003)        | 0.009**<br>(0.004)   |
| Board_Skills                        | -0.000<br>(0.000)         | -0.000<br>(0.000)    |
| CEO_Duality                         | -0.016<br>(0.010)         | -0.013<br>(0.013)    |
| Size                                | -0.016***<br>(0.005)      | 0.003<br>(0.007)     |
| Cashfl_sales                        | 0.004<br>(0.005)          | -0.017***<br>(0.006) |
| RoA                                 | -0.016***<br>(0.004)      | -0.016***<br>(0.005) |
| Beta                                | 0.034***<br>(0.012)       | -0.021<br>(0.015)    |
| Asset_Turnover                      | -0.191***<br>(0.025)      | -0.029<br>(0.032)    |
| Leverage                            | 0.010**<br>(0.005)        | 0.005<br>(0.006)     |
| Borrower FE                         | Yes                       | Yes                  |
| Year FE                             | Yes                       | Yes                  |
| Observations                        | 4,935                     | 4,935                |
| Kleibergen-Paap rk LM statistic     | 756.152                   |                      |
| Cragg-Donald Wald F-statistic       | 901.919                   |                      |
| Stock-Yogo weak ID CV (10% IV size) | 16.38                     |                      |

**Table 8: Regression results - Other loan contractual features.**

This table presents the regression results of other loan contractual features. The sample of loan facilities is from the Dealogic database, originated between 2006 and 2021 to world-wide based non-financial firms. The dependent variable is Log(Maturity), Log(Deal\_Amount), Secured\_Loan, Log(Lenders) and the analysis is conducted at the loan facility level. Climate\_Lawsuits is a dummy variable and denoted as 1 if the firm is exposed to a climate lawsuit, and 0 otherwise. Borrower FE is firms fixed effect. Year FE is time fixed effect. Bank (lending) FE is bank fixed effect. Country FE is country fixed effect and DCC FE is deal loan characteristics fixed effect. The variables' definitions and summary statistics are presented in Table 1 and in Table A.1 (appears in Appendices). Standard errors are double-clustered by both firm and year and are reported in parentheses. \*\*\*, \*\*, and \* correspond to statistical significance at the 1%, 5%, and 10% level, respectively.

| Dependent variable:    | Log(Maturity)<br>(1)   | Log(Deal_Amount)<br>(2) | Secured<br>(3)         | Log(Lenders)<br>(4)    |
|------------------------|------------------------|-------------------------|------------------------|------------------------|
| Climate_Lawsuits (t-1) | -0.0793**<br>(0.0315)  | -0.1339**<br>(0.0547)   | -0.1624<br>(0.1316)    | -0.0001<br>(0.0398)    |
| Deal_Amount            | -0.0398***<br>(0.0085) |                         | -0.0594***<br>(0.0145) | 0.1046***<br>(0.0106)  |
| Maturity               |                        | -0.1205***<br>(0.0257)  | 0.0228<br>(0.0359)     | 0.0285<br>(0.0185)     |
| Board_Size             | 0.0215<br>(0.0398)     | 0.2054***<br>(0.0692)   | 0.0383<br>(0.0732)     | -0.0988*<br>(0.0504)   |
| Ind_Board              | -0.0001<br>(0.0137)    | -0.0647***<br>(0.0238)  | 0.0334<br>(0.0323)     | 0.0207<br>(0.0172)     |
| Board_Diversity        | -0.0262***<br>(0.0073) | -0.0342***<br>(0.0126)  | 0.0372**<br>(0.0189)   | 0.0208**<br>(0.0092)   |
| Board_Skills           | 0.0019<br>(0.0082)     | -0.0095<br>(0.0143)     | -0.0576***<br>(0.0219) | 0.0202*<br>(0.0103)    |
| CEO_Duality            | 0.0384*<br>(0.0201)    | -0.0940***<br>(0.0350)  | -0.0853*<br>(0.0447)   | -0.0388<br>(0.0254)    |
| Size                   | -0.0005<br>(0.0119)    | 0.1416***<br>(0.0206)   | -0.1795***<br>(0.0116) | 0.0222<br>(0.0150)     |
| Cashfl_sales           | 0.0262***<br>(0.0094)  | -0.0213<br>(0.0165)     | -0.0714***<br>(0.0243) | -0.0096<br>(0.0120)    |
| RoA                    | -0.0008<br>(0.0084)    | 0.0271*<br>(0.0146)     | -0.1481***<br>(0.0275) | 0.0060<br>(0.0106)     |
| Beta                   | 0.0258<br>(0.0239)     | 0.0173<br>(0.0416)      | -0.0266<br>(0.0611)    | -0.0987***<br>(0.0302) |
| Asset_Turnover         | -0.0925*<br>(0.0493)   | -0.0201<br>(0.0858)     | -0.1873**<br>(0.0732)  | 0.0334<br>(0.0625)     |
| Leverage               | 0.0011<br>(0.0095)     | 0.0544***<br>(0.0164)   | 0.0682***<br>(0.0214)  | -0.0037<br>(0.0120)    |
| Intercept              | 1.6261***<br>(0.2341)  | 4.2199***<br>(0.4047)   | 2.7506***<br>(0.2971)  | 0.2163<br>(0.2962)     |
| Borrower FE            | Yes                    | Yes                     | Yes                    | Yes                    |
| Year FE                | Yes                    | Yes                     | Yes                    | Yes                    |
| Bank (lending) FE      | Yes                    | Yes                     | Yes                    | Yes                    |
| Country FE             | Yes                    | Yes                     | Yes                    | Yes                    |
| DCC FE                 | Yes                    | Yes                     | Yes                    | Yes                    |
| Obs.                   | 4935                   | 4935                    | 4935                   | 4935                   |

# Appendix

**Table A.1. Variable Definitions**

| Variable                               | Definition                                                                    | Source                                                    |
|----------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------|
| <b>Climate Litigation Risk Proxies</b> |                                                                               |                                                           |
| Climate.Lawsuits                       | Dummy variable (=1 if the firm is exposed to a climate lawsuit, =0 otherwise) | Sabin Center for Climate Change Law; Author's Calculation |
| ClimateLitExposure (log)               | Log of the number of climate lawsuits per firm per year                       | Sabin Center for Climate Change Law; Author's Calculation |
| Type.Lawsuit                           | Dummy (=1 if the firm is exposed to a filing, =0 otherwise)                   | Sabin Center for Climate Change Law; Author's Calculation |
| Novel.Lawsuit                          | Dummy (=1 if the firm is exposed to a novel climate lawsuit, =0 otherwise)    | Sabin Center for Climate Change Law; Author's Calculation |
| Europe                                 | Dummy (=1 if the lawsuit is filed in Europe, =0 otherwise)                    | Sabin Center for Climate Change Law; Author's Calculation |
| Government.Plaintiff                   | Dummy (=1 if the plaintiff is a government body, =0 otherwise)                | Sabin Center for Climate Change Law; Author's Calculation |
| <b>Loan Features and Loan Type</b>     |                                                                               |                                                           |
| Log(Spread)                            | Log of all-in-drawn spread over LIBOR (basis points)                          | Dealogic; Author's Calculation                            |
| Log(Deal.Amount)                       | Log-transformed total deal amount                                             | Dealogic; Author's Calculation                            |
| Log(Maturity)                          | Log-transformed loan maturity in years                                        | Dealogic; Author's Calculation                            |
| Log(Lenders)                           | Log-transformed number of lenders in syndication                              | Dealogic; Author's Calculation                            |
| Secured.Loan                           | Dummy (=1 if the loan is secured, =0 otherwise)                               | Dealogic; Author's Calculation                            |
| Subordinated.Loan                      | Dummy (=1 if the loan is subordinated, =0 otherwise)                          | Dealogic; Author's Calculation                            |
| Leveraged.Loan                         | Dummy (=1 if the loan is leveraged, =0 otherwise)                             | Dealogic; Author's Calculation                            |
| Loan.Sponsor                           | Dummy (=1 if the loan is sponsor-backed, =0 otherwise)                        | Dealogic; Author's Calculation                            |
| Investment.Grade                       | Dummy (=1 if S&P credit rating is BBB- or above, =0 otherwise)                | Dealogic; Author's Calculation                            |

Table A.1. Variable Definitions (continued)

| Variable                              | Definition                                                                | Source                                |
|---------------------------------------|---------------------------------------------------------------------------|---------------------------------------|
| Term.Loan                             | Dummy (=1 if the loan is a term loan, =0 otherwise)                       | Dealogic;Author's Calculation         |
| <b>ESG Variables</b>                  |                                                                           |                                       |
| Log(CO2)                              | Log of total carbon emissions (Scope 1 and Scope 2, in tons)              | Refinitiv Eikon;Author's Calculation  |
| ESG_Controversies_Score               | Index measuring exposure to ESG controversies and negative media events   | Refinitiv Eikon                       |
| <b>Corporate Governance Variables</b> |                                                                           |                                       |
| Board_Size                            | Log of the number of board members                                        | Refinitiv Eikon; Author's Calculation |
| Ind_Board                             | Percentage of independent board members                                   | Refinitiv Eikon                       |
| Board_Diversity                       | Fraction of female board members                                          | Refinitiv Eikon                       |
| Board_Skills                          | Percentage of board members with industry-specific or financial expertise | Refinitiv Eikon                       |
| CEO_Duality                           | Dummy (=1 if the CEO also serves as Board Chair, =0 otherwise)            | Refinitiv Eikon;Author's Calculation  |
| <b>Firm Characteristics</b>           |                                                                           |                                       |
| Size (log)                            | Log of total firm assets                                                  | Datastream;Author's Calculation       |
| Cashfl_Sales                          | Ratio of cash flow to sales                                               | Datastream                            |
| Debt_Ta                               | Ratio of debt to total assets                                             | Datastream                            |
| Beta                                  | 60-month beta: measures stock volatility relative to market index         | Datastream                            |
| RoA                                   | Return on assets, calculated using adjusted net income and asset averages | Datastream                            |
| Asset_Turnover                        | Ratio of revenue to total assets                                          | Datastream                            |

**Appendix Table A.2: Climate lawsuit events.**

| No | Issued Date | Event                                              | Company                               | Type   |
|----|-------------|----------------------------------------------------|---------------------------------------|--------|
| 1  | 20/09/2006  | California v. GM Corp.                             | General Motors Company                | Filing |
| 2  | 07/05/2007  | Germanwatch vs. Volkswagen                         | Volkswagen AG                         | Filing |
| 3  | 16/01/2008  | Australian Competition & Consumer Commission v. GM | General Motors Company                | Filing |
| 4  | 12/02/2008  | Sierra Club v. Duke Energy Indiana                 | Duke Energy Corporation               | Filing |
| 5  | 26/02/2008  | Native Village of Kivalina v. Exxon-Mobil Corp.    | BP                                    | Filing |
| 6  | 26/02/2008  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Chevron Corporation                   | Filing |
| 7  | 26/02/2008  | Native Village of Kivalina v. Exxon-Mobil Corp.    | ExxonMobil Corporation                | Filing |
| 8  | 26/02/2008  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Peabody Energy Corporation            | Filing |
| 9  | 26/02/2008  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Shell                                 | Filing |
| 10 | 09/05/2008  | Connecticut v. Am. Elec. Power                     | American Electric Power Company, Inc. | Filing |
| 11 | 16/07/2008  | Southern Alliance for Clean Energy v. Duke Energy  | Duke Energy Corporation               | Filing |
| 12 | 23/10/2008  | Burton v. Dominion Nuclear Connecticut, Inc.       | Dominion Energy, Inc.                 | Filing |
| 13 | 24/06/2010  | Conservation Law Foundation v. Dominion Energy New | Dominion Energy, Inc.                 | Filing |
| 14 | 09/09/2010  | Sierra Club v. Wisconsin Power & Light Co.         | Alliant Energy Corp                   | Filing |
| 15 | 27/12/2010  | Sao Paulo Public Prosecutor's Office v. United Air | Delta Air Lines, Inc.                 | Filing |
| 16 | 27/12/2010  | Sao Paulo Public Prosecutor's Office v. United Air | United Airlines Holdings, Inc.        | Filing |
| 17 | 28/01/2011  | United States v. DTE Energy                        | DTE Energy Company                    | Filing |
| 18 | 27/05/2011  | Comer v. Murphy Oil USA, Inc.                      | Chevron Corporation                   | Filing |
| 19 | 27/05/2011  | Comer v. Murphy Oil USA, Inc.                      | ExxonMobil Corporation                | Filing |
| 20 | 27/05/2011  | Comer v. Murphy Oil USA, Inc.                      | Honeywell International Inc.          | Filing |
| 21 | 27/05/2011  | Comer v. Murphy Oil USA, Inc.                      | Murphy Oil Corporation                | Filing |
| 22 | 27/05/2011  | Comer v. Murphy Oil USA, Inc.                      | Shell                                 | Filing |
| 23 | 28/11/2011  | Norwegian Climate Network et al vs Statoil         | Equinor ASA                           | Filing |
| 24 | 09/03/2012  | California Health Communities Network v. City of P | Walmart Inc.                          | Filing |
| 25 | 22/02/2013  | Conservation Law Foundation v. Dominion Energy Bra | Dominion Energy, Inc.                 | Filing |
| 26 | 30/12/2013  | In re Vienna-Schwechat Airport Expansion           | Flughafen Wien AG                     | Filing |
| 27 | 02/07/2014  | Northwest Environmental Defense Center v. Cascade  | Global Partners LP                    | Filing |
| 28 | 03/09/2014  | United States v. Costco Wholesale Corp. No.3:14-   | Costco Wholesale Corporation          | Filing |
| 29 | 25/03/2015  | Nucor Steel-Arkansas v. Big River Steel, LLC, No.  | United States Steel Corporation       | Filing |
| 30 | 09/06/2015  | Roe v. Arch Coal, Inc.                             | Arch Resources Inc Class A            | Filing |
| 31 | 11/06/2015  | Lynn v. Peabody Energy Corp.                       | Arch Resources Inc Class A            | Filing |
| 32 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-...(C | Apa Corporation                       | Filing |
| 33 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-...(C | Anadarko Petroleum Corporation        | Filing |

**Table A.2 (continued)**

| No | Issued Date | Event                                               | Company                          | Type   |
|----|-------------|-----------------------------------------------------|----------------------------------|--------|
| 34 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Anglo American                   | Filing |
| 35 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Arch Resources Inc Class A       | Filing |
| 36 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | BP                               | Filing |
| 37 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | CNX Resources Corporation        | Filing |
| 38 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Chevron Corporation              | Filing |
| 39 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | ConocoPhillips Company           | Filing |
| 40 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Devon Energy Corporation         | Filing |
| 41 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Eni SpA                          | Filing |
| 42 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | ExxonMobil Corporation           | Filing |
| 43 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Glencore plc                     | Filing |
| 44 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Heidelberg Cement AG             | Filing |
| 45 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Hess Corporation                 | Filing |
| 46 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Husky Energy Inc.                | Filing |
| 47 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Marathon Oil Corporation         | Filing |
| 48 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Murphy Oil Corporation           | Filing |
| 49 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Occidental Petroleum Corporation | Filing |
| 50 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Ovintiv Inc.                     | Filing |
| 51 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Peabody Energy Corporation       | Filing |
| 52 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | RWE AG                           | Filing |
| 53 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Repsol SA                        | Filing |
| 54 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Shell                            | Filing |
| 55 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Suncor Energy Inc.               | Filing |
| 56 | 22/09/2015  | In re Greenpeace Southeast Asia et al., 2015-__ (C) | Total Energies SE                | Filing |
| 57 | 23/11/2015  | Lliuya v. RWE                                       | RWE AG                           | Filing |
| 58 | 07/12/2015  | California v. Southern California Gas Co.           | Sempra Energy                    | Filing |
| 59 | 26/01/2016  | California ex rel. South Coast Air Quality Managem  | Sempra Energy                    | Filing |
| 60 | 02/02/2016  | People v. Southern California Gas Co.               | Sempra Energy                    | Filing |
| 61 | 03/02/2016  | Benton v. Global Companies, LLC, No. 1:16-cv-00125  | Global Partners LP               | Filing |
| 62 | 19/04/2016  | Shupak v. Reed                                      | Sempra Energy                    | Filing |

**Table A.2 (continued)**

| <b>No</b> | <b>Issued Date</b> | <b>Event</b>                                       | <b>Company</b>                   | <b>Type</b> |
|-----------|--------------------|----------------------------------------------------|----------------------------------|-------------|
| 63        | 25/07/2016         | California v. Southern California Gas Co., No.BC6  | Sempra Energy                    | Filing      |
| 64        | 29/09/2016         | Conservation Law Foundation v. ExxonMobilCorp.     | ExxonMobil Corporation           | Filing      |
| 65        | 07/11/2016         | Ramirez v. Exxon Mobil Corp.                       | ExxonMobil Corporation           | Filing      |
| 66        | 23/11/2016         | Fentress v. Exxon Mobil Corp.                      | ExxonMobil Corporation           | Filing      |
| 67        | 08/05/2017         | BankTrack, et al. vs. ING Bank                     | ING Groep NV                     | Filing      |
| 68        | 18/05/2017         | In re Amended and Restated Preliminary Prospectus  | Kinder Morgan, Inc.              | Filing      |
| 69        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Apa Corporation                  | Filing      |
| 70        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Anadarko Petroleum Corporation   | Filing      |
| 71        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | BP                               | Filing      |
| 72        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Chevron Corporation              | Filing      |
| 73        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | ConocoPhillips Company           | Filing      |
| 74        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Devon Energy Corporation         | Filing      |
| 75        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Eni SpA                          | Filing      |
| 76        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | ExxonMobil Corporation           | Filing      |
| 77        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Hess Corporation                 | Filing      |
| 78        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Marathon Petroleum Corporation   | Filing      |
| 79        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Occidental Petroleum Corporation | Filing      |
| 80        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Ovintiv Inc.                     | Filing      |
| 81        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Repsol SA                        | Filing      |
| 82        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Shell                            | Filing      |
| 83        | 17/07/2017         | County of San Mateo v. Chevron Corp.               | Total Energies SE                | Filing      |
| 84        | 28/08/2017         | Conservation Law Foundation, Inc. v. Shell Oil Pro | Shell                            | Filing      |
| 85        | 19/09/2017         | City of Oakland v. BP p.l.c.                       | BP                               | Filing      |
| 86        | 20/09/2017         | City of Oakland v. BP p.l.c.                       | Chevron Corporation              | Filing      |
| 87        | 21/09/2017         | City of Oakland v. BP p.l.c.                       | ExxonMobil Corporation           | Filing      |
| 88        | 22/09/2017         | City of Oakland v. BP p.l.c.                       | ConocoPhillips Company           | Filing      |
| 89        | 16/11/2017         | Harris County v. Arkema, Inc.                      | Arkema S.A.                      | Filing      |
| 90        | 20/12/2017         | County of Santa Cruz v. Chevron Corp.              | Apa Corporation                  | Filing      |
| 91        | 20/12/2017         | County of Santa Cruz v. Chevron Corp.              | Anadarko Petroleum Corporation   | Filing      |
| 92        | 20/12/2017         | County of Santa Cruz v. Chevron Corp.              | BP                               | Filing      |
| 93        | 20/12/2017         | County of Santa Cruz v. Chevron Corp.              | ConocoPhillips Company           | Filing      |
| 94        | 20/12/2017         | County of Santa Cruz v. Chevron Corp.              | Chevron Corporation              | Filing      |

Table A.2 (continued)

| No  | Issued Date | Event                                              | Company                          | Type   |
|-----|-------------|----------------------------------------------------|----------------------------------|--------|
| 95  | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Devon Energy Corporation         | Filing |
| 96  | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Eni SpA                          | Filing |
| 97  | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | ExxonMobil Corporation           | Filing |
| 98  | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Hess Corporation                 | Filing |
| 99  | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Occidental Petroleum Corporation | Filing |
| 100 | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Ovintiv Inc.                     | Filing |
| 101 | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Phillips 66                      | Filing |
| 102 | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Repsol SA                        | Filing |
| 103 | 20/12/2017  | County of Santa Cruz v. Chevron Corp.              | Shell                            | Filing |
| 104 | 09/01/2018  | City of New York v. BP p.l.c.                      | BP                               | Filing |
| 105 | 09/01/2018  | City of New York v. BP p.l.c.                      | Chevron Corporation              | Filing |
| 106 | 09/01/2018  | City of New York v. BP p.l.c.                      | ConocoPhillips Company           | Filing |
| 107 | 09/01/2018  | City of New York v. BP p.l.c.                      | ExxonMobil Corporation           | Filing |
| 108 | 09/01/2018  | City of New York v. BP p.l.c.                      | Shell                            | Filing |
| 109 | 22/01/2018  | City of Richmond v Chevron                         | Hess Corporation                 | Filing |
| 110 | 23/01/2018  | City of Richmond v Chevron                         | Apa Corporation                  | Filing |
| 111 | 24/01/2018  | City of Richmond v Chevron                         | BP                               | Filing |
| 112 | 25/01/2018  | City of Richmond v Chevron                         | Chevron Corporation              | Filing |
| 113 | 26/01/2018  | City of Richmond v Chevron                         | ExxonMobil Corporation           | Filing |
| 114 | 29/01/2018  | City of Richmond v Chevron                         | Ovintiv Inc.                     | Filing |
| 115 | 30/01/2018  | City of Richmond v Chevron                         | Anadarko Petroleum Corporation   | Filing |
| 116 | 31/01/2018  | City of Richmond v Chevron                         | Shell                            | Filing |
| 117 | 01/02/2018  | City of Richmond v Chevron                         | Devon Energy Corporation         | Filing |
| 118 | 02/02/2018  | City of Richmond v Chevron                         | Repsol SA                        | Filing |
| 119 | 05/02/2018  | City of Richmond v Chevron                         | Phillips 66                      | Filing |
| 120 | 06/02/2018  | City of Richmond v Chevron                         | Marathon Petroleum Corporation   | Filing |
| 121 | 17/04/2018  | Board of County Commissioners of Boulder County v. | ExxonMobil Corporation           | Filing |
| 122 | 17/04/2018  | Board of County Commissioners of Boulder County v. | Suncor Energy Inc.               | Filing |
| 123 | 09/05/2018  | King County v. BP p.l.c.                           | BP                               | Filing |
| 124 | 10/05/2018  | King County v. BP p.l.c.                           | Chevron Corporation              | Filing |
| 125 | 11/05/2018  | King County v. BP p.l.c.                           | ExxonMobil Corporation           | Filing |
| 126 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | BP                               | Filing |
| 127 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | Chevron Corporation              | Filing |
| 128 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | ConocoPhillips Company           | Filing |
| 129 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | ExxonMobil Corporation           | Filing |
| 130 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | Hess Corporation                 | Filing |
| 131 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | Marathon Petroleum Corporation   | Filing |
| 132 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | Phillips 66                      | Filing |
| 133 | 02/07/2018  | Rhode Island v. Chevron Corp.                      | Shell                            | Filing |
| 134 | 05/07/2018  | Friends of the Earth et al. v. Prefect of Bouch    | Total Energies SE                | Filing |
| 135 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | BP                               | Filing |
| 136 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | CNX Resources Corporation        | Filing |

**Table A.2 (continued)**

| No  | Issued Date | Event                                              | Company                                               | Type   |
|-----|-------------|----------------------------------------------------|-------------------------------------------------------|--------|
| 137 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Chevron Corporation                                   | Filing |
| 138 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | ConocoPhillips Company                                | Filing |
| 139 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Consol Energy Inc.                                    | Filing |
| 140 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | ExxonMobil Corporation                                | Filing |
| 141 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Hess Corporation                                      | Filing |
| 142 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Marathon Petroleum Corporation                        | Filing |
| 143 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Phillips 66                                           | Filing |
| 144 | 20/07/2018  | Mayor & City Council of Baltimore v. BP p.l.c.     | Shell                                                 | Filing |
| 145 | 06/08/2018  | Development YES – Open-Pit Mines NO v.Group PZU    | Powszechny Zakład Ubezpieczeń Spolka Akcyjna (PZU SA) | Filing |
| 146 | 24/10/2018  | ClientEarth v Enea                                 | ENEAS.A. (Enea S.A.)                                  | Filing |
| 147 | 24/10/2018  | People of the State of New York v. Exxon Mobil Cor | ExxonMobil Corporation                                | Filing |
| 148 | 31/10/2018  | Mapuche Confederation of Neuquén v. YPF et al.     | ExxonMobil Corporation                                | Filing |
| 149 | 31/10/2018  | Mapuche Confederation of Neuquén v. YPF et al.     | Total Energies SE                                     | Filing |
| 150 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Apa Corporation                                       | Filing |
| 151 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Anadarko Petroleum Corporation                        | Filing |
| 152 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | BP                                                    | Filing |
| 153 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Chevron Corporation                                   | Filing |
| 154 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | ConocoPhillips Company                                | Filing |
| 155 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Devon Energy Corporation                              | Filing |
| 156 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Eni SpA                                               | Filing |
| 157 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | ExxonMobil Corporation                                | Filing |
| 158 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Hess Corporation                                      | Filing |
| 159 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Occidental Petroleum Corporation                      | Filing |
| 160 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Ovintiv Inc.                                          | Filing |
| 161 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Phillips 66                                           | Filing |
| 162 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Repsol SA                                             | Filing |
| 163 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Shell                                                 | Filing |
| 164 | 14/11/2018  | Pacific Coast Federation of Fishermen's Associatio | Total Energies SE                                     | Filing |
| 165 | 16/11/2018  | Barnes v. Edison International                     | Edison International                                  | Filing |

**Table A.2 (continued)**

| <b>No</b> | <b>Issued Date</b> | <b>Event</b>                                       | <b>Company</b>               | <b>Type</b> |
|-----------|--------------------|----------------------------------------------------|------------------------------|-------------|
| 166       | 06/12/2018         | New York City Employees' Retirement System v. Tr   | TransDigm Group Incorporated | Filing      |
| 167       | 10/12/2018         | California Fueling, LLC v. Best Energy Solutions   | Innospec Inc.                | Filing      |
| 168       | 08/02/2019         | Von Oeyen v. Southern California Edison Co.        | Edison International         | Filing      |
| 169       | 22/03/2019         | City of Torrance v. Southern California Edison Co. | Edison International         | Filing      |
| 170       | 05/04/2019         | Milieudefensie et al. v. Royal Dutch Shell.        | Shell                        | Filing      |
| 171       | 02/05/2019         | In re Exxon Mobil Corp. Derivative Litigation Tex  | ExxonMobil Corporation       | Filing      |
| 172       | 06/08/2019         | Saratoga Advantage Trust Energy & Basic Materials  | ExxonMobil Corporation       | Filing      |
| 173       | 29/08/2019         | Public Watchdogs v. Southern California Edison Co. | Edison International         | Filing      |
| 174       | 05/09/2019         | Stourbridge Investments v Avery                    | ExxonMobil Corporation       | Filing      |
| 175       | 09/10/2019         | Spoon v. Bayou Bridge Pipeline LLC                 | Energy Transfer, L.P.        | Filing      |
| 176       | 24/10/2019         | Commonwealth v. Exxon Mobil Corp.                  | ExxonMobil Corporation       | Filing      |
| 177       | 29/10/2019         | Friends of the Earth et al. v. Total               | Total Energies SE            | Filing      |
| 178       | 12/11/2019         | Specific instance under the OECD Guidelines for Mu | Ascent Resources             | Filing      |
| 179       | 02/12/2019         | In re Exxon Mobil Corp. Derivative Litigation N.J  | ExxonMobil Corporation       | Filing      |
| 180       | 03/12/2019         | Complaint against BP in respect of violations of t | BP                           | Filing      |
| 181       | 20/12/2019         | Italian Competition Authority Ruling Eni's Diesel+ | Eni SpA                      | Filing      |
| 182       | 28/01/2020         | Notre Affaire a Tous and Others v. Total           | Total Energies SE            | Filing      |
| 183       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | BP                           | Filing      |
| 184       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | Chevron Corporation          | Filing      |
| 185       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | ConocoPhillips Company       | Filing      |
| 186       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | Energy Transfer, L.P.        | Filing      |
| 187       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | ExxonMobil Corporation       | Filing      |
| 188       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | Marathon Oil Corporation     | Filing      |
| 189       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | Phillips 66                  | Filing      |
| 190       | 09/03/2020         | City & County of Honolulu v. Sunoco LP             | Shell                        | Filing      |
| 191       | 15/05/2020         | Beyond Pesticides v. Exxon Mobil Corp.             | ExxonMobil Corporation       | Filing      |
| 192       | 24/06/2020         | State of Minnesota v. American Petroleum Institute | ExxonMobil Corporation       | Filing      |
| 193       | 25/06/2020         | District of Columbia v. Exxon Mobil Corp.          | BP                           | Filing      |
| 194       | 25/06/2020         | District of Columbia v. Exxon Mobil Corp.          | Chevron Corporation          | Filing      |

**Table A.2 (continued)**

| <b>No</b> | <b>Issued Date</b> | <b>Event</b>                              | <b>Company</b>                   | <b>Type</b> |
|-----------|--------------------|-------------------------------------------|----------------------------------|-------------|
| 195       | 25/06/2020         | District of Columbia v. Exxon Mobil Corp. | ExxonMobil Corporation           | Filing      |
| 196       | 25/06/2020         | District of Columbia v. Exxon Mobil Corp. | Shell                            | Filing      |
| 197       | 18/08/2020         | Walkover v Woods                          | ExxonMobil Corporation           | Filing      |
| 198       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | BP                               | Filing      |
| 199       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | Chevron Corporation              | Filing      |
| 200       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | ConocoPhillips Company           | Filing      |
| 201       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | ExxonMobil Corporation           | Filing      |
| 202       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | Phillips 66                      | Filing      |
| 203       | 02/09/2020         | City of Hoboken v. Exxon Mobil Corp.      | Shell                            | Filing      |
| 204       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | BP                               | Filing      |
| 205       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Chevron Corporation              | Filing      |
| 206       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | ConocoPhillips Company           | Filing      |
| 207       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | ExxonMobil Corporation           | Filing      |
| 208       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Hess Corporation                 | Filing      |
| 209       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Marathon Oil Corporation         | Filing      |
| 210       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Murphy Oil Corporation           | Filing      |
| 211       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Phillips 66                      | Filing      |
| 212       | 09/09/2020         | City of Charleston v. Brabham Oil Co.     | Shell                            | Filing      |
| 213       | 14/09/2020         | Connecticut v. Exxon Mobil Corp.          | ExxonMobil Corporation           | Filing      |
| 214       | 09/10/2020         | Delaware v. BP America Inc.               | Apa Corporation                  | Filing      |
| 215       | 09/10/2020         | Delaware v. BP America Inc.               | Chevron Corporation              | Filing      |
| 216       | 09/10/2020         | Delaware v. BP America Inc.               | CNX Resources Corporation        | Filing      |
| 217       | 09/10/2020         | Delaware v. BP America Inc.               | ConocoPhillips Company           | Filing      |
| 218       | 09/10/2020         | Delaware v. BP America Inc.               | Consol Energy Inc.               | Filing      |
| 219       | 09/10/2020         | Delaware v. BP America Inc.               | Devon Energy Corporation         | Filing      |
| 220       | 09/10/2020         | Delaware v. BP America Inc.               | ExxonMobil Corporation           | Filing      |
| 221       | 09/10/2020         | Delaware v. BP America Inc.               | Hess Corporation                 | Filing      |
| 222       | 09/10/2020         | Delaware v. BP America Inc.               | Marathon Oil Corporation         | Filing      |
| 223       | 09/10/2020         | Delaware v. BP America Inc.               | Marathon Petroleum Corporation   | Filing      |
| 224       | 09/10/2020         | Delaware v. BP America Inc.               | Murphy Oil Corporation           | Filing      |
| 225       | 09/10/2020         | Delaware v. BP America Inc.               | Occidental Petroleum Corporation | Filing      |
| 226       | 09/10/2020         | Delaware v. BP America Inc.               | Ovintiv Inc.                     | Filing      |
| 227       | 09/10/2020         | Delaware v. BP America Inc.               | Phillips 66                      | Filing      |
| 228       | 09/10/2020         | Delaware v. BP America Inc.               | Shell                            | Filing      |
| 229       | 09/10/2020         | Delaware v. BP America Inc.               | TotalEnergies SE                 | Filing      |
| 230       | 12/10/2020         | County of Maui v. Sunoco LP               | BP                               | Filing      |
| 231       | 12/10/2020         | County of Maui v. Sunoco LP               | Chevron Corporation              | Filing      |
| 232       | 12/10/2020         | County of Maui v. Sunoco LP               | ConocoPhillips Company           | Filing      |
| 233       | 12/10/2020         | County of Maui v. Sunoco LP               | ExxonMobil Corporation           | Filing      |

Table A.2 (continued)

| No  | Issued Date | Event                                              | Company                        | Type   |
|-----|-------------|----------------------------------------------------|--------------------------------|--------|
| 234 | 12/10/2020  | County of Maui v. Sunoco LP                        | Marathon Petroleum Corporation | Filing |
| 235 | 12/10/2020  | County of Maui v. Sunoco LP                        | Phillips 66                    | Filing |
| 236 | 12/10/2020  | County of Maui v. Sunoco LP                        | Shell                          | Filing |
| 237 | 11/11/2020  | Adorers of the Blood of Christ v. Transcontinental | The Williams Companies, Inc.   | Filing |
| 238 | 16/12/2020  | Greenpeace, Inc. v. Walmart Inc.                   | Walmart Inc.                   | Filing |
| 239 | 22/02/2021  | Annapolis v API                                    | BP                             | Filing |
| 240 | 22/02/2021  | Annapolis v API                                    | Chevron Corporation            | Filing |
| 241 | 22/02/2021  | Annapolis v API                                    | CNX Resources Corporation      | Filing |
| 242 | 22/02/2021  | Annapolis v API                                    | ConocoPhillips Company         | Filing |
| 243 | 22/02/2021  | Annapolis v API                                    | Consol Energy Inc.             | Filing |
| 244 | 22/02/2021  | Annapolis v API                                    | ExxonMobil Corporation         | Filing |
| 245 | 22/02/2021  | Annapolis v API                                    | Hess Corporation               | Filing |
| 246 | 22/02/2021  | Annapolis v API                                    | Marathon Oil Corporation       | Filing |
| 247 | 22/02/2021  | Annapolis v API                                    | Phillips 66                    | Filing |
| 248 | 22/02/2021  | Annapolis v API                                    | Shell                          | Filing |
| 249 | 02/03/2021  | Envol Vert et al. v. Casino                        | Casino, Guichard-Perrachon SA  | Filing |
| 250 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Campbell's Co                  | Filing |
| 251 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Colgate-Palmolive Company      | Filing |
| 252 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Nestle                         | Filing |
| 253 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Procter & Gamble Company       | Filing |
| 254 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Clorox Company                 | Filing |
| 255 | 04/03/2021  | Last Beach Cleanup v. TerraCycle, Inc.             | Coca-Cola Company              | Filing |
| 256 | 22/04/2021  | City of New York v. American Petroleum Institute,  | BP                             | Filing |
| 257 | 22/04/2021  | City of New York v. American Petroleum Institute,  | ExxonMobil Corporation         | Filing |
| 258 | 22/04/2021  | Patrick Pouyanné (CEO of TotalEnergies) v. Greenp  | Marathon Petroleum Corporation | Filing |
| 259 | 22/04/2021  | City of New York v. American Petroleum Institute,  | Shell                          | Filing |
| 260 | 26/04/2021  | Anne Arundel v BP                                  | BP                             | Filing |
| 261 | 26/04/2021  | Anne Arundel v BP                                  | Chevron Corporation            | Filing |
| 262 | 26/04/2021  | Anne Arundel v BP                                  | CNX Resources Corporation      | Filing |
| 263 | 26/04/2021  | Anne Arundel v BP                                  | ConocoPhillips Company         | Filing |
| 264 | 26/04/2021  | Anne Arundel v BP                                  | Consol Energy Inc.             | Filing |
| 265 | 26/04/2021  | Anne Arundel v BP                                  | ExxonMobil Corporation         | Filing |
| 266 | 26/04/2021  | Anne Arundel v BP                                  | Hess Corporation               | Filing |
| 267 | 26/04/2021  | Anne Arundel v BP                                  | Marathon Oil Corporation       | Filing |
| 268 | 26/04/2021  | Anne Arundel v BP                                  | Phillips 66                    | Filing |
| 269 | 26/04/2021  | Anne Arundel v BP                                  | Shell                          | Filing |
| 270 | 08/06/2021  | Earth Island Institute v. Coca-Cola Co.            | Coca-Cola Company              | Filing |
| 271 | 16/06/2021  | Swartz and Muto v. Coca-Cola Co.                   | Coca-Cola Company              | Filing |
| 272 | 07/07/2021  | Conservation Law Foundation v. Shell Oil Co.       | Shell                          | Filing |
| 273 | 14/09/2021  | State of Vermont v Exxon                           | ExxonMobil Corporation         | Filing |
| 274 | 14/09/2021  | State of Vermont v Exxon                           | Shell                          | Filing |
| 275 | 14/09/2021  | State of Vermont v Exxon                           | Sunoco LP                      | Filing |

**Table A.2 (continued)**

| No  | Issued Date | Event                                              | Company                                      | Type              |
|-----|-------------|----------------------------------------------------|----------------------------------------------|-------------------|
| 276 | 16/09/2021  | Complaint to Ad Standards on HSBC's Great Barrie   | HSBC Holdings plc                            | Filing            |
| 277 | 20/09/2021  | Deutsche Umwelthilfe (DUH) v. BMW                  | BMW AG                                       | Filing            |
| 278 | 20/09/2021  | Deutsche Umwelthilfe (DUH) v. Mercedes-Benz AG     | Mercedes-Benz Group AG (formerly Daimler AG) | Filing            |
| 279 | 09/11/2021  | Kaiser et al v. Volkswagen AG                      | Volkswagen AG                                | Filing            |
| 280 | 17/09/2007  | California v. GM Corp.                             | General Motors Company                       | Positive Decision |
| 281 | 20/11/2007  | Germanwatch vs. Volkswagen                         | Volkswagen AG                                | Positive Decision |
| 282 | 29/04/2008  | Australian Competition & Consumer Commission v. De | De' Longhi S.p.A.                            | Negative Decision |
| 283 | 25/06/2008  | Australian Competition & Consumer Commission v. Go | The Goodyear Tire & Rubber Company           | Negative Decision |
| 284 | 18/09/2008  | Australian Competition & Consumer Commission v. GM | General Motors Company                       | Negative Decision |
| 285 | 02/12/2008  | Southern Alliance for Clean Energy v. Duke Energy  | Duke Energy Corporation                      | Negative Decision |
| 286 | 24/06/2009  | California v. GM Corp.                             | General Motors Company                       | Positive Decision |
| 287 | 13/05/2010  | Connecticut v. Am. Elec. Power                     | American Electric Power Company, Inc.        | Positive Decision |
| 288 | 28/05/2010  | Comer v. Murphy Oil USA, Inc.                      | Chevron Corporation                          | Positive Decision |
| 289 | 28/05/2010  | Comer v. Murphy Oil USA, Inc.                      | ExxonMobil Corporation                       | Positive Decision |
| 290 | 28/05/2010  | Comer v. Murphy Oil USA, Inc.                      | Honeywell International Inc.                 | Positive Decision |
| 291 | 28/05/2010  | Comer v. Murphy Oil USA, Inc.                      | Murphy Oil Corporation                       | Positive Decision |
| 292 | 28/05/2010  | Comer v. Murphy Oil USA, Inc.                      | Shell                                        | Positive Decision |
| 293 | 24/11/2010  | Sierra Club v. Duke Energy Indiana                 | Duke Energy Corporation                      | Positive Decision |
| 294 | 19/04/2011  | Burton v. Dominion Nuclear Connecticut, Inc.       | Dominion Energy, Inc.                        | Positive Decision |
| 295 | 20/06/2011  | Connecticut v. Am. Elec. Power                     | American Electric Power Company, Inc.        | Positive Decision |
| 296 | 13/03/2012  | Norwegian Climate Network et al vs Statoil         | Equinor ASA                                  | Positive Decision |
| 297 | 21/09/2012  | Native Village of Kivalina v. Exxon-Mobil Corp.    | BP                                           | Positive Decision |
| 298 | 21/09/2012  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Chevron Corporation                          | Positive Decision |
| 299 | 21/09/2012  | Native Village of Kivalina v. Exxon-Mobil Corp.    | ExxonMobil Corporation                       | Positive Decision |
| 300 | 21/09/2012  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Peabody Energy Corporation                   | Positive Decision |
| 301 | 21/09/2012  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Shell                                        | Positive Decision |
| 302 | 18/03/2013  | Sao Paulo Public Prosecutor's Office v. United Air | United Airlines Holdings, Inc.               | Positive Decision |
| 303 | 18/03/2013  | Sao Paulo Public Prosecutor's Office v. United Air | Delta Air Lines, Inc.                        | Positive Decision |
| 304 | 14/05/2013  | Comer v. Murphy Oil USA, Inc.                      | Chevron Corporation                          | Positive Decision |
| 305 | 14/05/2013  | Comer v. Murphy Oil USA, Inc.                      | ExxonMobil Corporation                       | Positive Decision |
| 306 | 14/05/2013  | Comer v. Murphy Oil USA, Inc.                      | Honeywell International Inc.                 | Positive Decision |
| 307 | 14/05/2013  | Comer v. Murphy Oil USA, Inc.                      | Murphy Oil Corporation                       | Positive Decision |
| 308 | 14/05/2013  | Comer v. Murphy Oil USA, Inc.                      | Shell                                        | Positive Decision |
| 309 | 20/05/2013  | Native Village of Kivalina v. Exxon-Mobil Corp.    | BP                                           | Positive Decision |
| 310 | 20/05/2013  | Native Village of Kivalina v. Exxon-Mobil Corp.    | Chevron Corporation                          | Positive Decision |

**Table A.2 (continued)**

| <b>No</b> | <b>Issued Date</b> | <b>Event</b>                                       | <b>Company</b>                                        | <b>Type</b>       |
|-----------|--------------------|----------------------------------------------------|-------------------------------------------------------|-------------------|
| 311       | 20/05/2013         | Native Village of Kivalina v. Exxon-Mobil Corp.    | ExxonMobil Corporation                                | Positive Decision |
| 312       | 20/05/2013         | Native Village of Kivalina v. Exxon-Mobil Corp.    | Peabody Energy Corporation                            | Positive Decision |
| 313       | 20/05/2013         | Native Village of Kivalina v. Exxon-Mobil Corp.    | Shell                                                 | Positive Decision |
| 314       | 03/09/2014         | California Health Communities Network v. City of P | Walmart Inc.                                          | Negative Decision |
| 315       | 08/06/2016         | Nucor Steel-Arkansas v. Big River Steel, LLC, No.  | United States Steel Corporation                       | Positive Decision |
| 316       | 13/09/2016         | People v. Southern California Gas Co.              | Sempra Energy                                         | Negative Decision |
| 317       | 18/10/2016         | Sao Paulo Public Prosecutor's Office v. United Air | Delta Air Lines, Inc.                                 | Positive Decision |
| 318       | 18/10/2016         | Sao Paulo Public Prosecutor's Office v. United Air | United Airlines Holdings, Inc.                        | Positive Decision |
| 319       | 07/02/2017         | California ex rel. South Coast Air Quality Managem | Sempra Energy                                         | Negative Decision |
| 320       | 30/03/2017         | Lynn v. Peabody Energy Corp                        | Peabody Energy Corporation                            | Positive Decision |
| 321       | 01/06/2017         | In re Vienna-Schwechat Airport Expansion           | Flughafen Wien AG                                     | Positive Decision |
| 322       | 30/11/2017         | Lliuya v. RWE                                      | RWE AG                                                | Negative Decision |
| 323       | 28/03/2018         | In re Vienna-Schwechat Airport Expansion           | Flughafen Wien AG                                     | Positive Decision |
| 324       | 08/08/2018         | California v. Southern California Gas Co.          | Sempra Energy                                         | Negative Decision |
| 325       | 14/08/2018         | Ramirez v. Exxon Mobil Corp.                       | ExxonMobil Corporation                                | Negative Decision |
| 326       | 18/01/2019         | New York City Employees' Retirement System v. Tr   | TransDigm Group Incorporated                          | Negative Decision |
| 327       | 04/02/2019         | Fentress v. Exxon Mobil Corp.                      | ExxonMobil Corporation                                | Positive Decision |
| 328       | 25/02/2019         | California v. Southern California Gas Co.          | Sempra Energy                                         | Positive Decision |
| 329       | 14/03/2019         | Conservation Law Foundation v. ExxonMobil Corp.    | ExxonMobil Corporation                                | Negative Decision |
| 330       | 19/04/2019         | BankTrack, et al. vs. ING Bank                     | ING Groep NV                                          | Negative Decision |
| 331       | 06/05/2019         | City of Birmingham Relief & Retirement System v. E | ExxonMobil Corporation                                | Negative Decision |
| 332       | 26/07/2019         | Development YES – Open-Pit Mines NO v. Group PZU   | Powszechny Zakład Ubezpieczeń Spolka Akcyjna (PZU SA) | Negative Decision |
| 333       | 31/07/2019         | ClientEarth v Enea                                 | ENEAS.A. (Enea S.A.)                                  | Negative Decision |
| 334       | 10/12/2019         | People of the State of New York v. Exxon Mobil Cor | ExxonMobil Corporation                                | Positive Decision |
| 335       | 05/02/2020         | ASA Ruling on Ryanair Ltd t/a Ryanair Ltd          | Ryanair Hold.plc                                      | Negative Decision |
| 336       | 08/06/2020         | Advertising Standards Authority's Ruling on Shell  | Shell                                                 | Negative Decision |
| 337       | 16/06/2020         | Complaint against BP in respect of violations oft  | BP                                                    | Negative Decision |
| 338       | 22/09/2020         | ClientEarth v. Polska Grupa Energetyczna           | Polska Grupa Energetyczna S.A.                        | Negative Decision |
| 339       | 28/09/2020         | Conservation Law Foundation, Inc. v. Shell Oil Pro | Shell                                                 | Negative Decision |
| 340       | 17/03/2021         | City of Torrance v. Southern California Edison Co. | Edison International                                  | Negative Decision |
| 341       | 01/04/2021         | City of New York v. BP p.l.c.                      | BP                                                    | Positive Decision |

**Table A.2 (continued)**

| <b>No</b> | <b>Issued Date</b> | <b>Event</b>                                       | <b>Company</b>               | <b>Type</b>       |
|-----------|--------------------|----------------------------------------------------|------------------------------|-------------------|
| 342       | 01/04/2021         | Friends of the Earth et al. v. Prefect of of Bouch | TotalEnergies SE             | Negative Decision |
| 343       | 27/04/2021         | Barnes v. Edison International                     | Edison International         | Positive Decision |
| 344       | 26/05/2021         | Milieudefensie et al. v. Royal Dutch Shell plc.    | Shell                        | Negative Decision |
| 345       | 22/06/2021         | Commonwealth v. Exxon Mobil Corp.                  | ExxonMobil Corporation       | Negative Decision |
| 346       | 20/09/2021         | Greenpeace, Inc. v. Walmart Inc.                   | Walmart Inc.                 | Positive Decision |
| 347       | 28/09/2021         | King County v. BP p.l.c.                           | BP                           | Positive Decision |
| 348       | 30/09/2021         | Adorers of the Blood of Christ v. Transcontinental | The Williams Companies, Inc. | Positive Decision |
| 349       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Campbell's Co                | Positive Decision |
| 350       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Colgate-Palmolive Company    | Positive Decision |
| 351       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Nestle                       | Positive Decision |
| 352       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Procter & Gamble Company     | Positive Decision |
| 353       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Clorox Company               | Positive Decision |
| 354       | 15/11/2021         | Last Beach Cleanup v. TerraCycle, Inc.             | Coca-Cola Company            | Positive Decision |
| 355       | 18/11/2021         | Notre Affaire a Tous and Others v. Total           | Total Energies SE            | Negative Decision |
| 356       | 06/12/2021         | Public Watchdogs v. Southern California Edison Co. | Edison International         | Positive Decision |
| 357       | 16/12/2021         | Friends of the Earth et al. v. Total               | Total Energies SE            | Negative Decision |

## Supplementary information

### Case study 1. Milieudefensie et al. v. Royal Dutch Shell plc

A distinctive aspect of the Milieudefensie et al. v. Royal Dutch Shell plc case was the unprecedented level of transparency and public involvement that characterized the period leading up to its formal filing. In April 2018, a full year prior to the formal initiation of legal proceedings, Milieudefensie (Friends of the Earth Netherlands) issued an open letter to Mr. Ben van Beurden, Chief Executive Officer of Royal Dutch Shell plc. Published online<sup>16</sup>, the letter articulated the organization's view that Shell was in violation of its legal duty of care by failing to align its corporate strategy and investment decisions with the climate objectives set forth in the Paris Agreement. Milieudefensie contended that Shell's ongoing contribution to global greenhouse gas emissions amounted to an unlawful act, and it urged the company to take corrective measures. In the aftermath of the letter, the organization launched a nationwide public campaign aimed at mobilizing citizen support. Dutch residents were invited to endorse the initiative by signing a petition and registering as co-plaintiffs in the prospective legal action. By May 2018, the campaign had garnered the support of over 10,000 individuals.

In February 2019, six additional organizations - ActionAid Netherlands, Both ENDS, Fossielvrij NL, Greenpeace Netherlands, Wadden Sea Forum, and Jongeren Milieu Actief-formally joined Milieudefensie in issuing a second letter to Royal Dutch Shell. This correspondence reiterated their initial demands and explicitly warned that, in the absence of substantive corrective measures, legal proceedings would be initiated on April 5, 2019. By the end of March, more than 17,000 individuals had registered their intent to join the action as co-plaintiffs. As announced, the plaintiffs proceeded to file the lawsuit before the District Court of The Hague on the specified date. Shell was granted a period of three months to submit its initial response to the claim. Following subsequent procedural developments, the District Court scheduled four days of oral hearings, which took place in December 2020. Unusually, the Court pre-announced the date of its judgment, indicating that a decision would be rendered on May 26, 2021. As scheduled, the judgment was delivered and livestreamed, garnering significant attention from both national and international media outlets.

On July 20, 2021, Shell publicly confirmed its intention to appeal the decision, and the formal notice of appeal was filed on August 23. It is expected that the appellate proceedings will take approximately two to three years before a final judgment is rendered<sup>17</sup>.

On April 25, 2022, Milieudefensie issued a formal letter to Shell's Board of Directors urging immediate compliance with the May 26, 2021, court ruling and cautioning that failure to act could expose board members to personal liability risks toward third parties. Finally, on November 12, 2024, the Court of Appeal in The Hague issued its decision in the Shell climate case, affirming that Shell has a legal duty of care to mitigate dangerous climate change under Dutch tort law, interpreted considering international human rights and climate law. While the Court upheld the broader legal framework established by the lower court, it overturned the specific requirement that Shell reduce its emissions by 45% by 2030 relative to 2019 levels. The Appeals Court concluded that there is insufficient scientific and legal consensus to impose a fixed emissions reduction target on an individual company. Although the Court acknowledged that Shell's duty of care extends to Scope 1, 2, and 3 emissions, it emphasized legal and practical challenges - particularly regarding Scope 3 - in setting enforceable reduction obligations. The Court also noted that Shell is already pursuing its own voluntary target of a 45% reduction by 2035 compared to 2016. While the Court expressed concern that future fossil fuel investments could conflict with Shell's duty of care, it found that such issues were not central to the present case and declined to impose binding emissions targets<sup>18</sup>.

<sup>16</sup><https://www.bloomberg.com/news/articles/2021-05-25/court-decision-to-test-shell-s-responsibility-for-climate-change>

<sup>17</sup>See: [https://www.foei.org/wp-content/uploads/2018/06/Milieudefensie\\_legal\\_lettershell4\\_-\\_April\\_-\\_2018.pdf](https://www.foei.org/wp-content/uploads/2018/06/Milieudefensie_legal_lettershell4_-_April_-_2018.pdf)

<sup>18</sup>For more details see: <https://climatecasechart.com/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc>

## Case study 2. New York Attorney General Issued Subpoena to Exxon Mobil Regarding Climate Disclosures

In a notable legal confrontation involving state attorneys general and Exxon Mobil Corporation, the Attorneys General Offices of New York and Massachusetts initiated securities lawsuits against the corporation, following public investigations that commenced on November 4, 2015, as reported by the Bloomberg on the subsequent day<sup>19</sup>.

On October 24, 2018, the New York Attorney General formally filed a highly anticipated lawsuit. The legal action alleged that Exxon Mobil had misled investors and regulatory bodies by publicly downplaying the severity of climate change, despite internal advisories from the company's own scientists indicating otherwise. Although there was considerable anticipation surrounding this potential lawsuit, the exact filing date remained uncertain until its occurrence. The case proceeded to trial in October 2019, culminating in a 12-day judicial examination. Ultimately, on October 12, 2019, the court determined that the New York Attorney General's Office failed to substantiate claims that Exxon Mobil had misled investors regarding its methodologies and procedures for evaluating climate risk.

During the New York trial, the Massachusetts Attorney General initiated another securities suit against Exxon Mobil on October 24, 2019. This legal action was preceded by an investigation launched by Attorney General Maura Healey on April 19, 2016. The Massachusetts lawsuit contends that Exxon Mobil engaged in deceptive practices that adversely affected Massachusetts investors and consumers. Specifically, the company is accused of failing to adequately disclose climate change risks, misrepresenting its business practices concerning the use of proxy carbon costs, misleadingly advertising its products, neglecting to disclose the environmental impacts of its products on climate change, and executing greenwashing campaigns. Exxon Mobil's attempt to shift the case from state court to federal jurisdiction was thwarted by a federal district court in Boston. In contrast to the New York litigation, the Massachusetts lawsuit remains pending in state court<sup>20</sup>.

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<sup>19</sup>See:<https://www.bloomberg.com/news/articles/2015-11-05/exxon-mobil-said-to-be-probed-by-n-y-over-climate-change>

<sup>20</sup>For more details, see:<https://climatecasechart.com/case/people-v-exxon-mobil-corporation/>

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