Climate news and cross–border lending

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Abstract

Attention to climate-change-related news and risks has increased considerably in the past decade. This paper explores to what extent such attention is reflected in cross-border lending decisions in the syndicated loan market. We construct a Climate Attention Index (CAI) for a wide range of countries using major newspapers posts on Twitter. We find that when attention to climate news increases in a borrower's home country, their engagement in cross-border lending decreases. Moreover, consistent with a reputational view, the effect is more pronounced for borrowers in brown sectors. Finally, we show that an increase in the CAI in a lender's home country stimulates cross-border lending to foreign brown firms. These results suggest that lenders evaluate the climate risks in home and borrowers' country when they allocate credits across countries.

Keywords: Syndicated loans, climate risks, tweets, social media, text analysis, credit supply
JEL Classification codes: G21, G23, Q50, D8

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1 Introduction

As the impacts of climate change become increasingly apparent, the ongoing global debate over associated risks and potential mitigation strategies continues to intensify. This conversation goes beyond borders, highlighting the collective goal of many nations to reach zero greenhouse gas emissions. However, the journey to zero emissions is complex, influenced by varying public perspectives on climate risks over time and across different regions. Against this backdrop, the financial system is under heightened pressure to play a pivotal role in supporting, if not accelerating, the transition to a green economy. Notably, large corporations significantly contribute to greenhouse gas emissions due to their extensive operations and elevated production levels. As these corporations often rely on international financial markets for funding, understanding the intricate connection between the cross-border lending market and climate risks is crucial for achieving the zero-emission objective.

In this paper, we investigate the impact of climate attention on cross-border lending in the context of the global syndicated loan market. Our innovative approach involves constructing a Climate Attention Index (CAI) by analyzing social media posts on Twitter from major newspapers for a wide set of countries. Our index defines climate attention as the number of posts that mention *climate change* or *global warming* as a share of the universe of posts. By constructing this attention index, we are able to capture the public attention given to climate matters and its influence on cross-border loan allocation.

Given the broad focus of our index, capturing not only physical risks (e.g., droughts) but also transition risks (e.g., COP meetings), it serves as a proxy for the uncertainty surrounding climate change. We anticipate that an increase in climate news attention in the home country of lenders would lead to an expansion of cross-border loans, as lenders prefer countries with lower climate risks. Conversely, a surge in climate attention within a borrower's country is expected to deter loans from foreign lenders. Our analysis delves into these dynamics, offering insights into the intricate relationship between climate news attention and the allocation of cross-border loans.

In our baseline model, we measure the impact of climate attention in the home country of the borrower in the syndicated loan agreement. After controlling for various country characteristics, our analysis reveals a consistently negative impact across different specifications. Furthermore, we extend our baseline model and measure the impact of climate attention changes in the lender's country, observing a nuanced relationship between lender-country *CAI* and cross-border lending, especially concerning firms from brown sectors. Robustness checks, including deal-level fixed effects, strengthen our findings. Additionally, we explore the disparity in *CAI*

between lender and borrower countries, shedding light on how this difference affects cross-border lending dynamics. Consistent with our baseline results, we show that an increase in the relative attention in the lender country would increase the cross-border allocation of resources.

Our contribution is twofold. First, we develop a novel climate news attention index for a wide set of countries, which allows us to compare allocation effects through cross-border lending. Second, we present new evidence that lenders consider not only current climate policies but also climate risks, including the possibility of future stringent policies, when allocating resources between borrower countries.

2 Literature Review

Overall, our study contributes to the growing body of literature on the intersection of climate change and finance. Specifically, recent research has focused on the effect of climate change on syndicated loan characteristics. Kacperczyk and Peydró (2022) study syndicated lending decisions by banks in the presence of green pledges. Ehlers et al. (2022) combines syndicated loan data with carbon intensity data and find evidence of a risk premium charged to borrowing firms with higher carbon intensities post-Paris Agreement. Similarly, Ho and Wong (2023) examines the impact of firm-level carbon emissions on the terms of syndicated loans originating from emerging markets. They find that green banks charge higher loan spreads when lending to the same brown firm in the post-Paris Agreement period. Degryse et al. (2023) finds that green banks reward firms for being green in the form of cheaper loans but only after the ratification of the Paris Agreement. While most of these studies utilize a policy stringency index as a variable of interest or control, our approach differs as we primarily focus on climate attention, which encompasses both policy and public attention.

Closest to our work, Benincasa et al. (2022) investigates how banks' cross-border lending responds to changes in climate policy stringency in their home countries. Similar to our approach, the authors utilize syndicated loan data to investigate the effect of stringency of climate policy in the lender's country and find that lenders with more stringent policy increase cross-border loans. We differ from Benincasa et al. (2022) in several ways. While Benincasa et al. (2022) primarily explored the effect of policy stringency measured by the Climate Change Performance Index (CCPI), our study takes a complementary approach by examining the impact of attention to climate, encompassing both policy and public attention.

3 Data and Econometric Model

3.1 Data

Our loan-level data comes from Dealogic which includes information on syndicated loans originated by multiple banks and non-banks. We focus on cross-border deals between lenders and non-financial firms signed between 2014 and 2022. Dealogic offers information at the tranche level, including borrower and lender's name and nationality, lenders' role in the syndicate (e.g., bookrunner or participant), type of loan (e.g., revolving credit), maturity date, among others. The dataset also offers some insight on the structure of holding companies by stating the parent entity and its nationality. We match Dealogic data with ORBIS Bureau van Dijk's database in order to collect information at the firm-level.[1] Furthermore, we match both the lender and its parent's name with BankFocus and ORBIS databases to collect information at the lender-level.[2] Table A1 summarizes the definition of our loan-, firm-, bank- and country-level variables.

3.1.1 Loan allocation

As it is well noted in previous studies, lender shares from a syndicate at origination are not usually reported.[3] Some studies fill-in the missing values by assuming distributions based on estimates of private data (Blickle et al. (2022)) or assuming an equally distributed share amongst participants (Fatica et al. (2021)). In our baseline results, we follow previous literature (Ivashina and Scharfstein (2010)) and assume that the distribution amongst lead and non-lead banks is the same between the observed and unobserved deals. More specifically, following Dealogic's guidelines, we define a lead bank in a syndicate as the designated bookrunner or the mandated lead arranger. In the cases were neither was found, the administrative agent, arranger, syndication agent, documentation agent, facility agent or participant would be considered as the lead bank (in that order). We however distinguish between the size of the syndicate (see Figure A1), and match the average allocation between lead and non-lead banks. If there are more than one bank in either category, then we equally allocate the group share. This disaggregation allows us to have a lender-borrower-tranche-level database.

[1] Dealogic and ORBIS databases do not share common identifiers for lenders and borrowers. Therefore, we used a batch search approach by relying on the companies' name and nationality. We were able to successfully match approximately 80% of companies.

[2] Lenders in Dealogic include both banks and non-banks. Therefore, the match to BankFocus is not generally successful to populate lender characteristic variables. ORBIS includes information on both banks and non-banks, so we complemented lender identifiers and characteristics from ORBIS.

[3] Dealogic offers information on loan allocation to each bank parent company in a tranche for approximately 20% of tranches.

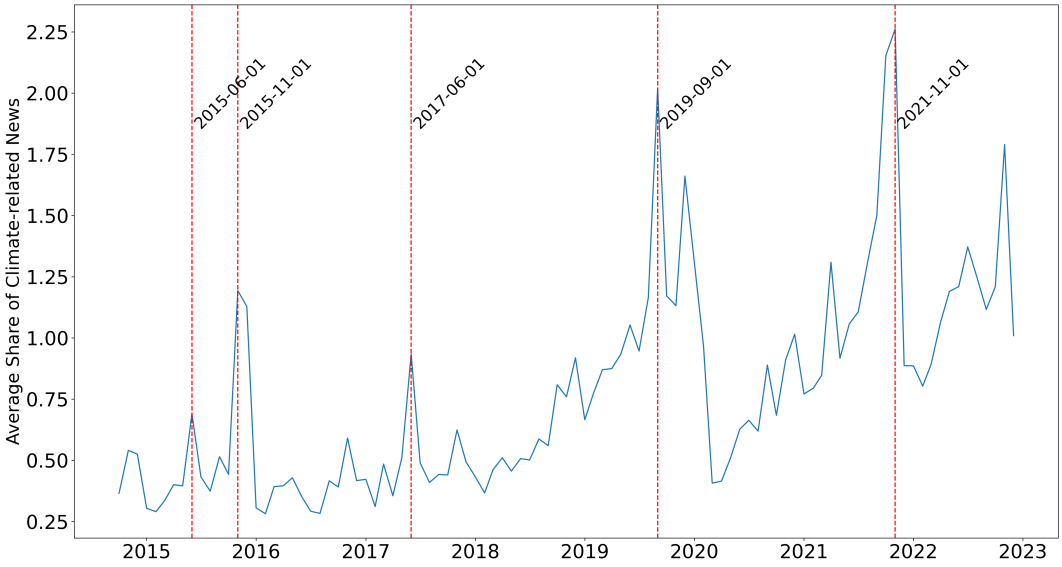

Figure 1: Climate Attention Index (CAI), sample average.

3.1.2 Climate Attention Index (CAI)

In order to measure a country's climate attention, we rely on the construction of the CAI. This index uses textual analysis techniques to build an attention measure from major newspapers' Twitter posts for every country in our sample. From the *universe* (i.e., every post) of tweets from the largest newspapers in each country,[4] we calculate the share of posts for which climate change or global warming is mentioned.[5] Table 1 summarizes the descriptive statistics of our attention index by country and Figure 1 shows the simple average of the country level CAI for the 17 countries in our sample. We highlight relevant events for our index, such as the Paris Agreement and the UN reports on climate change.

Additionally, we supplement our analysis with other indices. First, the Climate Change Performance Index (CCPI) by Germanwatch, which tracks the climate protection performance of various countries, including the stringency of their climate policies. Second, we use Hassan et al. (2019) to control for the political scenario around environmental issues in each country. This allows us to disentangle the attention factor and its importance for banks' decision to extend financing.

[4]We collected every post from major newspapers from October 2014 until December 2022, through Twitter's API. The selection of newspapers is based on the circulation importance within a country and the Twitter presence (i.e, consistent use of Twitter and a large amount of followers. Table A2 in the Appendix summarizes the newspapers used for the construction of our index.

[5]Given the nature of Twitter text, we correct for the potential mention of climate change and global warming in a wide way of expressions. For example, we locate a climate-related tweet if "climate change" and/or "#climatechange" was mentioned by the newspaper.

Table 1: Descriptive Statistics of Climate Attention Index (CAI)

Country	Mean	Std. Dev.	Min	25%	50%	75%	Max
AUS	1.10	0.90	0.13	0.36	0.89	1.44	4.44
BRA	0.42	0.23	0.12	0.26	0.35	0.51	1.45
CAN	0.91	0.50	0.30	0.58	0.72	1.21	3.24
CHL	0.62	0.39	0.12	0.39	0.53	0.76	3.04
CHN	1.64	0.89	0.39	0.89	1.67	2.11	4.78
COL	0.62	0.26	0.11	0.42	0.56	0.79	1.41
DEU	1.22	1.12	0.12	0.39	0.80	1.78	5.24
ESP	0.37	0.28	0.08	0.20	0.30	0.44	2.06
FRA	0.77	0.51	0.09	0.39	0.66	1.05	2.52
GBR	1.02	0.83	0.09	0.42	0.80	1.56	4.82
IND	0.63	0.38	0.16	0.36	0.54	0.78	2.26
ITA	0.42	0.28	0.07	0.21	0.36	0.56	1.68
JPN	1.07	0.66	0.20	0.62	0.86	1.40	3.96
KOR	0.46	0.29	0.09	0.25	0.40	0.59	1.53
MEX	0.63	0.28	0.18	0.40	0.55	0.82	1.59
PRT	0.48	0.36	0.02	0.23	0.41	0.66	2.04
USA	0.72	0.40	0.22	0.42	0.66	0.92	2.50

3.1.3 Summary statistics

Table 2 the summary statistics of the variables within the dataset used for estimation, based on tranche-level data. The total sample size is approximately 67,000. The logarithm of the allocated loan value to each lender demonstrates a median of 16.7, with the 25th and 75th percentiles at 15.6 and 17.6, respectively, which suggests a distribution that is slightly skewed towards the lower end. The standard deviation of the Climate Attention Index (CAI) is approximately 0.8 for both lender and borrower countries.

Table 3 illustrates the sample distribution categorized by borrower and lender countries. Among borrowers, the United States claims the largest share within our datasets, followed by the United Kingdom and Australia, respectively. Conversely, Japan stands out as the primary lender, contributing a sample size of approximately 12,000 entries, while maintaining a minor presence as a borrower. This trend aligns with the inclination of Japanese firms to seek loans from domestic banks, while Japanese financial institutions demonstrate a greater propensity to extend credit to foreign firms in pursuit of higher yields. Notably, France and other European countries hold a relatively significant share as lenders, driven in part by the active cross-border lending activities prevalent in Europe. Conversely, the United States' share as a lender is relatively modest compared to its position as a borrower.

Table 3 reports the sample size by sector of borrowing firms. The transportation, public utilities, and manufacturing sectors collectively encompass more than half of the observations. The

service sector follows as the third largest category. Additionally, the mining sector, categorized as a 'brown' sector within our classification, represents 6% of the entire sample.

Table 2: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	P25	P50	P75
log(allocated tranche value (USD))	66702	16.577	1.586	2.89	23.471	15.61	16.719	17.671
Borrower-country CAI	67104	.972	.79	.066	5.236	.425	.75	1.216
Lender-country CAI	67104	1.063	.835	.017	5.236	.466	.789	1.41
Control variables								
log(Borrower-country CCPI)	66289	3.683	.464	2.923	4.26	3.253	3.933	4.04
log(Lender-country CCPI)	67026	3.831	.342	2.923	4.26	3.657	3.933	4.088
Exchange rates (log difference)	67104	-.001	.022	-.131	.117	-.012	0	.012
Real GDP growth rate (%)	67104	1.206	3.992	-11.3	11.7	.7	1.9	2.8

Table 3: Sample size by country

Country	Obs. as borrower	Obs. as lender
AUS	6,765	1,325
BRA	1,177	111
CAN	4,895	9,933
CHL	740	71
CHN	503	2,744
COL	328	18
DEU	4,088	5,557
ESP	2,800	5,254
FRA	3,872	10,423
GBR	7,067	8,477
IND	844	365
ITA	2,750	2,176
JPN	307	12,168
KOR	223	658
MEX	1,833	12
PRT	309	146
USA	28,603	7,666
Total	67,104	67,104

3.2 Econometric Model

In our baseline model, we focus on the impact of climate attention (measured by the variable *CAI*) in the home-country of the borrower in the syndicated loan agreement. We run a loan-level panel regression as follows,

$$y_{ijkt} = \beta_{b0} BorrowCAI_{m_i t-1} + \beta_{b1} BorrowCAI_{m_i t-1} \times Brown_i + \alpha_i + \gamma_j + \tau_{n_j t} + \beta_c Control_{ijt} + u_{ijkt} \quad (1)$$

where y_{ijkt} indicates the log of the lending amount from lender j to borrower i in deal k at time t. α_i and γ_j denote borrower and lender fixed effects, respectively. $\tau_{n_j t}$ indicates monthly time-

Table 4: Sample size by sector

Sector	Obs.
Agriculture, forestry and fishing	571
Mining	4,169
Construction	2,023
Manufacturing	18,835
Transportation and public utilities	22,978
Wholesale trade	2,524
Retail trade	3,253
Services	12,638
Public administration	113
Total	67,104

varying lender's country (n_j) fixed effects. $BorrowCAI_{m_i t-1}$ is the CAI in the borrower's home country m_i. To mitigate the endogeneity problem, we use the one month lagged CAI. $Brown_i$ indicates whether the borrowing firm is classified as brown. We define brown firms as ones whose main sector is mining.[6] $Control_{ijt}$ represents a vector of control variables, which includes the CCPI by Germanwatch in borrower's country m_i, the growth rate of bilateral exchange rates between borrower i's and lender j's country (*ChgExc*), and yearly real GDP growth rate of borrower i's country in the previous year (*BorrowGDP*). The GDP growth rate controls demand factors in the borrower's country.

We additionally examine whether the climate attention in the lender's home country ($LendCAI_{n_j t-1}$) has an effect on the credit allocation. To do so, we run a panel regression as follows,

$$y_{ijkt} = \beta_{l0} LendCAI_{n_j t-1} + \beta_{b1} LendCAI_{n_j t-1} \times Brown_i + \alpha_i + \gamma_j + \eta_{m_i t} + \beta_c Control_{ijt} + u_{ijkt}, \quad (2)$$

where $\eta_{m_i t}$ indicates time-varying fixed effects of borrower's country m_i. As a control variable, we include the lender's home country real GDP growth rate (*LendGDP*) to control for the lender's incentive to seek investment opportunities abroad. As a robustness check, we also use a model satiated with deal-level fixed effects (Benincasa et al. (2022)),

$$y_{ijkt} = \beta_{l0} LendCAI_{n_j t-1} + \beta_{l1} LendCAI_{n_j t-1} \times Brown_i + \omega_k + \beta_c Control_{ijt} + u_{ijkt} \quad (3)$$

where ω_k indicates deal fixed effects and it absorbs borrower, lender and time fixed effects. In this specification, we fully control for demand factors and exploit the variation in the CAI in lenders' countries.

[6] We use the Standard Industrial Classification (SIC) code for the sector identification.

4 Estimation Results

First, we present the estimation results for the baseline model using the CAI in the borrower's country. Subsequently, we report the results for the lender-country CAI and the disparity in CAI between the lender's and borrower's countries.

4.1 Effect of an increase in climate attention in the borrower's country

First, we investigate whether an increase in the CAI in the borrower country affects cross-border loans. Table 5 shows the estimation results. The *BorrowCAI* has a negatively significant coefficient for all the specifications. Moreover, the effect holds economic significance: a one-standard deviation increase in CAI (0.7) decrease cross-border lending by 12 percentage points.

In line with Benincasa et al. (2022), the CCPI also has a significantly negative coefficient. The coefficient on the growth rate of bilateral exchange rates (*ChgExc*) is not significantly different from zero. The models presented in columns (4) to (6) incorporate the interaction term between Borrower CAI and the brown firm dummy (BorrowCAI×Brown). Notably, this interaction term exhibits a significantly negative coefficient, suggesting that loans to brown firms are more prone to decrease in response to heightened climate news attention. Moreover, the impact on loans to brown firms is more than double that estimated for non-brown firms. Importantly, the interaction effect of the borrower-country CAI remains robust even after taking into account the interaction between the borrower-country CCPI and the brown firm dummy in column (5) alongside time-varying lender fixed effects. Column (6) displays the estimation results utilizing double clustered standard errors at the lender×time and lender×time level, whereas columns (1) to (5) indicate the results with clustered standard errors at the lender level. In summary, a higher CAI in the borrower country is associated with a decrease in the cross-border loans from foreign banks.

4.2 Effect of the lender-country CAI on cross-border lending

In the previous section, we show that the climate news attention in a borrower's country has a substantial influence on the cross-border lending. In this section, we also investigate the effect of CAI in a lender's country. If lenders consider the climate risks both in home and foreign countries as additional costs, the CAI in the lender-home country would have a impact on cross-border lending. More specifically, if the CAI in lenders' country is high, they would tend to provide more credits in foreign countries. Moreover, the impact of the CAI is expected to be more pronounced for loans to firms in brown industries.

Table 5: Effect of the borrower-country CAI on cross-border lending

	(1) log(LOAN)	(2) log(LOAN)	(3) log(LOAN)	(4) log(LOAN)	(5) log(LOAN)	(6) log(LOAN)
BorrowCAI	-0.180***	-0.174***	-0.175***	-0.161***	-0.135***	-0.135**
	(0.0315)	(0.0311)	(0.0311)	(0.0307)	(0.0317)	(0.0660)
BorrowCCPI	-0.302***	-0.245***	-0.249***	-0.255***	-0.274***	-0.274***
	(0.0739)	(0.0817)	(0.0847)	(0.0843)	(0.0903)	(0.102)
BorrowGDP		0.0280***	0.0389***	0.0279***	0.0356***	0.0356**
		(0.00997)	(0.00871)	(0.0100)	(0.00980)	(0.0167)
ChgExc			0.323	0.428	-0.112	-0.112
			(0.665)	(0.737)	(0.769)	(1.329)
BorrowCAI× BrownDummy				-0.113**	-0.155**	-0.155*
				(0.0471)	(0.0609)	(0.0934)
BorrowCCPI× BrownDummy					-0.388**	-0.388
					(0.196)	(0.252)
N	61997	61997	61998	61992	60146	60146
adj. R^2	0.585	0.585	0.585	0.585	0.580	0.580
Borrower FE	Yes	Yes	Yes	Yes	Yes	Yes
Lender FE	Yes	Yes	Yes	Yes	—	—
Lender country × Time FE	Yes	Yes	Yes	Yes	—	—
Lender × Time FE	No	No	No	No	Yes	Yes
Lender × borrower countries FE	No	No	No	Yes	Yes	Yes

Note: Clustered standard errors at the lender level for columns (1) to (5) and at the lender*time and borrower*time level for column (6) in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6 reports the estimation results. Columns (1) to (3) show that the coefficients on both CAI and CCPI in the lender's country are not significantly different from zero. However, column (4) shows that the interaction term between the CAI and the brown firm dummy (LendCAI×Brown) is significantly positive. This result implies that a lender in a country with the higher CAI is more likely to provide larger loans to brown firms than a lender in a country with the lower CAI. In column (5), we show the estimation result for a regression where the deal fixed effect is incorporated. We should note that the deal fixed effect absorbs time-varying borrower fixed effects. Therefore, loan demand factors are thoroughly controlled. In column (5), the interaction term of the CAI and the brown firm dummy has a significantly positive coefficient while that for CCPI does not. This result shows evidence that the lender-country CAI effect on brown firms is significant even if we control for demand factors. In column (6), we report a result with the double clustered standard errors at the deal and lender level, which confirms that the CAI in the lender's country has a significantly positive effect on cross-border loans to brown firms. We can infer that lenders with the high CAI avoid lending in home country and are likely to increase lending to brown firms in foreign countries when the climate risks reflected to the social media in their home country have increased.

Table 6: Effect of the lender-country CAI on cross-border lending

	(1) log(LOAN)	(2) log(LOAN)	(3) log(LOAN)	(4) log(LOAN)	(5) log(LOAN)	(6) log(LOAN)
LendCAI	-0.00372	-0.00403	-0.00374	0.00181	0.00479	0.00479
	(0.0160)	(0.0161)	(0.0161)	(0.00984)	(0.00972)	(0.00963)
LendCCPI	-0.0102	-0.0129	-0.0146	0.00554	0.0215	0.0215
	(0.0315)	(0.0318)	(0.0314)	(0.0265)	(0.0257)	(0.0259)
LendGDP		-0.00134	-0.00136	-0.000737	-0.000359	-0.000359
		(0.00278)	(0.00279)	(0.00227)	(0.00208)	(0.00219)
ChgExc			-0.326	-0.110	-0.203	-0.203
			(0.256)	(0.192)	(0.192)	(0.240)
LendCAI×Brown				0.0522**	0.0418**	0.0418**
				(0.0217)	(0.0210)	(0.0205)
LendCCPI×Brown					0.0113	0.0113
					(0.0306)	(0.0299)
N	62663	62663	62663	62657	61324	60434
adj. R^2	0.613	0.613	0.613	0.613	0.664	0.666
Borrower FE	Yes	Yes	Yes	—	—	—
Lender FE	Yes	Yes	Yes	Yes	Yes	Yes
Borrower country × Time FE	Yes	Yes	Yes	—	—	—
Borrower × Time FE	No	No	No	Yes	—	—
Lender × borrower countries FE	No	No	No	Yes	No	No
Deal FE	No	No	No	No	Yes	Yes

Note: Clustered standard errors at the lender level for columns (1) to (5) and at the deal and lender level for column (6) in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4.3 Difference of CAI between lender and borrower countries

In our earlier analyses, we demonstrated the influence of the climate news index in both borrower and lender countries on the dynamics of cross-border lending. These findings suggest that lenders take climate risks into account when making credit allocations. If lenders are deciding whether to allocate loans to domestic or foreign firms with similar financial conditions, they would likely compare the climate risk in the domestic country to that in the foreign country. In the decision-making process of lenders, the discrepancy between conditions in the home and foreign countries becomes a crucial factor. To empirically test this hypothesis, we compute the disparity in Climate News Attention Index (CAI) between lender j's and borrower i's countries for $Loan_{ijkt}$ as follows,

$$Diff\_CAI_{ijkt} = LendCAI_{n_jt} - BorrowCAI_{m_it}. \tag{4}$$

Similarly, we control for the current policy stringent effect by defining $Diff\_CCPI$ as the difference of the CCPI between lender and borrower countries.

Table 7 shows the estimation results. The differences of CAI and CCPI have significantly positive coefficients as shown in column (1), which implies that the relatively higher climate news index in a lender's country than a borrower's country leads to a larger amount of cross-border loans by the lender to the borrower. This result is robust to including the current policy stringency index. In column (2), the interaction effect between the CAI difference and the brown firm dummy variable (Diff_CAI ×BrownDummy) is included as an explanatory variable as well as the interaction with the CCPI difference (Diff_CCPI ×BrownDummy). The interaction term between CAI and the brown firm dummy has a significantly positive coefficient while the interaction term with the CCPI does not. This result implies that a relative increase in the climate news attention affects the cross-border loans to brown firms. Column (3) shows the result with the deal fixed effects, which control for all the demand factors. We should note that the borrower and time fixed effects are absorbed by the deal fixed effects. The interaction term between the CAI difference and the brown industry dummy has a significantly positive coefficient. This shows the robustness of the result, indicating that the positive effect of the interaction term of the CAI is mainly driven by supply-side factors.

5 Conclusion

In conclusion, our study sheds light on the intricate dynamics between climate news attention and the allocation of cross-border loans. We introduce a novel Climate Attention Index (CAI) for a diverse set of countries, providing a comprehensive measure that incorporates both policy

Table 7: Effect of the difference between lender and borrower countries CAI on cross-border lending

	(1) log(LOAN)	(2) log(LOAN)	(3) log(LOAN)
Diff_CAI	0.0422***	0.0382**	0.00498
	(0.0160)	(0.0159)	(0.00976)
Diff_CAI ×BrownDummy		0.0666**	0.0430**
		(0.0338)	(0.0214)
Diff_CCPI	0.0807**	0.0797**	0.0154
	(0.0321)	(0.0333)	(0.0247)
Diff_CCPI ×BrownDummy		0.0131	0.0140
		(0.0392)	(0.0314)
ChgExc	-0.346	-0.353	-0.203
	(0.292)	(0.292)	(0.194)
BorrowGDP	0.0435***	0.0433***	
	(0.00811)	(0.00812)	
LendGDP	0.000225	0.000188	
	(0.00321)	(0.00319)	
N	62008	62008	59725
adj. R^2	0.583	0.583	0.669
Borrower FE	Yes	Yes	—
Lender FE	Yes	Yes	Yes
Time FE	Yes	Yes	—
Deal FE	No	No	Yes

Note: Clustered standard errors at the lender level are shown in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

and public attention to climate issues. Our analysis reveals that higher climate news attention in the borrower's country is associated with a decrease in cross-border loans from foreign banks, indicating a sensitivity to climate risks.

Our contribution extends to the nuanced role of climate attention in the lender's country. We find that lenders not only consider current climate policies but also factor in climate risks, including the potential for future stringent policies, when allocating resources among borrower countries. The Climate Attention Index in the lender's country influences lending decisions, particularly in the case of brown firms, suggesting a strategic response to climate-related risks.

Comparing our approach to existing literature, we distinguish ourselves by focusing on climate attention, encompassing both policy and public awareness, rather than relying solely on policy stringency indices. By examining the influence of climate attention on cross-border lending, we provide empirical evidence of the importance of considering not only formal climate policies but also the broader social and media discourse surrounding climate issues in shaping financial decisions.

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Table A1: Description of variables and sources.

Variable name	Description	Source
Loan-level variables		
Lead bank(s)	Based on Dealogic's guidelines it is the bookrunner of the tranche or the mandated arranger, if there is no bookrunner. If there is no bookrunner in the database, we opt for the arranger, documentation agent, facility agent or syndication agent (in that order Chakraborty et al. (2018)).	Dealogic
Loan type	Based on Berg et al. (2016) and Degryse et al. (2023), we classify loans in three major groups: (i) credit lines (incl. revolving and credit facilities), (ii) term loans (incl. term loan A to H) and (iii) other loan types. We use type of the head (first) tranche of the deal.	Dealogic
Num Leads	Number of Lead Banks in the syndicate	Dealogic
All-in pricing	Pricing of loan tranche including Margin and Fees (in bps).	
Maturity	Months between maturity date and settlement date.	Dealogic
Secured	Dummy =1 if the tranche is secured on any assets.	Dealogic
Deal nationality	Nationality where the majority of the borrower's business takes place	Dealogic
Investment Grade	Dummy =1 if deal is registered as investment grade.	Dealogic
Borrower-level variables		
Debt-to-Equity	Total Liabilities over Total Equity	ORBIS
Public Sector	Dummy =1 if borrower's is classified as public sector entity (i.e, SIC between 9100 and 9800)	Dealogic
Size	Total Assets (in log)	ORBIS
Industry	Firms' SIC code (first two-digits)	Dealogic
Rating	Company effective rating (not available for every company).	Dealogic
Nationality	Country where the borrower is incorporated	
Lender-level variables		
Capitalization		ORBIS
ROA		ORBIS
Size	Total Assets (in log)	ORBIS
Relationship-level variables		
Same nationality	Dummy =1 if lead bank and firm have the same nationality (**?**)	Dealogic

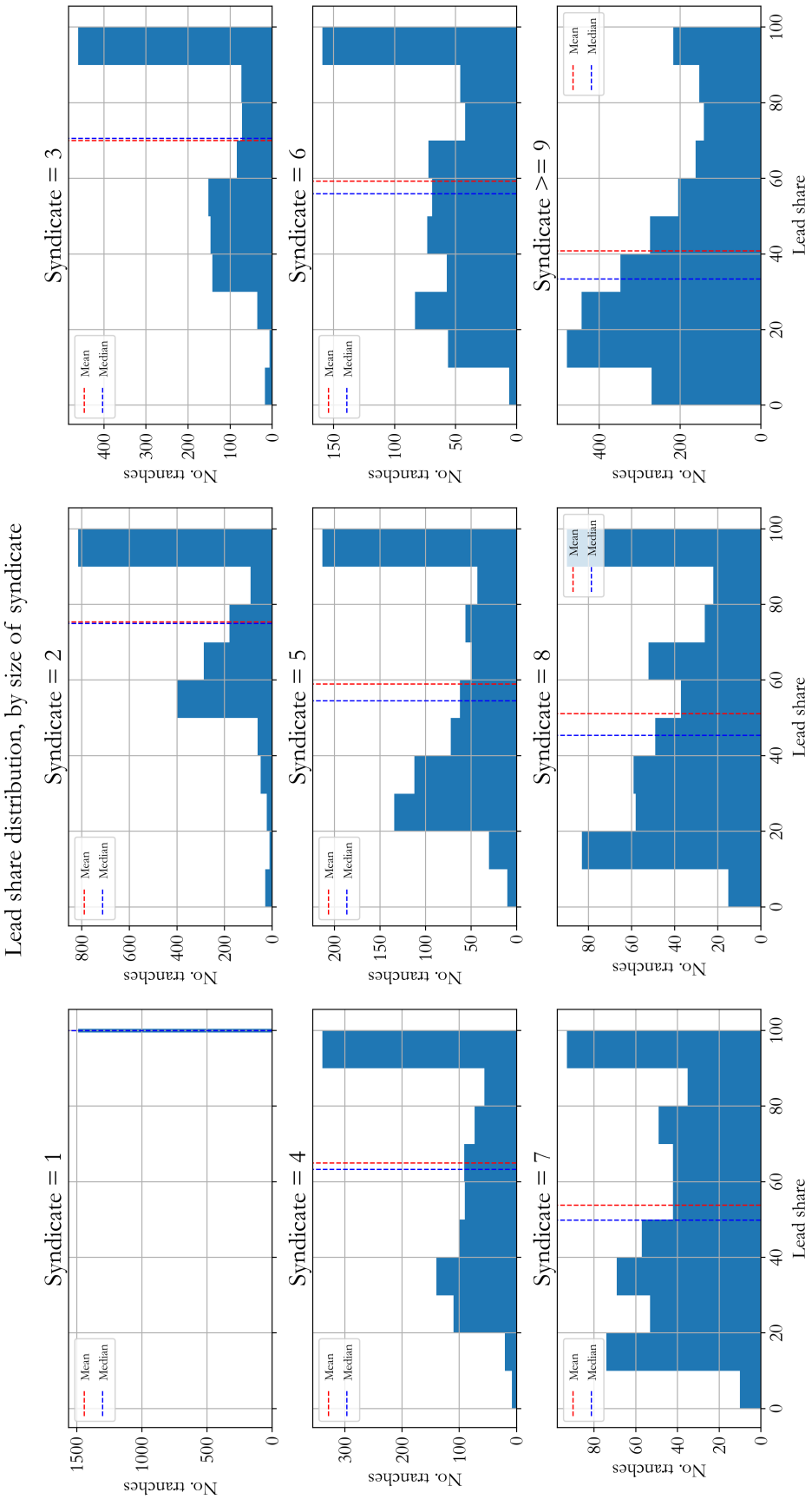

Figure A1: Distribution of lead share, by size of syndicate.

Table A2: Summary of newspapers used in the construction of Climate Attention Index (CAI).

Country	# Outlets	Outlet Name	# of Twitter posts
AUS	4	theage	97,627
		dailytelegraph	109,286
		australian	158,067
		FinancialReview	174,812
BRA	3	folha	433,377
		JornalOGlobo	337,103
		Estadao	320,693
CAN	5	OttawaCitizen	210,555
		TorontoStar	206,038
		VancouverSun	169,969
		globeandmail	319,235
		mtlgazette	165,563
CHL	3	latercera	756,222
		ElMercurio_cl	129,196
		elmostrador	203,037
CHN	3	ChinaDaily	164,618
		PDChina	101,911
		XHNews	221,547
COL	3	elespectador	797,728
		elcolombiano	169,930
		elheraldoco	324,115
DEU	4	zeitonline	174,329
		BILD	245,578
		faznet	174,825
		handelsblatt	113,960
ESP	4	LaVanguardia	443,782
		abc_es	412,669
		el_pais	374,253
		elmundoes	253,798
FRA	4	libe	181,248
		Le_Figaro	275,261
		lemondefr	216,904
		le_Parisien	331,182
GBR	4	thetimes	130,091
		guardiannews	247,422
		FinancialTimes	246,058
		BBCNews	168,358
IND	4	timesofindia	561,925
		htTweets	642,158
		the_hindu	277,174
		EconomicTimes	428,217
ITA	3	repubblica	674,662
		Corriere	377,840

		sole24ore	215,688
JPN	4	JapanToday	101,010
		AJWasahi	33,597
		japantimes	193,269
		The_Japan_News	25,371
KOR	4	TheKoreaHerald	70,152
		YonhapNews	164,003
		koreatimescokr	38,836
		JoongAngDaily	29,955
MEX	4	lajornadaonline	271,643
		El_Universal_Mx	709,930
		Milenio	738,849
		Reforma	321,083
PRT	3	expresso	300,366
		cmjornal	319,040
		JornalNoticias	182,605
USA	11	sfchronicle	197,228
		nytimes	278,242
		latimes	298,373
		dallasnews	207,470
		chicagotribune	187,592
		WSJ	281,073
		USATODAY	209,397
		MiamiHerald	151,816
		BostonGlobe	400,788
		washingtonpost	307,532
		HoustonChron	215,827