Do Politically Connected Banks Delay Green Transition? Empirical Evidence from Brown Borrowers

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Abstract

This study examines the interplay between banks' political connections and lending to brown borrowers, i.e. borrowers with poor environmental performance. A bank's political connection is captured based on whether a bank is headquartered in the state with a member from the U.S. Senate Banking, Housing, and Urban Affairs Committee. Using data from DealScan from 1995-2020, we show that banks headquartered in states with a Banking Committee senator provide cheaper loans to brown borrowers than banks without a Banking Committee senator in their headquarters state. This finding suggests that politically connected banks can play a significant role in delaying the green transition as they extend loans to brown firms at a low rate. In addition, we show that the effect of a bank's political connection on the cost of lending to brown borrowers is more pronounced when the senator is senior, when borrowers, lenders, and banking committee senators are from the same state, or when the party of the Senate is Republican, or when there is a competitive re-election race. Overall, we provide novel evidence on how the politics of bank lending can have implications for green transition.

Keywords: Syndicated Lending; Politicians; Bank Lending; Green Finance; Climate Change

1. Introduction

Banks have been facing growing calls to scale back their lending to carbon-intensive sectors to tackle global warming.[1] Financial intermediaries, i.e., banks, as a major source of financing can help green transition through their decisions on credit allocation. However, politics can play an important role in how banks engage in green transition. For instance, recently West Virginia announced that five major financial institutions, including Goldman Sachs and JPMorgan, would be barred from doing business with the state because they have stopped supporting the coal industry. In this paper, we examine how banks' political capital, i.e., political connections, influence their lending to brown firms, i.e., firms with high climate risk, ultimately influencing green transition. A bank's political connection is captured based on whether a bank is headquartered in the state with a member from the U.S. Senate Banking, Housing, and Urban Affairs Committee.

From the bank's perspective, lending to firms with high climate risk exposure is risky. A recent article in the Financial Times argues that more than 80% of banks agree that climate risks would have a material impact on their risk profiles and strategies.[2] Banks can incur financial losses due to climate change in terms of write-downs of asset values caused by shifts in regulatory policies and technological innovations. Hence, climate-related risks materially impact the banks' stability and performance, posing concerns to banks' lending to brown firms.

One the one hand, we can argue that banks with political connections can have incentives for extending loans to brown firms at a low cost as they expect to receive favourable treatment in case they incur losses from their lending to these firms with high climate risk exposure. Prior studies provide evidence showing how banks with political connections receive

[1] '*Banks' Green Pledges under Scrutiny*', Financial Times, https://www.ft.com/content/0ea3267c-d61f-4120-a976-0b81b60836c5

[2] '*ECB warns banks of capital hit if they fail to tackle climate risk'*, Financial Times, https://www.ft.com/content/7a1543c1-57f0-492f-b0e7-fae81f8e57ea.

favourable treatment. For example, in allocating government funds, powerful politicians can support banks in financial crises by directing millions of federal funds toward their home states (Duchin and Sosyura, 2012).[3] Faccio, Masulis, and McConnell (2006) also show that distressed banks and non-financial firms, particularly those where top executives serve as politicians, are more likely to receive government bailouts. In a similar vein, Kostovetsky (2015) provides evidence that politically connected financial institutions take more risks, with anticipation of being bailed out when they face financial difficulties.[4] In addition, Yue, Zhang, and Zhong (2022) find that banks in states with banking committee senators show greater abnormal loan loss provisions than banks without banking committee senators.

Moreover, motivated by career concerns, senators at the banking committee can practise forbearance[5] to prevent bank failures in their states and mitigate the concerns of negative impacts on the economy (e.g., Liu and Ngo, 2014). These senators might continue to allow firms in their states to ignore climate change risk if they do not support green transition.[6] Therefore, we hypothesize that banks with political connections (or political capital) may take more risk by lending to brown firms, i.e., firms with poor environmental performance, at a lower spread as they expect to be bailed out in case they experience losses due to high risk taking.[7]

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[3] Also, see the article, '*Political Interference Seen in Bank Bailout Decisions*' The Wall Street Journal, https://www.wsj.com/articles/SB123258284337504295.

[4] Kostovetsky (2015) uses the BC senator dummy variable, the political director dummy, and the amount of lobbying fees the firm spends as measures for the political connections of financial institutions.

[4]In this context, forbearance means offering support to larger and systematically significant institutions. This includes regulators allowing banks to function despite having minimal or zero net worth, which results in heightened risk-taking behaviours (Liu and Ngo, 2014).

[5]In this context, forbearance means offering support to larger and systematically significant institutions. This includes regulators allowing banks to function despite having minimal or zero net worth, which results in heightened risk-taking behaviours (Liu and Ngo, 2014).

[6] There is more than 25% of elected officials in the 117th U.S. Congress refuse to acknowledge the idea of climate change. See '*Climate Deniers in the 117th Congress*', AmericanProgress, https://www.americanprogress.org/article/climate-deniers-117th-congress/.

[7] Previous research uses measures such as campaign contributions and corporate lobbying activities (Stratmann, 2005 Claessens, Feijen and Laeven, 2008; and Borisov, Goldman and Gupta, 2016), as well as the results of state

On the other hand, banking committee senators could urge banks to lend safely at optimal levels to avoid negative externalities, which could influence their chances of being re-elected. Prior studies find that bank failures are less likely to happen when it is closer to the re-election time, implying that BC senators have supervision on banks' risk-taking behaviours (Brown and Dinc, 2005; Liu and Ngo, 2014). Considering banking committee senators' career concerns, we expect that they could urge banks to take less risk and avoid negative externalities. Hence, we propose an alternative hypothesis: Given senators' career concerns over the detrimental impacts of bank failures on their home states, banks with political connections may take less risk, hence lending to brown firms at a higher spread.

To test these predictions, we measure the political connections regarding whether banks are headquartered in states with senators from the U.S. Senate Committee on Banking, Housing and Urban Affairs[8] (BC hereafter). The BC senators can play a vital role in regulating financial institutions with the authority to supervise and review the actions of banking regulators (e.g., Weingast and Morgan, 1983; McCubbins and Schwartz, 1984; Yue, Zhang and Zhong, 2022).

We measure borrowers' climate risk (or environmental performance) using the environmental component of MSCI ESG STATS, formerly known as Kinder, Lydenberg, and Domini (KLD). The MSCI ESG ratings come from one of the preeminent ESG rating providers globally, which consists of a comprehensive set of indicators assessing the strengths and concerns of each firm's ESG performance. Prior researchers have commonly used this rating as a measure of climate risk exposure (e.g., Flammer, 2015; Cronqvist and Yu, 2017; Lins, Servaes and Tamayo, 2017; Li and Wang, 2022; Peng, Colak and Shen, 2023).

gubernatorial elections (Huang and Thakor, 2022). In this paper, we use banking committee membership as a measure of political connections (Mehta, Srinivasan and Zhao, 2020, Mehta and Zhao, 2020, Yue, Zhang and Zhong, 2022).

[8] Kostovetsky (2015) highlights the benefits of such a measure that this is more likely to be exogenous, owing to the nature of immobility of banks' headquarters and the relatively uniform dispersion of the financial sector across the United States than most industries.

For our empirical analysis, we collect loan-level information from the DealScan database that provides loan information such as loan price, size, maturity, type, and purpose, as well as detailed information related to borrowers and lenders. The accounting information for borrowers comes from the Compustat database.[9] After merging accounting information, BC senator data, and MSCI data into the DealScan database, we have 22,757 observations with non-missing information required in our analysis.

As a first step in our empirical investigation, we conduct a preliminary test and examine whether political connections impact the cost of bank debt for our sample of U.S. firms from 1995 to 2020. We confirm the findings from prior studies showing that politically connected lenders charge lower interest rates for US firms (Faccio, Masulis and McConnell, 2006; Kostovetsky, 2015; Yue, Zhang and Zhong, 2022).

Next, we merge our sample of lender-borrower-loan data over the period 1995 to 2020 with available MSCI scores, which yields 22,757 observations, accounting for 11,777 loan tranches for 2,581 borrowers and 357 lenders[10] from 37 states across the U.S. When there is a senator present at banks' headquarters, who is a member of the BC, one standard deviation increase in environmental concern could lead to a reduction in loan spread of 8.33 basis points and interest expenses of $1.94[11] million over the entire contract life if they borrow an average loan of $764.679 million, loan spread of 195.282 basis point and 4.24 years (50.836 months)

[9] We merge DealScan data to Compustat using the Compustat-DealScan link provided by Chava and Roberts (2008). This link was updated on Jan 2024 for all the facilities in the legacy DealScan. However, they use a new machine learning matching technique that produces a confidence score for the facilities that are not included in the 2017 version. For these newer facilities, we keep only matches if the score of name matching of DealScan borrower name and Compustat company name that is greater than 95 to ensure correct matching.

[10] Here, lenders refer to the lead lenders in the DealScan loan system. These 357 lenders account for **61 bank-**holding companies (BHC). Robustness tests in Section 8 suggest that the results remain robust when replicating our models on the BHC level.

[11] It is calculated as 5.98 bp=32.6%*195.282*0.094, 1.94 million =5.98/10,000*764.679*4.24.

of maturity. Thus, the effect of BC senators on banks' lending to brown firms is also economically significant.

We test whether a change in political leadership could weaken established political connections or result in a loss of BC senators, causing potential uncertainties. By conducting a stacked Difference-in- Differences estimation method, this paper exploits the exogenous event of BC senator turnovers as an external shock to examine the causal impact of a bank's political connection on lending to brown. During the sample period between 1995 and 2020, 49 senator turnovers occurred. For each turnover, we refer to Charles Stewart's website[12] and Google Search to examine the reasons for each turnover case. By following Mehta and Zhao (2020) and Mehta, Srinivasan and Zhao (2020), we identify that out of these turnovers, only 20 cases are considered exogenous[13], including senators who transferred to other Senate committees or resigned from Congress (Yue, Zhang and Zhong, 2022). Turnover cases involve senators from the same state taking the same position, re-election failures, or retirements, which are not considered exogenous. By conducting this stacked difference-in-differences (DiD) analysis conditional on firms' environmental performance, we find that when a senator departs from the bank's headquarters and with one standard deviation increase in borrowers' environmental concern score, banks increase the cost of lending by 8.55%[14]. In this case, a loan of $764.679 million with 4.24 years of maturity would have to pay 5.41[15] million more in interest expenses, given an average loan spread of 195.282 basis points. This is both statistically and economically significant.

[12] See https://web.mit.edu/17.251/www/data_page.html.
[13] As referred to exclusion restrictions discussed by Mehta, Srinivasan and Zhao (2020), the turnover event should be considered exogenous if the reasons for such turnover cases affect banks' lending to brown firms (the dependent variable) solely only via the presence of BC senators. Hence, only two types of turnover cases are satisfied: when members are transferred to other congressional committees and in cases of death or illness.
[14] It is calculated as 8.55%=91%*0.094.
[15] It is calculated as 5.41 million=8.55%*195.282/10,000*764.679*4.24.

As ESG ratings from different platforms could diverge from one another (Berg, Kölbel and Rigobon, 2022), it is essential to conduct a robustness check using other measures of firms' environmental performance. Here, we choose an alternative measure Sautner et al.[16] (2023) derived from earning call transcripts via a machine learning algorithm and textual analysis. This measure uses earning calls, considered vital corporate events that provide 'soft' information from management to financial analysts regarding material current and future developments (Sautner et al., 2023). Hence, this measure offers economic insights that extend beyond those obtained from current measures based on 'hard' information (e.g., weather events and carbon emissions). Our results show that politically connected lenders lower the cost of borrowing for companies with higher exposures to physical and regulatory shocks but no impacts on opportunity shocks.[17]

Further, our results remain robust when we use a measure of firms' direct and indirect greenhouse gas emissions, i.e., scope 1, scope 2, and scope 3, data from Trucost.[18] These metrics reflect firms' actual carbon emissions that are less prone to manipulation. We find that politically connected lenders tend to consider scope 1 and 2 emissions solely but not scope 3 emissions when lending to brown firms. Yet we need to be cautious in interpreting this finding as this result may stem from the poor data coverage of scope 3 emission, which has only 3,419 observations in the final sample compared to 9,854 observations for the sample using scope 1 and scope 2 data. These additional tests using different measures further support the reliability of our findings on the relationship between political connections, climate risks, and lending behaviour.

[16] This measure is used by Deng et al. (2022) to explore how stocks with different climate risks in response to the Russian-Ukraine War.

[17] Sautner et al. (2023) introduce a novel method for extracting keywords related to climate change from earnings calls to construct indexes related to exposure to climate-related opportunities, physical impacts, and regulatory changes for firms across 34 countries between 2002 and 2022.

[18] Trucost is a commercial entity providing corporate carbon emission data. Bolton and Kacperczyk (2021) and Cohen, Kadach, and Ormazabal (2023) also use this measure.

Previous studies find that politically connected borrowers obtain cheaper loan rates as banks recognise their superior creditworthiness from their connections (Houston et al., 2014). Thus, we ensure that our results are not affected by any potential bias due to the omission of the borrowers' political connection.[19] We conduct a robustness check by controlling for the political connections of borrowers and lenders and find that our results remain qualitatively the same.

Next, we explore potential channels that can explain our baseline finding that brown borrowers receive loans with a relatively lower loan spread when banks are headquartered in states with BC senators. We first consider whether the impact of BC senators could vary depending on their political clout, i.e., the seniority of BC senators. Levitt and Poterba (1999) argue that states with more experienced members of congress exhibit superior economic growth rates compared to those with less senior members. There is also evidence that the seniority of politicians affects enforcement actions for financial misconduct (Mehta, Srinivasan and Zhao, 2020) and bank's opacity in financial reporting (Yue, Zhang and Zhong, 2022). Our analysis suggests that banks connected to senior[20] senators charge a relatively lower spread on brown firms than banks without such connections.

We also consider the proximity of lenders, senators, and borrowers. When the distance between the lender and borrower decreases, the lender's ability to gather information about a borrower is less constrained, reducing information asymmetry between lenders and borrowers (e.g., Hauswald and Marquez, 2006). Being closer to borrowers, lenders charge a lower loan spread (Knyazeva and Knyazeva, 2012) and loosen covenants (Hollander and Verriest, 2016) on initial contracts to involve more contingent controls (Murfin, 2012). Our analysis supports

[19] This is evident in the untabulated result, which remained robust by including a dummy variable, '*BorrowerSenator'*, in the baseline regression.

[20] We measure seniority of senators using dummy variables that equal one If a BC senator's tenure in the Senate falls within the top decile among all banking committee senators or all senators in the given year.

the idea that when borrowers and lenders are in the same states, lenders with political connections charge an even lower spread to brown firms than lenders without political connections.

We further consider the party of the Senate as the different political parties could have different attitudes in green transition (e.g., Kwon, Lowry, and Verado, 2024; Erten and Ongena, 2023). Kwon, Lowry, and Verado (2024) suggest that lobbyists who are more Democratic tend to support pro-environmental policies, while lobbyists who are more Republican tend to support anti-environmental policies. Erten and Ongena (2023) use Trump's withdrawal from the Paris Agreement as a shock to highlight that banks charge a lower spread in states with low climate denial or Republican states after environmental deregulation. By using the party of the Senate, we find similar results that banks connected to a BC senator in a Republican Senate state charge a lower spread to brown borrowers.

Lastly, we examine the potential channel of competitive re-election pressure on BC senators' behaviours in banks' green transition. Prior literature shows that banks extend mortgage credit intending to enhance the electoral prospects of the incumbent politicians when the re-election race is tight (Chu and Zhang, 2022). We examine whether the banks also provide cheaper loan terms to brown borrowers in competitive re-election races. Using a similar method to measure the competitive political environment by looking at the difference in aggregate vote counts in each state, we find that banks charge an even lower spread to brown borrowers when there is a competitive political environment.

This study contributes to several strands of literature. First, our finding extends the literature on political connections. Research in this area has explored the impact of political connections on risk exposure of financial institutions (Kostoevtsky, 2015), regulatory enforcement actions (Lambert, 2019; Mehta and Zhao, 2020; Papadimitri et al., 2021), antitrust

review outcomes (Mehta, Srinivasan, and Zhao, 2020), and banks' financial reporting opacity (Yue, Zhang, and Zhong, 2022). Banks with political connections are more prone to have opaque financial reporting (Yue, Zhang and Zhong, 2022), more likely to receive bailouts during difficult times[21], and subject to less regulation and enforcement actions (Gropper, Jahera and Park, 2013; Papadimitri et al., 2021). To our knowledge, we are the first to explore how banks' political connections can influence their lending to brown firms and therefore, their green transition. Our findings show that banks with political connections are more prone to be riskier in their lending to brown firms by charging at relatively cheaper spreads. Notably, our results suggest that the political ties of banks can delay brown firms' green transition as they access to loans at a relatively lower cost.

Second, our study extends the literature on banks' lending to brown firms. Although banks are viewed as key players in influencing firms' environmental performance (Houston and Shan, 2021; Kacperczyk and Peydro, 2021; Nguyen et al., 2022), especially after Paris Agreement (Ginglinger and Moreau, 2019; Degryse et al., 2023; Kacperczyk and Peydro, 2021), there is no evidence on how banks' political capital influence their lending to brown firms. In this study, we fill this gap by examining the effects of BC senators on loans to brown firms. Notably, we provide novel evidence showing that the negative impact of political capital on loan spread to brown firms is more pronounced when a senior BC senator is from the bank's headquarters and lenders, borrowers, and BC senators are in the same state.

The finding of the impact of BC senators on banks' lending to brown firms provided in this paper has policy implications. This indicates that the current supervision of local politicians' behaviours in support of green transitions is insufficient. In this vein, our findings help

[21] '*Political Interference Seen in Bank Bailout Decisions*' The Wall Street Journal, https://www.wsj.com/articles/SB123258284337504295.

understand the potential obstacles that politicians could pose in the banks' lending practices to brown firms. Therefore, it emphasises that more attention should be given to politicians' role in ensuring a transition to a greener economy.

2. Literature Review

This section provides the political powers of banks' risk-taking and the importance of borrowers' climate risks in banks' lending practices.

2.1 Politics and Bank's Risk-Taking

Prior studies provide evidence on how political connections influence bank risk-taking behaviour. Kostovetsky (2015) consider the estimated spending on lobbying activities from the Senate Office of Public Records (e.g., Lambert, 2019), board members with previous experience in Congress or at the White House, and financial institutions' headquarters in states with a senator on the Banking Committee (e.g., Yue, Zhang, and Zhong, 2022). They highlight that banks with political connections could be riskier with higher chances of being bailed out (Kostovetsky, 2015), underperform than their nonconnected peers (Lambert, 2019), and opaquer in financial reporting (Yue, Zhang, and Zhong, 2022). In this paper, we use banking committee membership to measure political connections.

These political connections could affect risk-taking behaviours by financial institutions in different ways. Banking committee senators in the bank's home state are incentivised to prevent bank failures that could bring negative externalities to the state economy. While a solid banking system benefits politicians, bank failure can put politicians in electoral jeopardy. Hence, politicians are incentivised to intervene in bank closure regulations, potentially to prioritise favoured constituents with political affiliations or to evade such failures' negative

externalities, including financial losses experienced by uninsured depositors and shareholders, the loss of jobs, and the potential decline in economic activity. Liu and Ngo (2014) suggest that the state where the failed bank is likely to suffer the most from the costs associated with bank failures. These negative externalities are likely to decrease the chance of senators' re-election since these consequences would affect mainly the state where the failed banks are located. Hence, senators want to avoid them due to career concerns (Barke and Riker, 1982; Costello, Granja and Weber, 2019). [22]

Also, banking committee senators practice forbearance to neglect financial institutions' risk-taking behaviours forbearance when the banks are in trouble or during economic distress. Gallemore (2022) summarises several reasons behind regulators' forbearance to avoid intervening in troubled banks. Firstly, regulators may seek to avoid spending resources in intervening banks and mitigate contagion to healthy banks (Brown and Dinc, 2011; Eisenbach, Lucca, and Townsend, 2016). Secondly, they may aim to minimise the resolution costs of fire sales and bankruptcy fees (Brinkmann, Horvitz, and Ying-Lin, 1996; Faccio, 2006; Houston et al., 2014). Lastly, they may strive to prevent destabilising the targeted banks or exacerbating the bank's problems or failure contagious to other banks (Brown and Dinc, 2011; Morrison and White, 2013). These considerations highlight the potential impacts of political connections on the risk-taking behaviours of financial institutions, as BC senators allow forbearance to prevent bank failures and mitigate the associated concerns of the adverse effects on the economy.

In addition to the aligned interests between regulators and senators in practising forbearance, there is a possibility of collusion between politicians, regulators, and banks that results in loosening regulatory supervision over banks' risk-taking behaviours. Yue, Zhang, and

[22] Barke and Riker (1982) suggest that legislators have the political concerns to satisfy the interests that the majority have in order to attract the support of a winning set of voters, while Costello, Granja and Weber (2019) highlight that lenient regulators are less likely to have enforcement actions on correcting accounting restatements than strict regulators.

Zhong (2022) highlight that banks headquartered in states with BC senators have greater abnormal loan loss provisions than banks in other states and are less likely to receive enforcement actions. These findings suggest politicians and regulators in states with BC senators should act in banks' favour with loosened regulatory oversight (Costello, Granja and Weber, 2019). As a result of this lenient regulatory environment and aligned interests among these regulators and politicians, banks in states with BC senators are more inclined to take on more risks in their lending practices. The impacts of political connections and the resulting relaxed regulatory environment could affect banks' lending to brown firms, i.e. firms with higher climate risks.

Next, banks with political connections take on more risks, leveraging the benefits of being saved or bailed out when banks are in trouble or financial distress (Brown and Dinc, 2005; (Faccio, Masulis and Mcconnell, 2006; Houston et al., 2014). Financial assistance from the federal government is utilised to support politicians' interests, such as earning voter support, managing election campaigns, and potentially reaping individual rewards from corporate lobbying (Shleifer and Vishny, 1993). Influential senators can direct bailout funds (Faccio, Masulis and Mcconnell, 2006), such as the Troubled Asset Relief Programme (TARP), to banks during financial distress.[23] This dynamic can incentivise banks to bear excessive risks with the anticipation of government support during economic difficulties. Hence, banks with political connections tend to be riskier as they believe they have support and protection from politicians or regulators in times of financial difficulties. As such, we would expect that banks with BC senators would be more likely to be riskier, hence lending at a cheaper rate to brown firms.

Alternatively, another stream of literature on political connections and banks' lending practices focuses on how senators' political career concerns can influence their incentives.

[23] See also 'Political Interference Seen in Bank Bailout Decisions' The Wall Street Journal, https://www.wsj.com/articles/SB123258284337504295

Senators might have concerns about bank failures in their home states, urging banks to follow safe and solid banking practices and intervene in banks' risky lending activities. In line with these objectives, regulators want to ensure strong banking governance and healthy bank performance in their home state. They closely monitor banks' financial reporting and risk assessment to maintain transparency and promote responsible banking practices. The Officer of the Comptroller of the Currency (OCC) red-flagged the action of delayed recognition of loan losses or provisioning timeliness as a sign of poor disclosure quality. Those banks that make opaque financial reporting choices, such as delayed loan losses, have stricter enforcement and interventions (Nicoletti, 2018; Gallemore, 2022). This highlights that regulatory bodies are vigilant in monitoring banks' reporting practices and address poor disclosure quality when observed. With attention to the bank's performance and reporting information, banks, fearing regulatory and enforcement action, would not lend excessively, report imprudently or bear uncontrolled risks. In this case, banks with heightened pressures from regulators and senators could be less likely to be riskier in their lending practices to brown firms.

2.2 Bank Lending and Climate Risk

Financial institutions are also critical in driving changes for a successful climate transition. The Carbon Disclosure Project (CDP) and The Good Transition Plan[24] by Climate Safe Lending Network (2021) emphasise the substantial climate impacts that financial institutions can have through their loans, investments, and insurance underwriting activities. The Taskforce for Climate-related Financial Disclosures[25] (TCFD) also recognises the vital part of the financial sector in addressing climate-related risks and urges these financial institutions to align their portfolios with a net-zero carbon world. Having the power to

[24] '*The Good Transition Plan by Climate Safe Lending Networ*k', Climate Safe Lending Network, 2021, https://www.climatesafelending.org/good-transition-for-banks
[25] See https://www.fsb-tcfd.org/.

decarbonise their loan portfolio and cut their financing to carbon-intensive industries, financial sectors' actions aligning their activities with climate goals are instrumental in achieving a sustainable future.

Climate risk is a crucial factor in the pricing of mortgage credit (Nguyen et al., 2022), bond returns and stock markets (Engle et al., 2020; Huynh and Xia, 2021), the real estate market (Bernstein, Gustafson and Lewis, 2019), and property damage (Cortés and Strahan, 2017). Researchers also recognise that climate change can pose a threat to the financial system itself. For instance, accumulating vulnerable assets[26]can negatively impact insurance companies, weakening financial positions for affected businesses and consumers causing potential losses for lending banks (Huang *et al.*, 2022).[27] It has been argued that financial institutions typically charge a higher loan spread on brown companies, potentially those with greater carbon emissions or stronger reliance on fossil fuels (Goss and Roberts, 2011; Delis, de Greiff and Ongena, 2018; Degryse et al., 2023; Ehlers, Packer and de Greiff, 2022). One study by Jiang, Li, and Qian (2023) shows that banks offer loans with higher spreads, shorter loan durations, and collateral from companies with higher levels of chemical pollution. Firms with higher climate risk tend to have higher loan spreads after the Paris Agreement (Ginglinger and Moreau, 2019; Degryse et al., 2023; Kacperczyk and Peydro, 2021). Hence, these financial risks related to climate change are now vital when investors allocate their funds.

Recent studies also demonstrate a link between banks and their borrowers' ESG performance. Banks can influence firms' future ESG performance, measured using RepRisk data (Houston and Shan, 2021), as banks may consider the ESG performance of their potential

[26] Vulnerable assets are those capitals exposed to natural disasters such as floods, landslides, storms or extreme temperatures.

[27] Failing to fulfil financial obligations due to insolvency gives rise to non-performing loans, commonly known as bad debt, which affects the balance sheets of banks and other financial institutions. Hence, climate-related risks are essential in banks' lending practices. Javadi and Masum (2021) also provide evidence of the impact of drought severity at firms' headquarters on the cost of bank loans.

borrowers due to the credit risks associated with borrowers' poor ESG performance, such as backlash from stakeholders including consumer boycotts, employee opposition, and heightened regulation and litigation, as well as potential damages to banks' reputation and social capital. In addition, Kacperczyk and Peydro (2021) suggest that banks prefer lending to borrowers with similar environmental, social, and governance (ESG) profiles. These green banks[28] will more likely reduce loan amounts to firms with higher emission levels and vice versa. As such, these prior studies highlight that banks are essential in supporting corporate transition plans, such as enforcing emission reduction by stopping their lending to brown firms and increasing support to green firms.

However, despite several studies suggesting an association between bank lending and climate risk, the impact of banks' political connection on lending to brown borrowers remains unexplored. We address this question in the context of the syndicated loan market and examine potential explanations for this relationship.

3. Hypothesis Development

Existing research concerning the correlation between a bank's lending activities and its political connection primarily concentrates on aspects such as the bank's financial performance or risk behaviours (Yue, Zhang and Zhong, 2022), support received from government financial assistance programs like TARP (Brown and Dinc, 2005; Duchin and Sosyura, 2012; Kostovetsky, 2015), or the impact of political connections of borrowers on the bank's lending practices (Faccio, 2006).

From the literature review, there are many possible incentives for banking committee senators to practice forbearance on banks' risk-taking or exert monitoring on banks' lending

[28] Banks are considered as green banks if they commit to Science Based Targets Initiative (SBTI), which is an initiative that is in-lined with Paris Agreement in tackling climate change issues and reducing carbon emission.

practices out of career concerns and worries of bank failure in their home state (Nicoletti, 2018; Yue, Zhang and Zhong, 2022; Gallemore, 2022). Some researchers claim that politically connected financial firms tend to be riskier with the anticipation of government support during financial difficulties. The idea of moral hazard that the government would bail out financial institutions also provides support. Based on the premise that lenders headquartered in states with a banking committee senator take on more risks, these lenders may feel more comfortable taking on additional risks beyond their optimal level, including providing a cheaper loan to brown borrowers, as they anticipate potential assistance from the government in times of difficulty. By contrast, some researchers consider the existence of political connections to pose stricter regulations and more supervision on banks' lending practices due to career concerns (Liu and Ngo, 2014; Costello, Granja and Weber, 2019), prohibiting these banks from being too risky or beyond their socially optimal level in their lending. It is unclear whether such a political connection at the bank's level could affect lender's preference towards borrowers with different levels of climate risk exposure. As such, we state two hypotheses as follows:

Hypothesis 1a: Banks headquartered in states with a Banking Committee senator (or politically connected banks) will offer a cheaper rate to brown borrowers than banks without a Banking Committee senator in their headquarters state.

Hypothesis 1b: Banks headquartered in states with a Banking Committee senator (or politically connected banks) will charge a higher rate to brown borrowers than banks without a Banking Committee senator in their headquarters state.

4. Data and Research Design

4.1 Syndicated Loan Data

We obtained syndicated loan data from Thomson Reuters Loan Pricing Corporation, DealScan. Our main study focuses explicitly on loans that originated from 1995 to 2020, considering only loans granted to U.S.-incorporated firms or in the U.S. syndicated loan market. DealScan provides loan information at both facility (equivalently, "tranches") and package level (equivalently, "deals"). The deal refers to a group of loan tranches given to the same firm at the same time, while each tranche is a loan from the splitting of the deal provided to the same firm at different times and could involve different lenders. These tranches could be associated with various amounts, maturities, and loan spreads but generally the same covenants[29] (Celil, Julio and Selvam, 2023; Liu *et al.*, 2023).

We follow previous studies in our design to consider only the lead lenders (Hollander and Verriest, 2016; Houston and Shan, 2022). Lead Arrangers or lead lenders are expected to monitor the loans (Holmstrom and Tirole, 1997; Bharath, Pasquariello and Wu, 2006), enforce covenants and negotiate or design the loan contracts (Hollander and Verriest, 2016). To classify lenders as "lead arrangers", we rely on DealScan's "lead_arranger" variable that provides information on the names of lead arrangers for each loan.

Next, in LPC's Dealscan database, over 35% of all syndicated loan deals initiated in the 1990s were comprised of multiple tranches (Maskara, 2010), and each tranche could include more than one lead lender.[30] In our study, each loan tranche between the individual lead lender and the borrower is considered a unique observation[31] since we focus on each lead lender's

[29] Covenants are normally defined at the loan package or deal level.

[30] In our final sample of 22,757 observations, we have identified 11,777 tranches. Among these tranches, 23% feature a single lead lender headquartered in one of the U.S. states, 36% have two lead lenders from the United States, 17% are associated with three lead lenders from the United States, 11% are associated with three lead lenders from the United States while the remaining 13% involve more than four lead lenders from the United States.

[31] The results are robust when we collapse our data at the syndicate level, where we aggregate loans with multiple lead lenders into one observation (as shown in Section 9.1). This approach was similar to the approach in Hollander and Verriest's paper (2006) in looking at the design of loan contracts and the distance between lead lenders and borrowers

political connection. We manually retrieve lenders' headquarters from the official company website to measure the bank's political connection and whether a BC senator is at each bank's headquarters[32]. Suppose the official website is unavailable due to bank closures or mergers and acquisitions; in that case, we manually find it on the Standard and Poor (S&P) Capital IQ, Bloomberg or the FDIC official website.[33] The cost of each loan is measured by the natural logarithm of all-in-spread-drawn[34], denoted as $LnAISD$ in our study. According to Javadi and Masum (2021), we exclude observations with negative all-in-drawn spreads or a leverage ratio that is more than one.

We also merged loan data with firms' accounting information from Compustat one year before the year of loan origination using the Compustat-DealScan link[35] provided by Chava and Roberts (2008). Financial and quasi-public firms (SIC code 6000–6999 & 9000–9999) are excluded.

4.2 Senators data

The memberships of the Senate Banking Committee are found in the annual volumes of the Official Congressional Directory[36], including information on each senator's name and home state for each senate committee during each Congress. Our primary sample covers the period of 1995 to 2020, corresponding to the 104th to 117th Congress. For analysis at the individual lead lender level, we use the dummy variable $BankSenator$ that equals one if the

[32] This information are cross-checked with S&P Capital IQ or Bloomberg to ensure consistency.
[33] See https://banks.data.fdic.gov/bankfind-suite/bankfind.
[34] All-In-Spread-Drawn-bps is an variable in DealScan that is computed as the total annual spread paid over London Interbank Offered Rate (LIBOR).
[35] This link was updated on Jan 2024. We use this new link and keep the matching if the similarity score of the names of Dealscan and Compustat exceeds 95%. We also manually checked to make sure they were the same company.
[36] See https://www.govinfo.gov/app/collection/cdir.

loan originated with the lender with a BC senator at its headquarters in that year-quarter of loan origination and zero otherwise.

When collapsing all observations within a single tranche that involve more than one lead lender as a unique observation or conducting the analysis at the syndicated level, we use another variable $BankSenator\_tranche$ to measure the degree of banks' political connections for that specific tranche. $BankSenator\_tranche$ is computed as the ratio of the lead lenders in the tranche headquartered in the state with a BC senator to the total number of lead lenders in the tranche in that year-quarter of loan origination date, and zero otherwise.

4.3 Measuring Environmental Risks

Here, we use the specific environmental score component from MSCI ESG Stats to measure environmental risks. Within the environmental category, indicators help identify if the company has the necessary management capabilities to address key ESG risks ("Concern"), such as water stress, toxic emissions, and water management. Additionally, they assess opportunities ("Strength") related to clean technology, renewable energy, and efficient environmental management systems. In our study, we focus on the "Concern" of the environmental category. Some researchers previously used the raw number of strengths or concerns within individual categories. Still, this approach might be problematic as Manescu (2011) mentions that the raw score may not provide a meaningful comparison of a firm's ESG performance over the years as the total number or the maximum number of strengths or concerns for a category varies over time. To address this issue, we follow Servaes and Tamayo (2013), Lins, Servaes and Tamayo (2017), and Cao, Liang and Zhan (2019) to divide the number of concerns within the environmental category for each firm-year by the maximum possible number of concerns in the environmental category for that year to provide consistent comparisons by doing the computation as equation (1) below, we obtain the adjusted

environmental concern index that ranges from 0 to 1, denoted as $ClimateRisk_{MSCI}$ hereafter. A higher value of $ClimateRisk_{MSCI}$ signals that the borrower i is brown or has more climate risks.

$$ClimateRisk_{MSCI,i,year} = \frac{No.Concerns_i}{No.Concerns\ Category_{year}} \quad (1)$$

4.4 Control Variables

From syndicated loan literature, many regression models control both loan and firm characteristics. Here, we follow prior literature to control the characteristics of the borrowers, such as Altman-Z score, firm size, market-to-book ratio, debt ratio, profitability, tangibility, firm age, and cash holding (Saunders and Steffen, 2011; Chava, 2014; Javadi and Masum, 2021). We also control several loan characteristics such as tranche amount, maturity, the number of lenders, performance pricing dummy, collateral dummy, loan type and purpose dummies (Qian and Strahan, 2007; Ross, 2010; Chava, 2014; Bradley and Roberts, 2015). Following Graham, Li and Qiu (2008), we also include two macroeconomic variables, *TermSpread* and *CreditSpread,* to control monthly economic conditions.

5. Results and Discussions

5.1 Summary Statistics

[Insert Table 1 about here]

The sample summary statistics are presented in Table 1. On average, the spread is 195 bps with a standard deviation of 141 bps, while the tranche amount is 765 million, with a maturity of 51 months and 11 lenders. As shown in Panel B, an average firm in our sample has an Altman-Z score of 1.788 with 10.4 billion of firm assets. These firms have a mean

environmental concern score of 0.033, with a standard deviation of 0.094. Also, 67% of observations in our sample are with lenders whose headquartered states have BC senators.

Table OA3 compares the mean differences between contract terms and environmental performance among firms borrowing from lead banks with connections to BC senators and firms borrowing from lead banks without political connections. The results suggest that banks with political connections are associated with extending loans to browner firms and at favourable terms such as a lower spread, greater loan amount, longer maturity, and reduced collateral requirement, but are more likely to incorporate performance-based pricing grid, which offers more flexibility for lenders to adjust the interest rate.

5.2 Baseline Regression Model

Before moving on to the baseline model, we conduct a pre-analysis to test if the risk-taking explanation of banks with political connections holds. The untabulated pre-analysis analysis supports the narrative that politically connected banks take more risks than non-politically connected ones.[37]

Our baseline regression model will be as below, referring to equation (2):

$$\begin{aligned} Ln(AISD)_{i,s,t} = \alpha + \beta_1 BankSenator_{s,t} + \beta_2 ClimateRisk_{MSCI,i,t-1} \\ +\beta_3 BankSenator_{s,t} * ClimateRisk_{MSCI,i,t-1} \\ +Firm\ Controls\ + Loan\ Controls + Loan\ Type\ and\ Purposes\ FE \\ +\vartheta_s + \mu_t + \tau_{industry} + \varepsilon_{i,s,t} \end{aligned} \quad (2)$$

Where i indexes firm, s indexes the state of the lead lender's headquarters, t represents the quarter-year of the active date of the tranche. To price the cost of a loan, $AISD_{i,s,t}$ is the natural logarithm of All-In-Spread-Drawn in DealScan. $BankSenator_{s,t}$ is a dummy variable equal to

[37] The untabulated results are available upon request.

one when the bank is headquartered in a state with a BC senator. $ClimateRisk_{MSCI,i,t-1}$ is the climate risk of borrowers one year before the loan's active date, computed using equation (1) as stated in section 4.3.

By adding the interaction term of $BankSenator_{s,t} * ClimateRisk_{MSCI,i,t-1}$ this parameter of interest β_3 will then capture the difference in the loan rate that the borrower receives from a bank with a BC senator in headquarters state compared to a bank without a BC senator in headquarters state for the borrower's climate risk profile. Suppose a bank with a BC senator in the state has charged a cheaper loan rate to brown firms than a bank without a BC senator, the β_3 will be negative. This setup is like a generalised difference-in-difference specification and allows us to interpret the relationship in a regression setting (Huynh, Nguyen and Truong, 2020; Javadi and Masum, 2021). Also, this regression specification includes the quarter-year, industry, and lender-state fixed effects. The standard errors are clustered in firm levels[38] to control potential correlations in the cost of lending.

[Insert Table 2 about here]

Table 2 shows the regression results for the baseline model, showing that the coefficient for the interactions between *BankSenator* and $ClimateRisk_{MSCI}$ is statistically significant at a 1% level. This suggests that politically connected financial firms can charge a lower spread to brown firms, which meets our expectation that lenders will likely take more risks by providing cheaper loans when they have political connections. The presence of BC senators in the headquarters state of the lead bank is associated with a reduction in loan spread of 8.33 basis points and interest expenses of $1.94[39] million over the entire contract life if they borrow an

[38] In untabulated analyses, we cluster at firm and tranche levels since one tranche could consider multiple lenders (Petersen, 2009; Hollander and Verriest, 2016). The results are robust.
[39] It is calculated as 5.98 bp=32.6%*195.282*0.094, 1.94 million =5.98/10,000*764.679*4.24.

average loan of $764.679 million, loan spread of 195.282 basis point and 4.24 years (50.836 months) of maturity.

6. Identification: Senator Turnover Event and Cost of Borrowing to Brown Firms

Our identification regression model leverages the exogenous variation in BC senators, characterised by time series and cross-state variations, to examine its impact on firm decisions (Kostovetsky, 2015). The influence of political connections on firm performance has been extensively studied and documented. Previous research has demonstrated that firms with political connections can gain tangible advantages that enhance firm value (Fisman, 2001; Faccio, 2006; Faccio, Masulis and Mcconnell, 2006; Bunkanwanicha and Wiwattanakantang, 2008). Conversely, when there is a change in political leadership or turnover, established political connections may be weakened or severed, leading to potential uncertainties that can significantly impact a firm. Due to the weighting and bias issues inherent in the traditional staggered Difference-in-Differences estimation[40] (Baker, Larcker and Wang, 2022), we follow Yue, Zhang and Zhong (2022) and Houston and Shan (2022) to conduct a stack event study by focusing on exogenous BC senator departures (Mehta and Zhao, 2020).

First, we identified 49 senator turnovers for the sample period from 1995 to 2020. Considering the reasons behind each turnover case using Charles Stewart's website and Google Search, we follow Mehta and Zhao (2020) and Mehta, Srinivasan and Zhao (2020) to identify only 20 cases that are considered exogenous out of these 49 events: 17 senators transferred to

[40] The untabulated results remain robust when using staggered DiD , which is conditional on firms' environmental performance. The results are available upon request.

other Senate committees, and 3 resigned from Congress. Other senators took the position from the same state (12 cases), experienced re-election failure (7 cases) or retired (10 cases).[41]

For each state with the turnover event, we specifically consider an event-study window from one years before and one years after the year-quarter of the turnover event.[42] We then construct specific datasets that include all loans from lenders whose headquarters are in that state with a departure event and all other loans from all other pre-treatment state observations for each cohort (Baker, Larcker and Wang, 2022). 'Pre-treatment' means that the control unit could be either a loan from a lender headquartered in a state that never experienced a BC departure or a loan from a lender headquartered in a state that has yet to experience a BC departure by the time the loan originated. This stacked regression approach allows us to avoid bias from dynamic treatment effects and a better way to detect average treatment effects (Gormley and Matsa, 2011).

Here, we assume that loans are designed depending on previous firm characteristics, and we do not match loan contract terms as we consider them as ex-post information. Following Houston and Shan (2022), we perform matching at the loan level to ensure loans within the treated pool and those within the control pool are comparable regarding the borrowing firms' characteristics. Specifically, for each cohort, treated loans are identified as those provided to borrowers with at least one lead lender headquartered in the treated state. Conversely, control loans in the control pool are defined as those loans given to borrowers consisting of all lead lenders headquartered in states that have either never experienced or have not yet experienced a departure event by the time the loan originated.

[41] This is similar to the cases identified in Yue, Zhang, and Zhou's finding (2022). Of these 49 cases, '18 senators transferred to other Senate committees, and three resigned from Congress. Other senators either left the Banking Committee because of re-election failure (6 cases) or retirement (10 cases)' (Yue, Zhang, and Zhou, 2022, p. 11).
[42] There should be 20 cohorts for these 20 cases of departure events. However, by doing an event study around the window of one year before and after the year-quarter for each departure event, the final cohort number we have in our sample is 9.

After constructing the loan sample for each cohort's treatment and control pool (refer to cohort-specific datasets), we collapse the data and keep only the borrower information for matching. We use the propensity score matching method (one-to-one matching with replacement) to identify the matched firms from the control sample with similar firm characteristics to those from the treated sample for each quarter data of each cohort-specific dataset (refer as cohort-year-quarter-specific). [43] In this context, we employ propensity score matching at the quarter frequency level to match control loans initiated in the same year-quarter as the treated loans. This approach ensures that our estimation of average treatment effects remains unaffected by the time-series dynamics in the syndicated loan market, as emphasised by Houston and Shan (2022).

The propensity score is estimated using lagged borrowers' firm characteristics for each quarter of the cohort using the logit function, commonly used in practice. The propensity score matching (PSM) factors include the Altman-Z score, firm size, Market-to-Book ratio, debt ratio, profitability, tangibility, cash holding and firm age. We ultimately identified the matched pair of firms for all cohorts, a total of 336 pairs. We then merge the collapsed borrower-level data to the cohort-specific loan-level sample to obtain the final PSM sample data at the firm-loan level. The final sample at the firm-loan level consists of 1,286 loan observations, with 610 treatment loans and 676 control loans from 336 pairs of matched firms.[44]

For example, the lender 'AgFirst Farm Credit Bank' is headquartered in South Carolina with a BC senator who departed in 2013Q1. The event window for this cohort-specific dataset would be from 2012Q1 to 2014Q1, two years before and after the departure year-quarter. Loans from this lender and all other lenders headquartered in South Carolina would be treated loans

[43] As our measurement of Senator Departure is at the quarter frequency, we match our data at the year-quarter level rather than the year-month frequency, following the way employed in Houston and Shan's study (2022).
[44] As matched with replacement, the number of unique firms from the control and treated samples is unequal. In total, there are 163 unique firms in the control sample.

within this event window. In contrast, Loans originating from all lead lenders headquartered in all other pre-treatment states would be the control loans, i.e. if a lender is headquartered in a state that has a departure event on 2013Q3, we would include the observations of the loans made by this lender but only up to 2013Q2 in the cohort-specific dataset. For each quarter within this event window, we keep only the sample of treated loans and control loans from this respective quarter. We then collapsed the data at the borrower level for each quarter within the event window. For the next step, we use propensity score to find a matched pair of borrowers from the treated and control pool with similar firm characteristics in that respective quarter. When borrower A in the treated sample matches borrower B in the control sample based on their firm characteristics, we merge back to the cohort-year-quarter-specific loan datasets to consider all the loans received by these two firms in that quarter.

The main specification of the stacked event study analysis, equation (3), is as follows:

$$\begin{aligned} Ln(AISD)_{i,s,t,c} = \beta_0 + \ & \beta_1\left(\text{ClimateRisks}_{MSCI,i,t-1} * PostDeparture_{s,t,c}\right) \\ & + \beta_2 \text{ClimateRisks}_{MSCI,i,t-1} + \beta_3 PostDeparture_{s,t,c} \\ & + Controls + Loan\ Type\ and\ Purposes\ FE \\ & + \vartheta_{s,c} + \mu_{t,c} + \tau_{industry,c} + \varepsilon_{i,s,t,c} \end{aligned} \quad (3)$$

Where $AISD_{i,s,c,t}$ is the all-in-drawn spread over LIBOR, i indexes firms, s index states of lender headquarters, t indexes the year-quarter and c indexes cohort. $PostDeparture_{s,t,c}$ indicates whether the loan is from a lender that is headquartered in the cohort-specific state that experienced an exogenous departure event and originated after the turnover event. $\text{ClimateRisks}_{MSCI,i,t-1}$ and control variables are the same as our baseline models. Here, for fixed effects, we include the interactions of cohort and quarter-year, as well as industry and lender-state fixed effects, to control for differences across cohorts.

[Insert Table 3 about here]

Table 3 reports the balancing test between the ex-ante profiles of borrowers in the treatment and control groups. Ensuring the matching procedure works successfully before analysing the regression results based on the matched sample is essential. The means of the matched variables should not be significantly different from zero between the treatment and control groups after the matching procedures. The table below shows that all matched variables are not statistically significant after being matched. We will also control various borrower and loan characteristics and fixed effects to absorb both observed and unobserved factors in our regression.

[Insert Table 4 about here]

The estimates from the cohort-based PSM regression using equation (3) are reported in Table 4. In column (1), the coefficients of the primary interest variable $\text{ClimateRisks}_{MSCI,i,t-1} * PostDeparture_{s,t,c}$ is significantly positive, implying the senator's absence at the bank's headquarters could allow financial institutions to charge a higher spread to firms with greater climate risks. Hence, banks may be able to align more effectively with the objectives of the green transition as they would charge a higher spread to brown firms when they lose the connections to BC senators.

The difference-in-difference model assumes that, in the absence of treatment, the difference between the treatment and control groups is constant over time (parallel trend). Thus, we should exclude the possibility that the difference between the treatment and control groups in terms of the cost of lending to brown firms already existed before the treatment event of the senator's departure. To test this assumption, we replace the $PostDeparture_{s,t,c}$ with quarter dummies, $DepartureQuarter_t$, which is an indicator variable equal to one for observations in quarter k relative to the year-quarter of the departure event for the cohort-specific datasets. The first indicator variable, $DepartureQuarter_{\leq -2}$, is set to one if it has been two or more

quarters before the year-quarter of the BC departure event. In contrast, the last indicator variable,$DepartureQuarter_4$, is set to one if it has been four quarters after the year-quarter of the BC departure event (Serfling, 2016; Babenko, Bennett and Wang, 2023).

Our dynamic model results are in column (2) of Table 4. Here, we use $DepartureQuarter_0$ as the baseline group and omit it to avoid multicollinearity. Both results show no significant pre-trend before the departure event happens. We also find that banks started to significantly charge a higher spread to brown borrowers in the quarter of the departure of BC senators, suggesting that banks can respond fast or swiftly change their attitudes towards their risk-taking behaviours (Yue, Zhang and Zhong, 2022) or lending to brown firms.

7.1 Non-price terms

Next, we examine whether the effect of *BankSenator*ClimateRisk*$_{MSCI}$ is more likely to be associated with being collateralised, having a longer maturity, or having a covenant in place. Our analysis in Panel B, however, reveals that the presence of BC senators at banks' headquarters allows them to take on more risks by providing brown borrowers with greater loan amounts and less collateral requirement[45].

8. Mechanism

Here, I propose two potential mechanisms: the political clout of senators and the proximity of borrowers, lenders, and senators through reducing information asymmetries.

[Insert Table 6 about here]

[45] The untabulated result shows no other effects on covenants and upfront fees.

8.1 Political Clout: Seniority of Senators

Political clout (Seniority) of banking committee senators is a potential mechanism by which BC senators influence banks' risk-taking behaviours and regulatory omissions (Yue, Zhang and Zhong, 2022). The congressional seniority system, which has persisted over a century, bestows greater privileges and power upon congresspersons with longer tenures. A more senior senator is likely to be more influential (Galloway, 1953) in terms of promoting economic growth (Levitt and Poterba, 1999), reducing enforcement actions (Mehta, Srinivasan and Zhao, 2020; Mehta and Zhao, 2020), and enhancing banks' performance (Gropper, Jahera and Park, 2013).

To measure this political clout, we use two measures. We first compare if a BC senator's tenure in the Senate falls within the top decile among all senators in the given year and also compare if these senior BCs hold a chair position. The regression results suggest that banks only charge a lower spread to brown firms when they are connected to senior senators. This effect is greater when the senior senators hold a chair position. This meets our expectation that the more senior BC senators are, the more likely they are to support banks in their home states by giving a cheaper loan spread to brown firms since they can direct resources to banks when in financial difficulties.

8.2 Proximity of Lenders, Borrowers and Senators

Another potential channel will be the proximity of lenders, borrowers, and senators. Hollander and Verriest (2016) state that their proximity to these borrowers influences lenders' ability to collect information about borrowers. When borrowers and lenders are in the same geographical area, lenders could be better aware of the borrower's situation (Almazan, 2002), reducing information asymmetry and easing access to local information. Here, we examine

whether the impact of BC senators on the cost of lending to brown borrowers differs if borrowers, senators and lenders are headquartered in the same state. Here, we measure this using a dummy indicator, *SameState*, that equals one if they are headquartered in the same state at the time of loan origination. Here, a significant and negative relationship was found to support the effect of BC senators on banks' lending to brown firms, as shown in Columns (1) and (2) of Panel B of Table 6.

8.3 Party of the Senate

Politicians with different political ideologies and regulatory cultures could influence banks' lending practices to brown firms differently. The political nature of a Republican state is viewed as relatively more likely to support economic issues over social issues. Zhang et al. (2017) pointed out that conservative Republicans often serve officials in the new government for climate and energy-related governmental positions, and these Republicans supported Trump's withdrawal from the Paris Agreement. This is supported by the study from Erten and Ongena (2023) that banks' lending to brown firms is associated with local norms and regulatory supervision. The New York Times (2022) has also highlighted that Republican states exclude financial institutions from state business if these banks are not backing up fossil fuels companies. Similar cases happened in Texas, Florida, and Louisiana[46]. Additionally, Chu and Zhang (2022) claim that banking regulation could impose greater scrutiny or supervision subjecting to the chairpersons of the Senate Banking Committees, especially in the Democratic states.

Since states with different political natures may have different attitudes toward weighing climate risk and economic growth, some states might have loosened regulations and

[46] See also https://www.bloomberg.com/news/articles/2024-02-08/why-texas-is-banning-blackrock-citi-other-banks-over-esg-investing.

supervision, fostering an environment favourable to lenders who provide loans to brown borrowers. Separating the sample into two subgroups based on the party of the Senate, we found that banks that are politically connected to senators from the Republican Senate charge a lower spread to brown borrowers, as shown in Columns (3) and (4) of Panel B of Table 6. This is in line with prior literature and our expectations.

8.4 Competitive Political Environment

Senators may worry about re-election outcome. Chu and Zhang (2022) highlight that banks extend more mortgage credit in the home states, especially when re-election is more competitive. Following a similar approach, we use a measure to look at whether the bank is headquartered in a competitive state if the Democratic-Republican gap in the vote counts during a Senate general (re-)election[47] in a state is in the bottom quartile in a year and zero otherwise. We find supporting evidence that the effect of banks' political connection in brown lending is more pronounced in states where the re-election race is more competitive in the year of loan origination by almost six times the magnitude of the coefficient, as shown in Columns (5) and (6) of Panel B of Table 6. This could be due to senators' career concerns about obtaining support from the brown borrowers by supporting banks in charging brown borrowers favourable terms.

9. Robustness

9.1 Syndicate Level: Loans with multiple lead banks are aggregated into one observation and considered at the syndicate level.

[Insert Table 7 about here]

[47] Voting outcomes for Senate elections are obtained from the Harvard Dataverse. See https://doi.org/10.7910/DVN/DGUMFI.

Previously, in our baseline and identification model, we considered the unit of analysis at the loan level. We included multiple loans in the same trance made to the same borrower from different lead lenders as unique observations. In a separate test, we aggregate loans with multiple lead arrangers into one observation and consider the information at the syndicate level. Here, we replace *BankSenator* with the *BankSenator_Tranche* variable, which equals the ratio of number of lead lenders in the tranche that is headquartered in the state with a BC senator to the total number of lead lenders in the tranche in that year-quarter of loan origination date, and zero otherwise. Our results remain statistically significant and robust to our main findings.

9.2 Alternative Environmental Performance Measure: Sautner et al. (2023) and Trucost Emission Data

[Insert Table 8 about here]

For robustness checks, we use alternative measures of environmental risks: Trucost Emission data and textual analysis-based climate change exposure indexes by Sautner et al. (2023). The reason for choosing Trucost data is due to its unique source of data, which comes directly from the reported figures of the firm's carbon emission, instead of rating agencies that may be subject to bias or manipulation. However, Trucost data has a lower coverage than the MSCI score. The final observation used in regression using Trucost is 9,854, while the one using the MSCI score is about 22,757. As displayed in Table 8, the results remain robust and statistically significant at a 1% level. We further replicated our main findings by changing the environmental measures to textual analysis-based climate change exposure indexes by Sautner et al. (2023), and we found similar significant results for borrowers with greater exposure to physical and regulatory shocks but not to opportunities exposures.

10. Conclusion

In conclusion, this paper sheds light on the complex interplay between political connections, climate risk, and banking behaviour, offering valuable insights into the role of banks in the global green transition. Our findings underscore the significant impact that political capital, in the form of headquartering at the state with a senator from the U.S. Senate Banking Committee, can have on bank lending decisions to firms with greater climate risk exposure. These findings raise questions about aligning banking practices and senator roles with global efforts to combat climate change. We also find supporting evidence that such effect of banks' political connection in lending to brown firms is stronger when the banking committee senators are senior, in the same state as the borrowers, and from a Republican state, and when the time of the loan origination is during competitive re-election race.

Our study could have significant policy implications, especially in the context of growing attention on transition to a greener economy. The significant negative impact of BC senators on the cost of lending to brown firms suggests that the current supervision of local politicians' behaviour may not be sufficient and that these BC senators did not benefit banks in supporting greener lending. Policymakers should consider measures encouraging banks to align lending practices with climate goals and promote sustainability.

References

Almazan, A. (2002) 'A Model of Competition in Banking: Bank Capital vs Expertise', Journal of Financial Intermediation, 11(1), pp. 87–121. Available at: https://doi.org/10.1006/jfin.2001.0327.

Babenko, I., Bennett, B. and Wang, Z. (2023) 'Does Enhanced Disclosure Curb CEO Pay? Evidence from a Modern Information Technology Improvement', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.4523306.

Baker, A.C., Larcker, D.F. and Wang, C.C.Y. (2022) 'How much should we trust staggered difference-in-differences estimates?', Journal of Financial Economics, 144(2), pp. 370–395. Available at: https://doi.org/10.1016/j.jfineco.2022.01.004.

Barke, R.P. and Riker, W.H. (1982) 'A Political Theory of Regulation with Some Observations on Railway Abandonments', Public Choice, 39(1), pp. 73–106.

Berg, F., Kölbel, J.F. and Rigobon, R. (2022) 'Aggregate Confusion: The Divergence of ESG Ratings', Review of Finance, 26(6), pp. 1315–1344. Available at: https://doi.org/10.1093/rof/rfac033.

Bernstein, A., Gustafson, M.T. and Lewis, R. (2019) 'Disaster on the horizon: The price effect of sea level rise', Journal of Financial Economics, 134(2), pp. 253–272. Available at: https://doi.org/10.1016/j.jfineco.2019.03.013.

Bharath, S.T., Pasquariello, P. and Wu, G. (2006) 'Does Asymmetric Information Drive Capital Structure Decisions?', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.789725.

Bolton, P. and Kacperczyk, M. (2021) 'Do investors care about carbon risk?', Journal of Financial Economics, 142(2), pp. 517–549. Available at: https://doi.org/10.1016/j.jfineco.2021.05.008.

Borisov, A., Goldman, E. and Gupta, N. (2016) 'The Corporate Value of (Corrupt) Lobbying', Review of Financial Studies, 29(4), pp. 1039–1071. Available at: https://doi.org/10.1093/rfs/hhv048.

Bradley, M. and Roberts, M.R. (2015) 'The Structure and Pricing of Corporate Debt Covenants', Quarterly Journal of Finance, 05(02), p. 1550001. Available at: https://doi.org/10.1142/S2010139215500019.

Brinkmann, E.J., Horvitz, P.M. and Huang, Y.-L. (1996) 'Forbearance: An empirical analysis', Journal of Financial Services Research, 10(1), pp. 27–41. Available at: https://doi.org/10.1007/BF00120144.

Brown, C.O. and Dinc, I.S. (2005) 'The Politics of Bank Failures: Evidence from Emerging Markets', The Quarterly Journal of Economics, 120(4), pp. 1413–1444. Available at: https://doi.org/10.1162/003355305775097506.

Bunkanwanicha, P. and Wiwattanakantang, Y. (2009) 'Big Business Owners in Politics', Review of Financial Studies, 22(6), pp. 2133–2168. Available at: https://doi.org/10.1093/rfs/hhn083.

Cao, J., Liang, H. and Zhan, X. (2019) 'Peer Effects of Corporate Social Responsibility', Management Science, 65(12), pp. 5487–5503. Available at: https://doi.org/10.1287/mnsc.2018.3100.

Celil, H.S., Julio, B. and Selvam, S. (2023) 'Investment sensitivity to lender default shocks', Journal of Corporate Finance, 79, p. 102311. Available at: https://doi.org/10.1016/j.jcorpfin.2022.102311.

Chava, S. (2014) 'Environmental Externalities and Cost of Capital', Management Science, 60(9), pp. 2223–2247. Available at: https://doi.org/10.1287/mnsc.2013.1863.

Chava, S. and Roberts, M.R. (2008) 'How Does Financing Impact Investment? The Role of Debt Covenants', The Journal of Finance, 63(5), pp. 2085–2121. Available at: https://doi.org/10.1111/j.1540-6261.2008.01391.x.

Chu, Y. and Zhang, T. (2022) 'Political influence and banks: Evidence from mortgage lending', Journal of Financial Intermediation, 52, p. 100982. Available at: https://doi.org/10.1016/j.jfi.2022.100982.

Claessens, S., Feijen, E. and Laeven, L. (2008) 'Political connections and preferential access to finance: The role of campaign contributions', Journal of Financial Economics, 88(3), pp. 554–580. Available at: https://doi.org/10.1016/j.jfineco.2006.11.003.

Cohen, S., Kadach, I. and Ormazabal, G. (2023) 'Institutional investors, climate disclosure, and carbon emissions', Journal of Accounting and Economics, 76(2–3), p. 101640. Available at: https://doi.org/10.1016/j.jacceco.2023.101640.

Cortés, K.R. and Strahan, P.E. (2017) 'Tracing out capital flows: How financially integrated banks respond to natural disasters', Journal of Financial Economics, 125(1), pp. 182–199. Available at: https://doi.org/10.1016/j.jfineco.2017.04.011.

Costello, A.M., Granja, J. and Weber, J. (2019) 'Do Strict Regulators Increase the Transparency of Banks?', Journal of Accounting Research, 57(3), pp. 603–637. Available at: https://doi.org/10.1111/1475-679X.12255.

Cronqvist, H. and Yu, F. (2017) 'Shaped by their daughters: Executives, female socialization, and corporate social responsibility', Journal of Financial Economics, 126(3), pp. 543–562. Available at: https://doi.org/10.1016/j.jfineco.2017.09.003.

Degryse, H. et al. (2023) 'When green meets green', Journal of Corporate Finance, 78, p. 102355. Available at: https://doi.org/10.1016/j.jcorpfin.2023.102355.

Degryse, H., Roukny, T. and Tielens, J. (2022) 'Asset Overhang and Technological Change', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.4194892.

Delis, M.D., de Greiff, K. and Ongena, S. (2018) 'Being Stranded on the Carbon Bubble? Climate Policy Risk and the Pricing of Bank Loans', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.3125017.

Deng, M. et al. (2022) 'Stock Prices and the Russia-Ukraine War: Sanctions, Energy and ESG', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.4080181.

Di Giuli, A. and Kostovetsky, L. (2014) 'Are red or blue companies more likely to go green? Politics and corporate social responsibility', Journal of Financial Economics, 111(1), pp. 158–180. Available at: https://doi.org/10.1016/j.jfineco.2013.10.002.

Duchin, R. and Sosyura, D. (2012) 'The politics of government investment', Journal of Financial Economics, 106(1), pp. 24–48. Available at: https://doi.org/10.1016/j.jfineco.2012.04.009.

Ehlers, T., Packer, F. and de Greiff, K. (2022) 'The pricing of carbon risk in syndicated loans: Which risks are priced and why?', Journal of Banking & Finance, 136, p. 106180. Available at: https://doi.org/10.1016/j.jbankfin.2021.106180.

Eisenbach, T., Lucca, D. and Townsend, R. (2016) The Economics of Bank Supervision. w22201. Cambridge, MA: National Bureau of Economic Research, p. w22201. Available at: https://doi.org/10.3386/w22201.

Erten, I and S Ongena (2023), 'DP18664 Do banks price environmental risk? Only when local beliefs are binding!', CEPR Discussion Paper No. 18664. CEPR Press, Paris & London. https://cepr.org/publications/dp18664

Engle, R.F. et al. (2020) 'Hedging Climate Change News', The Review of Financial Studies. Edited by A. Karolyi, 33(3), pp. 1184–1216. Available at: https://doi.org/10.1093/rfs/hhz072.

Faccio, M. (2006) 'Politically Connected Firms', American Economic Review, 96(1), pp. 369–386. Available at: https://doi.org/10.1257/000282806776157704.

Faccio, M., Masulis, R.W. and Mcconnell, J.J. (2006) 'Political Connections and Corporate Bailouts', The Journal of Finance, p. 40.

Fisman, R. (2001) 'Estimating the Value of Political Connections', American Economic Review, 91(4), pp. 1095–1102. Available at: https://doi.org/10.1257/aer.91.4.1095.

Flammer, C. (2015) 'Does product market competition foster corporate social responsibility? Evidence from trade liberalization: Does Competition Foster CSR?', Strategic Management Journal, 36(10), pp. 1469–1485. Available at: https://doi.org/10.1002/smj.2307.

Gallemore, J. (2022) 'Bank financial reporting opacity and regulatory intervention', Review of Accounting Studies [Preprint]. Available at: https://doi.org/10.1007/s11142-022-09674-4.

Galloway, G. (1953). The Legislative Process in Congress. Thomas Y. Crowell, New York

Ginglinger, E. and Moreau, Q. (2019) 'Climate Risk and Capital Structure', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.3327185.

Gormley, T.A. and Matsa, D.A. (2011) 'Growing Out of Trouble? Corporate Responses to Liability Risk', Review of Financial Studies, 24(8), pp. 2781–2821. Available at: https://doi.org/10.1093/rfs/hhr011.

Goss, A. and Roberts, G.S. (2011) 'The impact of corporate social responsibility on the cost of bank loans', Journal of Banking & Finance, 35(7), pp. 1794–1810. Available at: https://doi.org/10.1016/j.jbankfin.2010.12.002.

Graham, J., Li, S. and Qiu, J. (2008) 'Corporate misreporting and bank loan contracting', Journal of Financial Economics, 89(1), pp. 44–61. Available at: https://doi.org/10.1016/j.jfineco.2007.08.005.

Gropper, D.M., Jahera, J.S. and Park, J.C. (2013) 'Does it help to have friends in high places? Bank stock performance and congressional committee chairmanships', Journal of Banking & Finance, 37(6), pp. 1986–1999. Available at: https://doi.org/10.1016/j.jbankfin.2013.01.003.

Hallman, N., Howe, J.S. and Wang, W. (2023) 'Analyst coverage and syndicated lending', Review of Accounting Studies, 28(3), pp. 1531–1569. Available at: https://doi.org/10.1007/s11142-022-09670-8.

Hauswald, R. and Marquez, R. (2006) 'Competition and Strategic Information Acquisition in Credit Markets', Review of Financial Studies, 19(3), pp. 967–1000. Available at: https://doi.org/10.1093/rfs/hhj021.

Hollander, S. and Verriest, A. (2016) 'Bridging the gap: the design of bank loan contracts and distance', Journal of Financial Economics, 119(2), pp. 399–419. Available at: https://doi.org/10.1016/j.jfineco.2015.09.006.

Holmstrom, B. and Tirole, J. (1997) 'Financial Intermediation, Loanable Funds, and The Real Sector', The Quarterly Journal of Economics, 112(3), pp. 663–691. Available at: https://doi.org/10.1162/003355397555316.

Houston, J.F. and Shan, H. (2022) 'Corporate ESG Profiles and Banking Relationships', The Review of Financial Studies. Edited by P. Strahan, 35(7), pp. 3373–3417. Available at: https://doi.org/10.1093/rfs/hhab125.

Houston, J.F. et al. (2014) 'Political Connections and the Cost of Bank Loans: POLITICAL CONNECTIONS AND THE COST OF BANK LOANS', Journal of Accounting Research, 52(1), pp. 193–243. Available at: https://doi.org/10.1111/1475-679X.12038.

Huang, H.H. et al. (2022) 'Firm climate risk, risk management, and bank loan financing', Strategic Management Journal, 43(13), pp. 2849–2880. Available at: https://doi.org/10.1002/smj.3437.

Huang, S. and Thakor, A.V. (2022) 'Political Influence, Bank Capital, and Credit Allocation', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.4311512.

Huynh, T.D. and Xia, Y. (2021) 'Climate Change News Risk and Corporate Bond Returns', Journal of Financial and Quantitative Analysis, 56(6), pp. 1985–2009. Available at: https://doi.org/10.1017/S0022109020000757.

Huynh, T.D., Nguyen, T.H. and Truong, C. (2020) 'Climate risk: The price of drought', Journal of Corporate Finance, 65, p. 101750. Available at: https://doi.org/10.1016/j.jcorpfin.2020.101750.

Javadi, S. and Masum, A.-A. (2021) 'The impact of climate change on the cost of bank loans', Journal of Corporate Finance, 69, p. 102019. Available at: https://doi.org/10.1016/j.jcorpfin.2021.102019.

Jiang, F., Li, W. and Qian, Y. (2023) Do Costs of Corporate Loans Rise with Sea Level? preprint. SSRN. Available at: https://doi.org/10.2139/ssrn.4351883.

Jung, H., Santos, J.A.C. and Seltzer, L. (2023) 'U.S. Banks' Exposures to Climate Transition Risks', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.4411661.

Kacperczyk, M.T. and Peydro, J.-L. (2021) 'Carbon Emissions and the Bank-Lending Channel', SSRN Electronic Journal [Preprint]. Available at: https://doi.org/10.2139/ssrn.3915486.

Knyazeva, A. and Knyazeva, D. (2012) 'Does being your bank's neighbor matter?', Journal of Banking & Finance, 36(4), pp. 1194–1209. Available at: https://doi.org/10.1016/j.jbankfin.2011.11.011.

Kostovetsky, L. (2015) 'Political capital and moral hazard', Journal of Financial Economics, 116(1), pp. 144–159. Available at: https://doi.org/10.1016/j.jfineco.2014.12.003.

Lambert, T. (2019) 'Lobbying on Regulatory Enforcement Actions: Evidence from U.S. Commercial and Savings Banks', Management Science, 65(6), pp. 2545–2572. Available at: https://doi.org/10.1287/mnsc.2017.2895.

Levitt, S.D. and Poterba, J.M. (1999) Public Choice, 99(1/2), pp. 185–216. doi:10.1023/a:1018341713887.

Li, C. and Wang, X. (2022) 'Local peer effects of corporate social responsibility', Journal of Corporate Finance, 73, p. 102187. Available at: https://doi.org/10.1016/j.jcorpfin.2022.102187.

Lins, K.V., Servaes, H. and Tamayo, A. (2017) 'Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis: Social Capital, Trust, and Firm Performance', The Journal of Finance, 72(4), pp. 1785–1824. Available at: https://doi.org/10.1111/jofi.12505..

Liu, C. et al. (2023) 'Prosocial CEOs and the cost of debt: Evidence from syndicated loan contracts', Journal of Corporate Finance, 78, p. 102316. Available at: https://doi.org/10.1016/j.jcorpfin.2022.102316.

Liu, W.-M. and Ngo, P.T.H. (2014) 'Elections, political competition and bank failure', Journal of Financial Economics, 112(2), pp. 251–268. Available at: https://doi.org/10.1016/j.jfineco.2014.02.005.

Maskara, P.K. (2010) 'Economic value in tranching of syndicated loans', Journal of Banking & Finance, 34(5), pp. 946–955. Available at: https://doi.org/10.1016/j.jbankfin.2009.10.007.

McCubbins, M.D. and Schwartz, T. (1984) 'Congressional Oversight Overlooked: Police Patrols versus Fire Alarms', American Journal of Political Science, 28(1), p. 165. Available at: https://doi.org/10.2307/2110792.

Mehta, M.N. and Zhao, W. (2020) 'Politician Careers and SEC enforcement against financial misconduct', Journal of Accounting and Economics, 69(2–3), p. 101302. Available at: https://doi.org/10.1016/j.jacceco.2020.101302.

Mehta, M.N., Srinivasan, S. and Zhao, W. (2020) 'The Politics of M&A Antitrust', Journal of Accounting Research, 58(1), pp. 5–53. Available at: https://doi.org/10.1111/1475-679X.12291.

Morrison, A.D. and White, L. (2013) 'Reputational contagion and optimal regulatory forbearance', Journal of Financial Economics, 110(3), pp. 642–658. Available at: https://doi.org/10.1016/j.jfineco.2013.08.011.

Murfin, J. (2012) 'The Supply-Side Determinants of Loan Contract Strictness', The Journal of Finance, 67(5), pp. 1565–1601. Available at: https://doi.org/10.1111/j.1540-6261.2012.01767.x.

Nguyen, D.D. et al. (2022) 'Climate Change Risk and the Cost of Mortgage Credit', Review of Finance, 26(6), pp. 1509–1549. Available at: https://doi.org/10.1093/rof/rfac013.

Nicoletti, A. (2018) 'The effects of bank regulators and external auditors on loan loss provisions', Journal of Accounting and Economics, 66(1), pp. 244–265. Available at: https://doi.org/10.1016/j.jacceco.2018.05.003.

Papadimitri, P. et al. (2021) 'Does political influence distort banking regulation? Evidence from the US', Journal of Financial Stability, 53, p. 100835. Available at: https://doi.org/10.1016/j.jfs.2020.100835.

Peng, D., Colak, G. and Shen, J. (2023) 'Lean against the wind: The effect of policy uncertainty on a firm's corporate social responsibility strategy', Journal of Corporate Finance, 79, p. 102376. Available at: https://doi.org/10.1016/j.jcorpfin.2023.102376.

Petersen, M.A. (2009) 'Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches', Review of Financial Studies, 22(1), pp. 435–480. Available at: https://doi.org/10.1093/rfs/hhn053.

Qian, J. and Strahan, P.E. (2007) 'How Laws and Institutions Shape Financial Contracts: The Case of Bank Loans', The Journal of Finance, 62(6), pp. 2803–2834. Available at: https://doi.org/10.1111/j.1540-6261.2007.01293.x.

Ross, D.G. (2010) 'The "Dominant Bank Effect:" How High Lender Reputation Affects the Information Content and Terms of Bank Loans', Review of Financial Studies, 23(7), pp. 2730–2756. Available at: https://doi.org/10.1093/rfs/hhp117.

Saunders, A. and Steffen, S. (2011) 'The Costs of Being Private: Evidence from the Loan Market', Review of Financial Studies, 24(12), pp. 4091–4122. Available at: https://doi.org/10.1093/rfs/hhr083.

Sautner, Z. et al. (2023) 'Firm-Level Climate Change Exposure', The Journal of Finance, 78(3), pp. 1449–1498. Available at: https://doi.org/10.1111/jofi.13219.

Serfling, M. (2016) 'Firing Costs and Capital Structure Decisions', The Journal of Finance, 71(5), pp. 2239–2286. Available at: https://doi.org/10.1111/jofi.12403.

Servaes, H. and Tamayo, A. (2013) 'The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness', Management Science, 59(5), pp. 1045–1061. Available at: https://doi.org/10.1287/mnsc.1120.1630.

Shleifer, A. and Vishny, R.W. (1993) 'Corruption', The Quarterly Journal of Economics, 108(3), pp. 599–617. Available at: https://doi.org/10.2307/2118402.

Stratmann, T. (2005) 'Some Talk: Money in Politics. A (Partial) Review of the Literature', 124(1/2), pp. 135–156. Available at: https://doi.org/10.1007/s1 1127-005-4750-3.

Weingast, B.R. and Moran, M.J. (1983) 'Bureaucratic Discretion or Congressional Control? Regulatory Policymaking by the Federal Trade Commission', Journal of Political Economy, 91(5), pp. 765–800. Available at: https://doi.org/10.1086/261181.

Yue, H., Zhang, L. and Zhong, Q. (2022) 'The politics of bank opacity', Journal of Accounting and Economics, 73(2–3), p. 101452. Available at: https://doi.org/10.1016/j.jacceco.2021.101452.

Table 1: Summary Statistics

This table reports the summary statistics (number of observations, mean, standard deviation, minimum,25%, 50%, and 75% percentiles) for the main variables used in the paper, including loan contract terms, firm characteristics, political connection measures, firms' environmental performance, and two macroeconomic factors. In Panel B, all continuous Firm Characteristics variables are winsorised at 1% and 99% level. Detailed variable definitions are provided in Appendix Table OA2.

	N	Mean	SD	p25	Median	p75
Panel A. Loan Characteristics						
All-in-Spread Drawns	22757	195.282	140.888	100	175	250
LnAISD	22757	4.996	0.825	4.605	5.165	5.521
Upfront Fees	3744	74.738	121.623	20	50	100
Ln. Upfront Fees	3519	3.798	1.083	3.219	3.912	4.605
Tranche Amount	22757	764.679	1556.014	150	375	850
Ln. Amount	22757	5.847	1.313	5.011	5.927	6.745
Maturity	22757	50.836	21.363	36	60	60
Ln. Maturity	22757	3.779	0.642	3.584	4.094	4.094
Collateral	22757	0.45	0.498	0	0	1
Covenant	22757	0.549	0.498	0	1	1
Refinancing	22757	0.703	0.457	0	1	1
PerformancePricing	22757	0.404	0.491	0	0	1
No.Lenders	22757	10.673	8.307	5	9	14
Ln. Lenders	22757	2.079	0.812	1.609	2.197	2.639
Panel B. Firm Characteristics						
Altman-Z score	22757	1.788	1.178	0.994	1.729	2.469
Asset	22757	10358.409	22384.994	1046.718	2777.84	8419
Log Asset	22757	8.051	1.512	6.953	7.929	9.038
Market-to-Book ratio	22757	1.919	1.067	1.243	1.599	2.193
Debt Ratio	22757	0.303	0.197	0.166	0.281	0.405
Profitability	22757	0.161	0.089	0.104	0.146	0.2
Tangibility	22757	0.274	0.22	0.104	0.205	0.392
Ln. Cash	22757	4.941	1.853	3.716	4.965	6.2
Panel C. State Information						
BankSenator	22757	0.672	0.469	0	1	1
BankSenator_Tranche	12932	0.705	0.394	0.5	1	1
Panel D. Climate Risk						
$ClimateRisk_{MSCI}$	22757	0.033	0.094	0	0	0
$ClimateRisk_{LnScope1}$	9854	11.774	2.146	10.375	11.612	12.964
$ClimateRisk_{LnScope2}$	9854	11.873	1.725	10.672	11.847	13.12
$ClimateRisk_{LnScope3}$	3419	14.324	2.131	12.838	14.155	15.686
$ClimateRisk_{SautnerOP}$	23874	-8.008	0.351	-8.299	-7.851	-7.744
$ClimateRisk_{SautnerRG}$	23874	-10.098	0.351	-10.223	-10.036	-9.824
$ClimateRisk_{SautnerPHY}$	23874	-11.313	0.181	-11.432	-11.311	-11.166
Panel E. Macroeconomic factors						
TermSpread	22757	1.215	0.876	0.379	1.26	1.948
CreditSpread	22757	-1.005	0.358	-1.142	-0.915	-0.809

Table 2: Baseline model: The Impact of BC Senators on Banks' Lending to Brown Firms

This table summarises the results of baseline regressions of the impact of banks' political connections on the cost of lending to brown firms. The dependent variables are the logarithm form of All-in-Spread drawn (*LnAISD*). The key explanatory variable is the interaction of *BankSenator*, a dummy variable equal to one if the lead lender is headquartered in a state with a banking committee senator, and $ClimateRisk_{MSCI}$, the adjusted MSCI environmental concern score. The sample period is from 1995Q1 to 2020Q4. All continuous explanatory variables of firm characteristics are winsorized at the 1 percent and 99 percent levels. The t-statistics are reported in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at th(e 10%, 5%, and 1% level respectively. The standard errors are clustered at the firm level. Variable definitions are presented in Appendix Table OA2.

VARIABLES	(1) LnAISD	(2) LnAISD	(3) LnAISD	(4) LnAISD
BankSenator	-0.150***	-0.149***	0.005	-0.010
	(-7.370)	(-8.653)	(0.564)	(-0.892)
$ClimateRisk_{MSCI}$	-0.892***	-0.154	0.133	0.171
	(-3.177)	(-0.557)	(0.880)	(1.120)
BankSenator *$ClimateRisk_{MSCI}$	-1.046***	-0.904***	-0.285**	-0.326**
	(-3.434)	(-3.238)	(-1.989)	(-2.235)
ALTMAN-Z score		-0.098***	-0.049***	-0.048***
		(-7.031)	(-5.297)	(-5.290)
Log Asset		-0.266***	-0.080***	-0.084***
		(-15.802)	(-6.908)	(-7.310)
Market-to-Book ratio		-0.154***	-0.089***	-0.091***
		(-7.942)	(-7.986)	(-8.168)
Debt Ratio		0.933***	0.354***	0.355***
		(13.661)	(7.451)	(7.529)
Profitability		-0.675***	-0.305***	-0.283**
		(-3.792)	(-2.604)	(-2.429)
Tangibility		-0.080	0.064	0.065
		(-1.217)	(1.299)	(1.330)
Ln. Cash		0.092***	0.014**	0.014**
		(8.252)	(2.297)	(2.238)
Ln. Lenders			-0.025**	-0.019*
			(-2.457)	(-1.923)
Ln. Amount			-0.107***	-0.103***
			(-13.189)	(-12.729)
Maturity			0.101***	0.098***
			(7.510)	(7.321)
Collateral			0.426***	0.419***
			(26.043)	(25.688)
PerformancePricing			-0.068***	-0.067***
			(-4.232)	(-4.186)
TermSpread			0.006	0.002
			(0.110)	(0.042)
CreditSpread			0.003	0.015
			(0.044)	(0.199)
Observations	22,757	22,757	22,757	22,753
Adjusted R-squared	0.056	0.286	0.675	0.678
Firm controls	No	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	No	No	Yes	Yes
Macroeconomic controls	No	No	Yes	Yes
Time FE	No	No	Yes	Yes
Lender_State FE	No	No	No	Yes
Industry FE	No	No	Yes	Yes

Table 3: Propensity Score Matching: Comparison of Treatment and Control Firms

This table reports the results of post-match diagnostic tests that compare the differences between the means of the matching covariates used in propensity score matching of the treated and control groups. We first construct cohort-year-quarter specific datasets, then collapse the sample at borrower level, and use logit regression to estimate the probability of being a treated borrower on lagged $ClimateRisk_{MSCI}$, Altman-Z score, Assets, Market-to-Book ratio, Debt ratio, Profitability, Tangibility, Firm Age, and Cash Holdings. We then match each treatment borrower to a control borrower (One-to-One matching with replacement) with similar climate performance and firm characteristics. When matching is done, we collect only the borrower_id and the treatment status and keep relevant loan data for that cohort-year-quarter-specific dataset. We finally stack all these matched cohort-year-quarter specific datasets from each cohort to obtain the propensity-score-matching sample. P-values are based on t-tests of mean differences between the treated and control firms from the final matched sample. Although three variables remain statistically significant after matching, the difference in the means of the treated and control is reduced for Cash and less statistically significant for Altman-Z score and Tangibility. These variables would also be controlled in our PSM-DID regression. All variable definitions can be found in the Appendix Table OA2.

After Matching	N	Treated	N	Control	Difference	p-value
$ClimateRisk_{MSCI}$	336	0.028	336	0.019	0.009	0.201
ALTMAN-Z score	336	4.7	336	4.672	0.028	0.811
Asset	336	1.992	336	2.058	-0.066	0.451
Market/Book ratio	336	7.825	336	7.705	0.12	0.181
Debt Ratio	336	2.191	336	2.299	-0.107	0.265
Profitability	336	0.285	336	0.272	0.013	0.329
Tangibility	336	0.168	336	0.169	-0.001	0.969
Cash	336	0.028	336	0.019	0.009	0.201

Table 4: Identification Model: Senator Turnover Event and Cost of Borrowing to Brown Firms

This table examines the impact of the unexpected departures of BC senators on banks' lending to brown borrowers using the propensity-score-matching sample. The variable $PostDeparture_{s,t,c}$ would be an indicator equal to one if the lead lender for that loan is headquartered in states s that experienced a plausibly exogenous departure of their BC senator in the cohort and if the year-quarter of the loan is after the departure of the state s in the cohort. The dependent variables are the natural logarithm of All-in-Spread drawn (*LnAISD*). The key explanatory variable is the Treated, Post, and Climate Risk measure interaction, $\text{ClimateRisks}_{MSCI,i,t-1} * PostDeparture_{s,t,c}$. Column (1) reports the results under the control of Lender_State*Cohort, Year-Quarter*Cohort, and Industry*Cohort fixed effects.

To test this assumption, we replace the $PostDeparture_{s,t,c}$ with quarter dummies, $DepartureQuarter_t$, which is an indicator variable equal to one for observations in quarter k relative to the year-quarter of the departure event for the cohort-specific datasets. The first indicator variable, $DepartureQuarter_{\leq -2}$, is set to one if it has been two or more quarters before the year-quarter of the BC departure event. In contrast, the last indicator variable,$DepartureQuarter_4$, is set to one if it has been four quarters after the year-quarter of the BC departure event (Serfling, 2016; Babenko, Bennett and Wang, 2023). The results are reported in Column (2).

The t-statistics are reported in parentheses below the coefficient estimates. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level respectively. The standard errors are clustered at the firm level. All variable definitions can be found in the Appendix Table. OA2.

	(1)	(2)
VARIABLES	LnAISD	LnAISD
$\text{ClimateRisks}_{MSCI,i,t-1} * PostDeparture_{s,t,c}$	0.910**	
	-2.122	
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{\leq -2}$		-0.197
		(-0.274)
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{-1}$		2.335
		(1.313)
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{1}$		1.441**
		(2.402)
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{2}$		-0.353
		(-0.313)
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{3}$		0.381
		(0.378)
$\text{ClimateRisks}_{MSCI,i,t-1} * DepartureQuarter_{4}$		1.059*
		(1.903)
Observations	1,274	1,274
Adjusted R-squared	0.803	0.804
Firm & Macroeconomic controls	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes
Time*Cohort, State*Cohort, & Ind*Cohort FE	Yes	Yes

Table 5: The Impact of BC Senators on Banks' Lending to Brown Borrowers Considering Different Non-Price Terms

This table examines the impact of BC senators on banks' lending to brown borrowers, considering different non-price terms before and after the Paris Agreement. Panel A considers non-price terms such as tranche amount, number of covenants, number of general covenants, number of financial covenants, upfront fees and collateral requirement. The t-statistics are reported in parentheses below the coefficient estimates. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level respectively. The standard errors are clustered at the firm level. All variable definitions can be found in the Appendix Table OA2.

Panel A. Non-Price Terms

VARIABLES	(1) Log (tranche amount)	(2) Log (# of covenants)	(3) Log (# of general covenants)	(4) Log (# of financial covenants)	(5) Log (upfront fee)	(6) Collateral
$ClimateRisk_{MSCI}$	-1.179***	-0.042	-0.044	0.214	0.027	0.309**
	(-2.596)	(-0.258)	(-0.292)	-1.102	-0.079	-2.431
BankSenator	-0.017	-0.023	-0.030*	-0.018	0.053	0.011
	(-0.757)	(-1.224)	(-1.841)	(-1.348)	-1.39	-0.993
$BankSenator*ClimateRisk_{MSCI}$	1.217***	0.015	0.035	-0.121	0.198	-0.297**
	-2.868	-0.092	-0.243	(-0.651)	-0.563	(-2.428)
Observations	22,753	22,753	22,753	12,120	3,516	22,753
Adjusted R-squared	0.538	0.474	0.463	0.273	0.551	0.31
Firm and Loan Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan Type & Purposes FEs	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Table 6. Mechanisms of Political Clout (Seniority of BC Senators), Information Asymmetry, Party of the Senate, and Competitive Re-election Vote

This table presents the results of the effects of BC senators' seniority and information asymmetry on the cost of lending to brown borrowers. We use two measure the seniority of BC senators. If a BC senator's tenure in the Senate falls within the top decile among all senators in the given year, the result is shown in column (1) and (2). We also use another measure to look at whether the effect differs when the senator is a senior and holds a chair position, as shown in Column (3) and (4) of panel A. In panel B, *SameState* is a dummy variable for the channel of information asymmetry, considering the geographical proximity among senators, lenders and borrowers. *SameState* equals one if both borrower, lender and senator are in the same state. We also look at the party of the Senate, whether Democratic or Republican, and at the time where there is a competitive re-election race.

The dependent variable in this table is the natural logarithm of the loan spread (*LnAISD*). The t-statistics are reported in parentheses below the coefficient estimates. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level respectively. The standard errors are clustered at the firm level. All interaction terms are included in the mechanism tests. All variable definitions can be found in the Appendix Table OA2.

Panel A. Political Clout

	Senior Senator (Compared to all Senators)		Senior Chair	
	(1) Senior	(2) Member	(3) Senior	(4) Member
$ClimateRisk_{MSCI}$	1.388**	0.014	2.158*	0.091
	-2.338	-0.053	-1.771	-0.347
BankSenator	0.026	0.027	-0.662	0.024
	-0.12	-1.463	(-1.246)	-1.498
BankSenator*$ClimateRisk_{MSCI}$	-1.774**	-0.11	-2.139*	-0.206
	(-2.255)	(-0.500)	(-1.764)	(-0.928)
T-Test for the diffs		-1.774**		-2.139**
Observations	1,205	14,808	549	15,464
R-squared	0.703	0.699	0.857	0.685
Firm controls	Yes	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Lender_State FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes

Panel B. Information Asymmetry, Party of the Senate, and Competitive Re-election Vote

	Same State		Party of the Senate		Competitive Re-election Race	
	(1) Same	(2) Different	(3) Democratic	(4) Republican	(5) Yes	(6) No
$ClimateRisk_{MSCI}$	0.602	0.13	0.073	0.296*	1.147***	0.121
	-1.314	-0.793	-0.356	-1.769	(3.007)	(0.778)
BankSenator	0.047	-0.014	-0.027	-0.001	-0.091	-0.003
	-1.046	(-1.153)	(-1.174)	(-0.041)	(-1.475)	(-0.250)
$BankSenator*ClimateRisk_{MSCI}$	-1.278**	-0.236	0.008	-0.493***	-1.533***	-0.270*
	(-2.443)	(-1.529)	-0.037	(-2.885)	(-2.672)	(-1.858)
T-Test for the diffs		-1.278*		0.493*		-1.263**
Observations	2,188	20,569	9,934	12,808	1,154	20,984
R-squared	0.763	0.675	0.635	0.713	0.727	0.684
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes	Yes	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Lender_State FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Table 7. The Impact of BC Senator/Bank's Political Connection on Lending to Brown Firms at the Syndicate Level

This table presents the regression results of the bank's political connections on loan spreads of borrowers with higher climate risks. The dependent variable is the natural logarithm of the loan spread. The key explanatory variable is the interaction of *BankSenator_Tranche*. This variable is constructed as the ratio of the number of lead lenders in the tranche that is headquartered in the state with a BC senator to the total number of lead lenders in the tranche in that year-quarter of loan origination date, and zero otherwise., and $ClimateRisk_{MSCI}$, the adjusted MSCI environmental concern score. All variables are defined in the Appendix. P-values are based on standard errors adjusted for heteroskedasticity and firm-level clustering and are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

VARIABLES	(1) LnAISD	(2) LnAmount	(3) Collateral
BankSenator_Tranche	-0.007	0.164***	0.024
	(-0.328)	(4.107)	(1.410)
$ClimateRisk_{MSCI}$	0.481**	-1.877***	0.294**
	(2.039)	(-3.223)	(2.207)
BankSenator_Tranche *$ClimateRisk_{MSCI}$	-0.519**	2.001***	-0.286**
	(-2.049)	(3.359)	(-2.005)
Observations	11,669	11,669	11,669
Adjusted R-squared	0.681	0.546	0.324
Firm controls	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes
Time FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes

Table 8. The Impact of BC Senators on Banks' Lending to Brown Firms using Alternative Measures of Environmental Performance: Trucost & Sautner et al., (2023)'s Climate Exposure Indexes

This table presents the regression results of the bank's political connections on the cost of bank loans to borrowers with higher climate risks using alternative measures from the Trucost environmental dataset (Panel A) and Sautner et al. (2023)'s textual-based Environmental Performance measures (Panel B). The dependent variable is the natural logarithm of the loan spread. The key explanatory variable is the interaction of *BankSenator*, a dummy indicator of the bank's political connection, and $ClimateRisk_{LnScope1/2/3}$, the natural logarithm of the scope 1/2/3 emission respectively; and $ClimateRisk_{SautnerOP}$ for climate-related opportunities exposure, $ClimateRisk_{SautnerRG}$ for climate-related regulatory risks, and $ClimateRisk_{SautnerPHY}$ for climate-related physical risks. P-values are based on standard errors adjusted for heteroskedasticity and firm-level clustering and are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. All variables are defined in the Appendix Table OA2.

Panel A. Trucost Emission Data

	(1)	(2)	(3)
VARIABLES	LnAISD	LnAISD	LnAISD
BankSenator	0.192**	0.298***	-0.091
	(2.196)	(2.811)	(-0.969)
$ClimateRisk_{LnScope1}$	0.022*		
	(1.857)		
BankSenator* $ClimateRisk_{LnScope1}$	-0.020***		
	(-2.627)		
$ClimateRisk_{LnScope2}$		0.017	
		(1.181)	
BankSenator* $ClimateRisk_{LnScope2}$		-0.029***	
		(-3.181)	
$ClimateRisk_{LnScope3}$			-0.001
			(-0.096)
BankSenator* $ClimateRisk_{LnScope3}$			0.005
			(0.831)
Observations	9,851	9,851	3,414
Adjusted R-squared	0.642	0.642	0.543
Firm controls	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes
Time, Lender_State, Industry FEs	Yes	Yes	Yes

Panel B. Sautner et al. (2023)'s climate risk measures

VARIABLES	(1) LnAISD	(2) LnAISD	(3) LnAISD
BankSenator	-0.102	-0.568**	-2.069***
	(-0.405)	(-2.017)	(-3.447)
$ClimateRisk_{SautnerOP}$	1.510***		
	(3.552)		
BankSenator* $ClimateRisk_{SautnerOP}$	-0.011		
	(-0.350)		
$ClimateRisk_{SautnerRG}$		0.746**	
		(2.053)	
BankSenator* $ClimateRisk_{SautnerRG}$		-0.055**	
		(-1.962)	
$ClimateRisk_{SautnerPHY}$			0.397
			(0.750)
BankSenator*$ClimateRisk_{SautnerPHY}$			-0.182***
			(-3.421)
Observations	23,872	23,872	23,872
Adjusted R-squared	0.626	0.626	0.626
Firm controls	Yes	Yes	Yes
Loan controls, Loan Type & Purpose FEs	Yes	Yes	Yes
Macroeconomic controls	Yes	Yes	Yes
Time, Lender_State, & Industry FEs	Yes	Yes	Yes

Appendix

Table OA1. Sample Selection

This table reports the sample selection and breakdown of our sample. After all, the number of unique borrowers is 2,081, while the number of unique lead lenders is 322. These lenders are headquartered in 37 states.

Sample Selection	**Observation**	
1.DealScan Data with conditions of "U.S." as the country of Syndication (From 1980-2023.03)	1,350,662	
2. New-Old Borrower_ID mapping	1,304,089	
3. Borrower information		
3.1 Chava Dealscan-Compustat Link (updated till Aug 2017)		556,938
3.2 Chava Dealscan-Compustat Link (newer Version for loans after Aug 2017)		59,916
3.3 If the borrower has one GVKEY during the sample period, then fill in those other borrower_id but the same borrower with missing identifiers the GVKEY information		326,473
Observation left	943,327	
4. Matched with COMPUSTAT	775,914	
5. Dropped Financial firms		-97,812
6. Dropped Utility firms		-52,693
7. keep if Tranche_currency= U.S. Dollar		-8,572
8. keep if Deal_currency= U.S. Dollar		-102
Observation Left	616,735	
9. Keep observations if there are no missing observations and no missing loan-relevant data	410,025	
10. Keep if lead ==1	108,236	
11. Keep if year>1994	104,143	
12. Keep if year<2021	85,486	
13. Merge with Macroeconomic Data		
14. Drop duplicate observations (all contract terms are the same within the duplications)		0
15. Drop duplicate observations if everything is the same except the tranche starting date(keep the one with the earliest date)		-33,448
Observation Left	52,038	
16. With Senator Information	40,630	
17. With lagged MSCI score (Available up to 2020 for lagged data)	22,930	
18. Drop if "Bankers' Acceptance", "Standby Letter of Credit", " Step-Payment Lease", "Guidance Line (Uncommitted)", "Trade Letter of Credit", "Multi-Option Facility", "Undisclosed", "Unadvised Guidance Line (Uncommitted)", "Performance Standby Letter of Credit"		-6
19. Drop any missing financial data and control data		-167
Total Observations left	**22,757**	

Table OA2. Variable Definitions

Variable	Definition & Source
Main Variable of Interest	
BankSenator	The dummy variable equals 1 if the loan is from a lead lender whose headquarters is in a state with a BC senator at the time of loan origination and 0 otherwise. *Source: Congress Report*
BankSenator_Tranche	The dummy variable equals the ratio of lead lenders in the tranche headquartered in the state with a BC senator to the total number of lead lenders in the tranche in that year-quarter of loan origination date, and zero otherwise. *Source: Congress Report*
$ClimateRisk_{MSCI}$	The scaled climate concern index is computed by dividing the number of concerns by the total maximum concerns in the category. *Source MSCI KLD Database*
$ClimateRisk_{LnScope1}$	The natural logarithm of the scope 1 emission. *Source Trucost*
$ClimateRisk_{LnScope2}$	The natural logarithm of the scope 2 emission. *Source Trucost*
$ClimateRisk_{LnScope3}$	The natural logarithm of the scope 3 emission. *Source Trucost*
$ClimateRisk_{SautnerOP}$	The natural logarithm of the average climate-related opportunities exposure risk. *Source Sautner et al. (2023)*
$ClimateRisk_{SautnerRG}$	The natural logarithm of the average climate-related regulatory exposure risk. *Source Sautner et al. (2023)*
$ClimateRisk_{SautnerPHY}$	The natural logarithm of the average climate-related physical exposure risk. *Source Sautner et al. (2023)*
Dependent Variable	
Ln(AISD)	The natural logarithm of the total annual spread paid over the London Interbank Offered Rate (LIBOR). *Source: DealScan*
Control Variables	
ALTMAN-Z score	1.2*(ACT - LCT)/AT + 1.4*RE/AT + 3.3*(NI + XINT + TXT)/ AT + 0.999*SALE/AT, here ACT stands for total current assets, LCT total current liabilities, RE retained earnings, NI net income, XINT total interest and related expenses, TXT total income taxes, SALE net sales, and AT total assets. *Source: Compustat*
Log Asset	Natural logarithm of the book value of total assets. *Source: Compustat*
Market-to-Book ratio	The market value of equity is divided by the book value of equity. *Source: Compustat*
Debt Ratio	The debt ratio is calculated as the sum of long-term and short-term debt scaled by total assets. *Source: Compustat*
Profitability	Earnings before interest, taxes, depreciation, and amortization (EBITDA) scaled by lagged total assets. *Source: Compustat*
Tangibility	Property, plant and equipment (PPENT)/ Total assets. *Source: Compustat*
Cash	The natural logarithm of Cash. *Source: Compustat*
No.Lenders	The natural logarithm of the number of lenders funding the loan. *Source: DealScan*
Tranche_Amount	The natural logarithm of loan size is in millions of dollars. *Source: DealScan*
Maturity	The natural logarithm of loan maturity in months. *Source: DealScan*
Collateral	An indicator variable is one if a loan is collateralized and zero otherwise. *Source: DealScan*

Performancepricing	An indicator variable equals 1 if a loan has a performance pricing clause and zero otherwise. *Source: DealScan*
Loan Type Dummies	Indicator variables for types of loans include term loans, revolving loans less than one year, revolving loans greater than one year, 364-day facility, and bridge loans separately. *Source: DealScan*
Loan Purpose Dummies	Indicator variables for loans purposes include corporate purposes, working capital, LBO, debt repayment, takeover, leveraged buyouts, etc. *Source: DealScan*
Macroeconomic Factors	
Term Spread	The yield spread between BAA and AAA corporate bond indexes.
Credit Spread	The yield spread between 10-year Treasury and 3-month Treasury bonds.

Table OA3. Comparison of mean differences of Loan Contract Terms and Environmental Performance Among Firms Borrowing from Lead Banks with Connections to BC Senators Versus Firms Borrowing from Lead Banks with No Political Connections.

This table compares loan contract terms and firms' environmental performance for loans originated with politically connected banks (with BC senators) or banks without political connections (without BC senators). Appendix Table OA2 provides detailed variable definitions.

	With Senator	**Without Senator**	**Diff**
All-in-Spread Drawns	186.944	206.966	-20.024***
Tranche_Amount	678.265	393.831	284.435***
Upfront Fees	74.407	66.559	7.848
Maturity	49.56	46.197	3.363***
Collateral	0.45	0.481	-0.032***
PerformancePricing	0.426	0.326	0.1***
No.Lenders	10.255	6.232	4.023***
$ClimateRisk_{MSCI}$	0.039	0.025	0.015***