How Do Climate Risks Drive Corporate Tax Avoidance? Evidence from Biodiversity Risk and Policy Uncertainty

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Abstract

For the first time, the study examines the impacts of biodiversity risk [BDR] on corporate tax avoidance [CTA] through times of aggregate economic conditions for US firms. The study finds that negative BDR-exposed firms are likely to avoid tax for liquidity needs. Long-term climate disaster risk presents the main driving force of CTA along with other risk factors. Negative BDR-exposed firms avoid tax in times of heightened state-level economic policy uncertainty. EPU imposes an additional friction with marginal direct impacts on CTA. The impacts of BDR on CTA are pronounced for negative BDR-exposed firms with limited access to credit supplies, poor financial performance, shrinking liquidity reserves, lower payouts, higher investment opportunities, and market-to-book value. Statewide greenhouse gas exposure and long-term climate change risks are the main drivers of corporate behaviors through biodiversity losses leading to uncertain economic policies for firms and the wider economy. Given the strong links between climate disasters and biodiversity risks, the empirical findings are empirically robust and economically meaningful controlling for diverse endogenous and exogenous (non)climate risk factors. Climate-related externalities outperform endogenous risk factors in explaining corporate behavior in longer terms. The impacts of endogenous risk factors on corporate policies could be conditional on how extensive externalities impose risks on firms and the whole economy.

Keywords: Biodiversity risk, tax avoidance, corporate behavior, climate change risks, economic policy uncertainty, statewide economic conditions.

JEL codes: G30, Q54, E02

1. Introduction

Taxation is one of the most significant expenses for individual businesses and the primary source of fiscal revenue for the government (Wang et al., 2020). Legal tax planning and unlawful tax evasion are two examples of corporate tax avoidance (CTA). Tax planning is lowering a firm's tax liability by making investments and organizing operations in a way that complies with tax regulations. Beyond avoidance, tax evasion includes when a firm violates tax regulations or associated rules to avoid paying taxes. In the era of climate change, climate-related risks induce firms to hoard cash to safeguard from financial distress due to earnings uncertainty, with divergent corporate financial decisions (Dang et al., 2023; Huang et al., 2018; Javadi et al., 2023). Going beyond corporate decisions, Trinh (2023b) shows that climate change is the long-lasting root of volatile economic conditions with policy uncertainties due to human decision making.

Biodiversity offers several ecological services that are essential to human health now and in the future[1]. Climate has a crucial role in ecosystem functioning, and the effects of climate on terrestrial and marine ecosystems have an impact on human health both directly and indirectly. Climate change is one of the important drivers of biodiversity loss due to industry and other human activities. The rationale is that the Earth's temperature is changing due to the burning of fossil fuels, a phenomenon known as global warming. The burning of fossil fuels releases greenhouse gases into the atmosphere, which increase the absorption of infrared radiation (heat energy) and trap the heat, affecting precipitation and temperature. Therefore, firms are exposed to biodiversity risks (BDR). Under the multidimensional effects of climate change risks on corporate earnings, BDR-exposed firms could have an incentive to avoid tax to reserve liquidity for necessary financing choices. For instance, following life-cycle theory,

[1] Biodiversity and Health

Trinh (2023a) shows that BDR induces matured firms to lower corporate investment to maintain dividends paid to shareholders. Since the Paris Agreement (COP21) with financial constraints, the impacts of BDR on capital expenditure have been pronounced for larger firms with higher tangibility. For the US economy with multifaceted macroeconomic uncertainties, BDR could impose greater uncertainty on corporate behavior when firms are exposed to climate-related risk drivers.

Having posited that decreasing the corporate tax burden could be a possible choice for firms to reserve financial flexibility under the supply- and demand effects of climate risks, this study examines how BDR affects corporate tax avoidance for US firms. Because biodiversity risks strongly correlate with climate disasters, the study employs long-term disaster-prone states, such as DPS, as the main climate friction incentivizing firms to practice CTA under BDR. The study employs data on firm-level biodiversity risks (FL-BDR), the news-based time-varying measures for US firms offered by Stefano Giglio, Theresa Kuchler, Johannes Stroebel, et al. (2023). To mitigate endogeneity issues, the study employs diverse transitional and physical climate risk drivers. The choices of both endogenous and exogenous literature-based factors employed by the study include state-led adaptation plans finalized – SAPF (Kovacs et al., 2025), US climate policy uncertainty – CPU (Konstantinos Gavriilidis, 2021), long-term climate change (Tol, 2024), firm-level climate change exposure (SAUTNER et al., 2023), industry-based polluting firms (Nguyen & Phan, 2020), and state-level greenhouse gas emissions (Trinh, 2024c). Given the long-term linkages between climate change and the wider economy (Mohaddes et al., 2022; Trinh, 2023b), the study examines the roles of state-level economic conditions (SL-ECI) and policy uncertainty (SL-EPU) in the potential impacts of BDR on CTA under climate risk drivers. To control for macroeconomic uncertainties, the study employs aggregate state-level economic condition index (SL-ECI) from Baumeister et al. (2024) and state-level economic policy uncertainty (SL-EPU) from

Baker et al. (2022). The study employs US sample firms for the period 2001-2019 to examine the impacts of BDR on corporate tax avoidance under diverse endogenous and exogenous climate risk drivers[2].

The empirical findings show that firms that are negatively exposed to biodiversity risk (BDR_NEGATIVE) are likely to avoid tax with the predicted persistent increase in corporate tax avoidance. In other words, the study shows a positive association between BDR and CTA. The positive BDR-CTA association is pronounced for firms located in US states that are chronically prone to natural disasters with the presence of global warming, known as disaster-prone states. The impacts of BDR on CTA are less statistically significant for BDR-exposed firms located in US states with state-led adaptation plans finalized. Under the driving force of long-term proneness of natural disasters, the positive BDR-CTA associations are persistent when the study controls for diverse endogenous and exogenous risk drivers. BDR-exposed firms are likely to avoid tax under heightened economic conditions and policy uncertainty across US states. The effects of BDR on CTA remain statistically significant for BDR-exposed firms with lower financial leverage, poor performance, shrinking liquidity, lower payout, higher market-to-book value, and promising investment opportunities. Such effects present robust statistical significance for BDR-exposed firms located in non-SAPF states for firms with high firm-level climate change risks and state-level greenhouse gas exposure.

Through the lens of firm-level biodiversity risk exposure, the study offers additional evidence of the consequences of long-term climate change risks to corporate behavior, the heightened tax avoidance practices in this case. Given the close linkages between natural disasters and

[2] The study removes the COVID-19 period to mitigate the potential effects of such extreme health-related events. The selected period is the most comprehensive period that allows the study to control for diverse climate risk drivers, state-level economic conditions, and policy uncertainty.

biodiversity losses, the empirical findings are economically meaningful showing that long-term proneness to climate physical risks increases the probability of tax avoidance for BDR-exposed firms. The predicted increase in CTA under BDR is empirically explained by earnings uncertainty due to multifaceted and chronic consequences of climate-related frictions. Using the long-term proneness of climate disaster risks as the major driving force of heightened CTA for BDR-exposed firms, the study contributes directly to modern climate corporate finance literature by showing that exogenous climate-related risk drivers outperform endogenous risk drivers in explaining corporate behaviors and policies. Most recently, Trinh (2024c) employed SL-GHG exposure to explain endogeneity issues that remained in prior studies using industry-based carbon emission risk in corporate financing choices (Nguyen & Phan, 2020)[3]. In other words, the impacts of endogenous risk factors on corporate policies are conditional on multidimensional exogenous risk drivers. For this study, in the spirit of Trinh (2024c), the current study controls for an exceptionally diverse set of climate-related risk drivers in explaining the impacts of BDR on corporate behavior in tax avoidance. With the evident positive BDR-CTA association, the study complements the prior study of Ginglinger and Moreau (2023) by implying that long-term physical risk could escalate credit accessibility for BDR-exposed firms.

With the long-term proneness of climate disasters, access to credit for operating needs could become even more challenging to firms that are negatively sensitive to biodiversity risks leading to their heightened tax avoidance behavior for US firms. With escalating corporate earnings uncertainty due to volatile access to credit under climate drivers (Chang et al., 2024; Dang et al., 2023; Dang et al., 2025; Ginglinger & Moreau, 2023; Gounopoulos & Zhang,

[3] Other recent studies follow this approach for a quasi-experimental design for which endogeneity issues might still significantly remain without comprehensively controlling for necessary driving forces. For instance, transitional risk should not be a matter for environmentally friendly (green) firms. With the demand and supply-side effects of climate risks, greener firms should have access to credit for operating needs.

2024; Javadi et al., 2023; Kovacs et al., 2025), BDR-exposed firms are more likely to avoid tax for liquidity needs. The driving forces of climate disasters to tax avoidance practices of BDR-exposed firms are economically meaningful in explaining the multifaceted complexity of climate change impacts on corporate behaviors. Given the strong and multidecade links between climate change and economic conditions (Trinh, 2023b), the current study offers supplementary evidence on the consequences of climate change to firm-level policy uncertainty across US states. For this study, the impacts of biodiversity risk on corporate tax avoidance are pronounced for BDR-exposed firms in times of heightened economic policy uncertainty controlled for aggregated state-level economic conditions.

Capturing economic conditions and policy uncertainty for firms across US states over the recent decades, the study shows that long-term climate risks are the main drivers of corporate behavior, and corporate tax avoidance for firms with biodiversity risk exposure in this case. The study offers a meaningful economic story with the rationale that negative BDR-exposed firms have a greater incentive to avoid tax when access to credit is uncertain due to long-term climate change risks. In the same vein of Trinh (2024c), endogeneity issues are optimally mitigated when we control for diverse sets of endogenous and exogenous risk drivers. The impacts of BDR on corporate tax avoidance are pronounced for firms exposed to statewide GHG emissions, global warming, and chronic climate disaster risks. Biodiversity losses with consequential risks induce firms to implement tax avoidance for liquidity needs. Through the lens of biodiversity risk exposure, the study offers empirical insights into the way that corporate behaviors are driven by long-term climate change risks. It is worth noting that corporate financing choices could be adjusted by firms to adapt to climate change risks; however, the levels of volatile financial policies could be conditional on several frictional factors. Through biodiversity risks imposed on firms, the study might provide explainable insights into heterogeneous findings on the impacts of climate change risks on corporate

financial policies documented by prior literature (Huang et al., 2018; Huynh et al., 2020; Nguyen & Phan, 2020; Nguyen et al., 2022)[4]. Given the demand- and supply-side effects of climate change risks, the impacts of BDR on tax avoidance are pronounced for firms that are chronically exposed to climate disaster risks located in US states with no climate adaptation plans finalized yet for local climate action. To reserve liquidity needs, the impacts of biodiversity risks are persistent for firms with shrinking cash reserves, poor financial performance, and limited access to accredit with low financial leverage levels, higher investment opportunities, and market-to-book ratios. Corporate financial policy uncertainty is conditional on climate-related externalities. The study shows that long-term climate externalities outperform in explaining corporate behavior, here is tax avoidance under climate-induced biodiversity risks. While BDR-exposed firms are likely to avoid tax in times of heightened SL-EPU and economic conditions in US states, the study shows weak and relatively no evidence of the impacts of EPU on firms' tax avoidance for both statewide and nationwide economic policy uncertainty.

Mimicking the recent related study by Nguyen and Nguyen (2020), empirical findings do not show any evidence of the statistically significant impacts of EPU on corporate tax avoidance[5]. Controlling for both statewide and nationwide EPU indexes, the empirical findings are persistent with no evidence found that nationwide policy uncertainty positively corporate tax avoidance. Regarding Trinh (2024c), external financing frictions are driven by long-term climate risk drivers for which climate change drives the aggregate economic conditions of the whole economy for the US and worldwide (Nordhaus, 2019; Tol, 2024;

[4] For instance, the impacts of corporate carbon risk on financial leverage could be driven by other risk factors such as climate policy stringency, and credit supplies and among other risk drivers.

[5] For baseline regression, prior literature controls for industry fixed effects and robust standard errors clustered by firm, see Tables 2-5 reported by Nguyen and Nguyen (2020). The current study controls for time/year, industry, and state-level fixed effects with standard errors clustered by firms. The current study controls comprehensively for endogenous and exogenous climate risk drivers, a comprehensive set of firm-level control variables as well as well-established macroeconomic factors. The study also uses both state level and national EPU indexes for empirical robustness checks.

Trinh, 2023b). Therefore, policy uncertainty might be an additional friction to corporate behavior. Modern literature presents that uncertainty could be favorable to firms with real ESG performance with decreased default risk, which is evident from listed firms' stocks in major financial markets (Trinh, 2024b). Another factor to mitigate endogeneity issues is that empirical studies need to control firms' serious ESG commitments with real progressive environmental performance (Trinh, 2023c). On the bright side of global uncertainties, firms with real commitments to environmental sustainability (e.g., R&D investment, real environmental performance, etc.) might benefit from more affordable cost of debt financing. Investors present their increasing awareness of climate change risks for which firms' environmental performance is priced by financial markets (Bolton & Kacperczyk, 2021, 2023; Zhang, 2024). For firms' avoidance and other corporate behaviors, the study empirically documents endogenous factors, here are firm-level biodiversity risks offered by Stefano Giglio, Theresa Kuchler, Johannes Stroebel, et al. (2023) present potential impacts that are conditional on exogenous risk drivers. Linking to related finance theories for possible explanations like prior literature (Balachandran & Nguyen, 2018; Huynh et al., 2020; Nguyen & Phan, 2020; Nguyen & Nguyen, 2020; Nguyen et al., 2022), the current study with empirical findings show that, it could be challenging for single theory to comprehensively explain empirical evidence since there are potential risk drivers with different nature and various contexts to be examined. Therefore, the current study avoids leaning itself to any specific theory for explaining empirical findings[6]. The current study aims to provide a simple but economically meaningful story about long-term climate change transmitting its risks to corporate behavior through biodiversity losses inducing negative BDR-exposed firms practice tax avoidance for liquidity needs that are mainly driven by the long-term proneness to natural disasters. The empirical findings are robust when the study controls for diverse

[6] Additional empirical works are needed to specifically explain for necessary theories.

climate-related risk drivers (both endogenous and exogenous factors) through times of aggregate economic conditions and policy uncertainty across the US states with macroeconomic variables controlled.

The study contributes to the growing literature on corporate climate finance by showing that firms that are negatively exposed to biodiversity risks might have an incentive to avoid tax for liquidity needs. More importantly, the impacts of biodiversity risk on tax avoidance are driven by long-term proneness to climate disasters and long-term exogenous climate change phenomena such as statewide greenhouse gas exposure and global warming. Endogenous risk drivers with potential impacts on corporate behaviors are conditional on how extensive climate-related externalities impose risks on firms. For the current study, we observe statistically significant and positive impacts of biodiversity risk on corporate tax avoidance on firms that are negatively exposed to biodiversity risk. The impacts of BDR on corporate tax avoidance are pronounced for negative BDR-exposed firms located in disaster-prone states and US states with no state-led adaptation plans finalized yet. Endogenous risk drivers such as industry-based carbon emissions (Balachandran & Nguyen, 2018; Nguyen & Phan, 2020), climate policy uncertainty (Konstantinos Gavriilidis, 2021), and firm-level climate change exposure (SAUTNER et al., 2023) show no direct statistically significant impacts on corporate tax avoidance for the current US evidence. The state-level economic policy uncertainty composite index shows marginal direct effects on corporate tax avoidance, while national EPU indexes show no significant impacts on firms' tax avoidance. The impacts of EPU become more statistically significant when the study controls for climate risk drivers and firm-level biodiversity risk. With evidence from firm-level negative biodiversity risk, the study implies the importance of integrating long-term climate change risks into corporate behaviors (Chang et al., 2024; Dang et al., 2023; Ginglinger & Moreau, 2023; Huang et al., 2018; Kovacs et al., 2025; Nguyen et al., 2022). As mentioned, EPU could offer necessary

additional frictions to firms and the wider economy for which climate risk factors could shed further light on the documented impacts of EPU on corporate behavior and financial policies (Attig et al., 2021; Bhattacharya et al., 2017; D'Mello & Toscano, 2020; Duong et al., 2020; Gulen & Ion, 2015; Kang et al., 2014; Li, 2019; Matousek et al., 2020; Phan et al., 2019; Xu, 2020). Regarding Trinh (2023b), in the long-term period over the past decades, climate change is the long-lasting root of aggregate economic conditions and policy uncertainty caused by human decision-making; hence, it is fair to argue that it could be something unsurprised when firms respond to uncertainty in some ways. However, to conclude the ways that an externality affects corporate behavior, more frictions need to be tested comprehensively.

For instance, Trinh (2024a) shows that world uncertainty does not always depress corporate investment as documented in prior literature (Gulen & Ion, 2015; Kang et al., 2014), leading to heightened tax avoidance due to financial constraints as documented by Nguyen and Nguyen (2020). More specifically, Trinh (2024a) shows that firms with a serious commitment to climate action (e.g., real ESG performance) are rewarded for their green operation with progressive R&D investments over the year. Going back to our current findings, the current study shows no evidence of the positive impacts of nationwide EPU on corporate tax avoidance as documented by Nguyen and Nguyen (2020) and state-level EPU shows its marginal effects. The impacts of both statewide and nationwide EPU on tax avoidance measures appear when the study controls for climate-related frictions with corporate biodiversity risk. Empirical findings in this study once again prove the argument by Trinh (2024c) to be true so far, showing that exogenous climate risk drivers (e.g., state-level GHG exposure and long-term climate change risks, etc.) outperform endogenous climate risk factors (e.g., firm-level carbon risk, climate change exposure, etc.) in explaining corporate behaviors. In other words, once again, the study shows that the impacts of endogenous risk

factors are conditional on the levels of risks from externalities imposed on firms and the wider economy. For this study, through corporate tax avoidance behavior, we observe that BDR-exposed firms are likely to avoid tax for liquidity needs under the long-term climate change impacts and the complexity of endogenous and exogenous risk factors. Controlling for state-level policy uncertainty, aggregate economic conditions, and risk factors, our economic story empirically proves that the close link between climate disasters and biodiversity losses leads to heightened corporate tax avoidance for negative BDR-exposed firms for liquidity management.

The remaining parts of the study are as follows: Section 2 presents a literature review and develops hypotheses. Section 3 presents variables, data sources, empirical models, and estimation methods. Section 4 presents findings, discussions, and elaborated contributions to the literature. Section 5 concludes with findings, policy implications, and future directions.

2. Literature and hypotheses

Biodiversity is often referred to as the totality of genes, species, and ecosystems—has been essential to human survival and well-being throughout history. At the same time, during the past few decades, human activity has caused a sharp drop in biodiversity. Regarding IPBES (2019), a substantial body of research shows that the extinction rate of species worldwide was at least 10–100 times higher than the base rate during the previous 10 million years and that this rate had been increasing recently. Climate change is becoming a more significant factor in biodiversity loss[7]. Global freshwater, marine, and terrestrial ecosystems have all changed because of climate change. The earliest extinctions brought on by climate change have occurred because of the loss of native species, a rise in illnesses, and mass plant and animal deaths. With far-reaching effects on ecosystems, elevated temperatures have compelled

[7] Biodiversity - our strongest natural defense against climate change | United Nations

terrestrial animals and plants to relocate to higher latitudes or elevations, with many of them heading toward the poles. The more warming there is, the greater the chance of a species going extinct. For the US economy, from tornadoes in Tornado Alley to hurricanes on the East Coast and Gulf of Mexico to wildfires in the West, natural catastrophes can take many different forms and have varying effects on the whole economy[8]. Long-term climate disasters show great threats to ecosystems with escalating biodiversity-related risks. Using firm-level biodiversity risk measures extracted from firms' 10-K statements by Stefano Giglio et al. (2023), Trinh (2023a) documents a strong negative association between corporate investment and biodiversity risks (BDR). Regarding the life-cycle theory, the impacts of BDR are pronounced for older and larger firms, implying that firms with fewer growth opportunities care more about climate-induced risk drivers. The study supports the rationale that climate disasters are risky to firms with large amounts of fixed assets, leading to financial constraints if those firms are chronically prone to physical climate risks. The economic story for consequential climate risks is caused by long-term greenhouse gas (GHG) exposure leading to global warming across the world economy (Nordhaus, 2019; Stern, 2008), see also a recent survey by Tol (2024). To cope with financial constraints, firms are likely to avoid tax when economic policy becomes uncertain (Nguyen & Nguyen, 2020). Motivated by the related streams of literature, this study proposes the following hypotheses [H] for an empirical investigation of firms' tax avoidance when firms are exposed to biodiversity risk. Using firm-level BDR measures (FL-BDR or BDR to be concise) by Stefano Giglio et al. (2023), the main hypotheses are as follows.

H1: Firms negatively exposed to biodiversity risk are likely to avoid tax. In other words, negative BDR-exposed firms have higher corporate tax avoidance.

[8] The Most Disaster-Prone States in the U.S.

Using state-level evidence, a modern study by Trinh (2024c) shows that statewide GHG emissions impose risks on firms by causing consequential climate risk drivers in the past decades. Controlling for an exceptionally rich set of climate-related risk drivers, the study proves endogeneity issues remained in prior literature on corporate climate finance using single proxies to quantify the impacts of climate risks (Balachandran & Nguyen, 2018; Ginglinger & Moreau, 2023; Huang et al., 2018; Huynh et al., 2020; Javadi et al., 2023; Nguyen & Phan, 2020). Climate risks have great complexity and using single proxies could be challenging to comprehensively capture the real and long-term consequences of climate risks, Trinh (2024c) proves the argument by the levels of GHG exposures across US states and explains why prior literature presents heterogeneous findings of the impacts of climate risks on capital structure and financial policies (Dang et al., 2023; Dang et al., 2025; Huang et al., 2018; Kovacs et al., 2025). In the same spirit of Trinh (2024c), the study proposes the following hypotheses.

H2: Long-term proneness to natural disasters is the main driver of corporate tax avoidance for negatively BDR-exposed firms.

H3: The impacts of biodiversity risk on corporate tax avoidance are significant for negative BDR-exposed firms located in US states with high GHG exposure, leading to global warming due to multidecade climate change.

For local climate action, there are US states that have finalized climate adaptation plans, known as state-led adaptation plans [SAPF]. Recent study by SAUTNER et al. (2023) made efforts to capture firm-level climate change exposure [FL-CCE]. A rich literature documents (dis)appearing carbon returns for the US and global financial markets (Bolton & Kacperczyk,

2021, 2023; Zhang, 2024). Prior corporate finance literature uses industry-based corporate carbon emissions to capture carbon pollution for carbon-intensive firms [EMITTER] exposed to climate transition. For climate transition risk, Konstantinos Gavriilidis (2021) offers climate change uncertainty index for the US [US CPU]. For optimally mitigating endogeneity for our empirical robustness, the study controls for all those risk factors mentioned by prior literature with the following developed hypothesis

H4: The other endogenous and transitional climate risk factors might jointly matter to corporate tax avoidance behavior for negative BDR-exposed firms. However, the joint effects could be interdependent relying on long-term climate risk drivers.

Besides tax avoidance under policy uncertainty, firms have an incentive to hoard cash reserves for liquidity needs with potential financial constraint risks (Li, 2019; Nguyen & Nguyen, 2020; Phan et al., 2019). Similar evidence is documented by recent literature in the context of climate change exposure due to earnings uncertainty, leading to volatile access to credit (Dang et al., 2023; Dang et al., 2025; Ginglinger & Moreau, 2023; Gounopoulos & Zhang, 2024; Javadi et al., 2023). Some studies show that policy uncertainty depresses corporate investment due to potential higher investment with precautionary delays (Gulen & Ion, 2015; Xu, 2020). Under climate physical risks, a recent study by Chang et al. (2024) show that firms prepare payout flexibility by preferring shares repurchase over dividends paid to shareholders. Solving the ESG puzzle under climate risk exposure globally, Trinh (2024a) shows that the depression of world uncertainty on corporate investment should not be a case for firms that commit to innovation (e.g., R&D expenditure, environmental performance, etc.) with real ESG performance with a decreased cost of debt financing. For the largest financial markets exposed to climate risks, corporate default risks are mitigated for ESG-oriented firms with sustained economic performance through times of global economic

uncertainty (Trinh, 2024b). Also, to properly conclude the impacts of global uncertainty on corporate behavior and firms' financial policies, it is critical to show how we know firms do seriously care about the environment (Trinh, 2023c). With multidecade evidence, Trinh (2023b) proves that climate change is powerful in explaining aggregate economic conditions with consequential policy uncertainty across US states. In the same spirit, this study controls for US economic policy uncertainty [US EPU] (Baker et al., 2016), state-level economic policy uncertainty [SL-EPU] (Baker et al., 2022), aggregate state-level economic condition (Baumeister et al., 2024). The association between firm-level biodiversity risk and corporate tax avoidance (the so-called BDR-CTA association) is hypothesized to be driven by long-term climate risk drivers (LT-CRDS), for our robust evidence, the study proposes and tests the following hypotheses.

H5: The BDR-CTA association is pronounced in times of heightened SL-EPU and SL-ECI.

H6: The BDR-CTA association is pronounced for negative BDR-exposed firms with lower financial leverage, poor financial performance, shrinking corporate liquidity, lower corporate payouts, higher corporate investment, and market-to-book value.

H7: The BDR-CTA association is related to policy uncertainty of firms and the wider economy (US statewide and the whole nation) for corporate liquidity needs.

H8: Firm-level and state-level policy uncertainties reflect the long-term consequences of climate change through biodiversity losses leading to corporate tax avoidance for negative BDR-exposed firms.

The additional hypotheses are not just for mitigating endogeneity issues but also to validate the recent studies of Trinh (2023b, 2023c, 2024a, 2024b, 2024c) reflecting on the explanatory power of climate change to macroeconomic uncertainty of the whole economy as well as consequential corporate behavirors over the past decades at both micro and macro levels discussed in the literature review so far. In other words, macroeconomic uncertainty could play additional and necessary frictional roles for firms and the whole economy to seriously consider environmental sustainability in operations for which uncertainties are caused by human activities leading to climate change over the decades[9]. Therefore, besides ESG puzzles (Trinh, 2023c, 2024a, 2024b), empirical studies are assumed to be relatively sound when comprehensively controlling for all those factors in explaining corporate behaviors and policies.

3. Data, model, and method

3.1. Data sources

The study collects data from multiple sources. Firm-level data vendors are extracted from the following vendors. Firm-level biodiversity risk [FL-BDR] measures are extracted from Stefano Giglio et al. (2023)[10]. Firm-level climate change exposure [FL-CCE] measures are extracted from SAUTNER et al. (2023)[11]. Firm-level financial accounting fundamentals are extracted from COMPUSTAT Annual File[12].

The study extracts statewide data on state-level monthly economic policy uncertainty [SL-EPU], state-level monthly global warming measures (known as long-term climate change

[9] What Is Climate Change? - NASA Science. The thing is, it seems we care about sustainability after many years/decades of unfriendly human activities to the environment. Let's climate change phenomena alert us. In this study, I provide evidence on how climate change is related to corporate behavior through tax avoidance under biodiversity risk exposure.

[10] Firm-level biodiversity risk measures are publicly available at Biodiversity Risk; Download Data

[11] Firm-level climate change exposure measures are publicly available at https://osf.io/fd6jq/. At the time this manuscript is being written, the latest version is 'firmyear_score_2023Q4_Version_2024_Aug.csv'

[12] I extract COMPUSTAT Annual File, Wharton Research Data Services (WRDS) using a licensed account h.h.trinh@massey.ac.nz offered by the School of Economics and Finance, Massey Business School, Massey University Palmerston North 4442 New Zealand. WRDS records my downloads for the users in the system.

measured by statewide temperature anomaly, SL-CC], and aggregate weekly economic conditions [SL-ECI] with their converted yearly-mean panel data from Trinh (2023b). The raw data on SL-EPU and other US EPU indexes can be extracted from Baker et al. (2016); Baker et al. (2022)[13]. Raw datasets on SL-ECI are from Baumeister et al. (2024)[14]. State-level greenhouse gas emissions are extracted from the US Environmental Protection Agency - EPA[15] . The study uses the clean statewide GHG panel data from Trinh (2024c)[16]. The study extracts US Economic Policy Uncertainty (US EPU) from Konstantinos Gavriilidis (2021)[17]

3.2. Empirical models and methods

To examine the impacts of firm-level biodiversity risk on corporate tax avoidance, the study proposes the following baseline regression model:

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (1)$$

The study examines the joint effects of BDR and the long-term proneness to natural disasters by estimating the following regression models.

[13] Local and National Economic Policy Uncertainty in US States can be extracted at Economic Policy Uncertainty Index. US EPU (Monthly, Daily, Categorical) can be extracted at Economic Policy Uncertainty Index.

[14] Datasets are available at the author's website Christiane Baumeister - Datasets. The study revisited and downloaded raw datasets which are available as of 2025-02-21. This study makes use the clean panel data version of Trinh, H. H. (2023b). Climate Change, Policy Uncertainty, and Economic Conditions: US State-Level Evidence. *SSRN*. https://doi.org/https://dx.doi.org/10.2139/ssrn.4581860 The study offers step-by-step very detailed data handling procedure for statewide climate, EPU, and ECI datasets used for the study.

[15] Raw datasets can be extracted from State GHG Emissions and Removals | US EPA

[16] EPA has recently updated statewide GHG emissions up to 2022. The study revisited and downloaded raw datasets from EPA which are available as of 2025-02-21. Location: United States. Sectors/Subsectors: Total including LUCF. Gases: All GHG. Calculation: Total. Show data by Subnational. Please visit, Methodology Report: Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2022 | US EPA

[17] US CPU can be publicly extracted from Economic Policy Uncertainty Index

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times DPS_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (2)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times DPS \times CPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (3)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times DPS \times CPU \times FLCCE_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (4)$$

Models 2-4 aim to examine whether and to what extent our tested hypotheses are robust when we control for various climate-related risk drivers. As hypothesized, that, DPS should be the major risk driver for our economic meaningful evidence on the impacts of BDR on tax avoidance measured by effective tax rate [TA_ETR]. Given the context, the study respectively controls for the joint effects of endogenous BDR interacted with DPS as the benchmarked physical risk and nationwide climate transition risk measured by US climate policy uncertainty [CPU]. The study controls for aggregate firm-level climate change exposure [FL-CCE] measure to be an additional endogenous risk driver for the study.

$$TA\_ETR_{i,t} = \alpha + \beta_1 DPS \times SLEPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (5)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLEPU \times FLCCE_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (6A)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 DPS \times SLEPU \times FLCCE_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (6B)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLEPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (7A)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 DPS \times SLEPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (7B)$$

Since the study of Baker et al. (2016), prior studies richly document the impacts of economic policy uncertainty [US EPU] on corporate behaviors and financial policies. While US EPU might fail to capture the geographical divergence and sensitivity of policy uncertainty across US states where firms are headquartered. For our additional empirical models, the study controls for the state-level EPU composite index offered by Baker et al. (2022) to validate the explanatory power of EPU over climate risk drivers for this study. As elaborated by Trinh (2023) EPU does not always impose negative effects on firms' performance. In the era of climate change, the study proves the argument by showing the sustained financial performance of ESG-oriented firms through times of policy uncertainty. Furthermore, Trinh (2023b) documents that climate change is the multidecade lasting root of policy uncertainty

and aggregate economic conditions caused by human decision-making. Therefore, long-term climate change (e.g., DPS for this case) is assumed to be a more powerful driver over EPU. EPU should be an additional friction in the scenario that firms are negatively exposed to biodiversity risks. Motivated by modern literature, to be more rigorous, the study tests for such arguments validating our economic meaningful rationale by tracking state-level economic conditions [SL-ECI] offered by Baumeister et al. (2024). Our proposed empirical models are as follows.

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLEPU \times CPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (8A)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 DPS \times SLEPU \times CPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (8B)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLECI_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (11A)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLECI \times CPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (11B)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 DPS \times SLECI \times CPU_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (11C)$$

$$TA\_ETR_{i,t} = \alpha + \beta_1 BDR \times SLECI \times DPS_{i,t} + \beta_2 CRDS_{i,t} + \beta_k \sum_{i=0}^{n} FLCS_{i,t} + \beta_k \sum_{i=0}^{n} MFS_t + FEs_{i,t} + \varepsilon_{i,t} \quad (11D)$$

By controlling for a diverse set of endogenous and exogenous climate risk drivers [CRDS], the study optimally mitigates endogeneity concerns that may remain from adopting single risk drivers in prior literature (Bolton & Kacperczyk, 2021; Chang et al., 2024; Dang et al., 2023; Ginglinger & Moreau, 2023; Huang et al., 2018; Huynh et al., 2020; Kovacs et al., 2025)[18]. Also, the study controls for macroeconomic aggregate conditions and policy uncertainty across US states. The study controls for commonly used firm-level control variables [FLCS], and macroeconomic factors [MFS]. The details of the selected variables used in empirical models are reported in the Appendix. The study performs ordinary least-squares linear regressions with two- and three-way dynamic interactions for climate risk drivers and risk factors. With robust standard errors clustered by firm, the study includes the fixed effects for time/year, industry, and state levels.

4. Empirical findings

The baseline regressions show that firms with negative biodiversity risk exposure (BDR) present a predicted increase of 0.028-unit change in corporate tax avoidance, measured by transformed effective tax rates (TA_ETR). The selected dependent variable is consistent with prior literature (Dyreng et al., 2010; HASAN et al., 2017)[19], a higher *TA_ETR* the greater the extent of corporate tax avoidance. The findings are robust when we control for a diverse set of climate-related endogenous and exogenous risk drivers including state-level natural disasters known as long-term disaster-prone states (DPS), state-led adaptation plans finalized

[18] For testing to what extent, the empirical models generate sound findings, any additional endogenous and exogenous factors can be tested further. Prior studies employ specific events (e.g., the 2015 Paris Agreement, etc.) to set up quasi-experiments, however, the real treatment outcomes remain questionable with more factors are needed to be controlled. For instance, corporate behaviors of polluting firms could be more sensitive to climate transition risk, while physical risks could impose widespread impacts. The fundamental question to be answered is, for instance, do all polluting firms present real treatment outcomes under the impacts of an externality (e.g., transition risk, etc.)? prior studies set treatment equal to one for a single criterion, while real outcomes are missing. For instance, among a group of polluting firms, some firms have progressively committed to decreasing operating pollution, while other firms could have just made greenwashing. All those factors highlight the importance of real treatment outcomes, a basic step in quasi-experimental design.

[19] Consistent with prior related literature, the study employs the transformed assets of cash effective tax rate (TA_CETR) for robustness checks. The findings remain consistent when using either TA_ETR or TA_CETR.

(SAPF), industry-based polluting firms (EMITTER), firm-level climate change exposure (FL-CCE), US greenhouse gas emissions (US_GHG), and US Climate Policy Uncertainty (US_CPU). Among the selected climate risk drivers, the findings show that DPS is the major climate driver of firms' tax avoidance and BDR-exposed firms present a persistent increase in CTA for all the fitted models. The positive BDR_NEGATIVE-CTA associations are predictably robust when the study controls for a rich set of firm-level controls and macroeconomic variables. The baseline findings show that firms with higher investment (CAPX), performance (ROA), and payout (PAYOUT) are less likely to avoid tax. On the other hand, firms with higher cash holdings (CASH) in the earlier year (t-1) present their statistically significant increase in CTA. The initial findings show that heightened CTA could reflect an incentive for BDR-exposed firms to safeguard liquidity needs under long-term exposure to climate disasters. The findings present the economic meaningfulness of the close links between climate disasters and firm-level negative biodiversity risks due to long-term climate change. The baseline regressions show now significant evidence of other climate risk drivers to corporate behaviors through tax avoidance practices. The study reports the joint effects for additional analyses controlling for climate risk drivers, state-level economic policy uncertainty, and corporate financial policies to prove the hypothesis predictions.

Regression findings reported in Table 2 support our hypotheses that BDR-exposed firms in DPS are likely to have higher predicted tax avoidance. DPS presents its main driving force of CTA with the increase in CTA that is only statistically significant for firms located in DPS. The joint effect of DPS and BDR on CTA is constant when we interact with CPU and FL-CEE. The findings show that BDR-exposed firms exposed to CPU with corporate climate change exposure are likely to have a higher predicted tax avoidance of 15.67-unit change. The findings show that endogenous risk factors (e.g., Fl-CEE, BDR, etc.) affecting corporate

behavior (e.g., tax avoidance) could be conditional for exogenous climate risk drivers. Table 3 shows that corporate tax avoidance behavior remains for BDR-exposed firms located in non-SAPF. The findings are pronounced when we interact with CPU and FL-CCE, showing that BDR firms are likely to practice tax avoidance even more aggressively when they are exposed to exogenous climate frictions in US states with local climate action adapted yet. Tables 4A and 4B complement modern literature by Trinh (2024c) showing that corporate tax avoidance is aggressive for BDR-exposed firms located in US states with high GHG exposure experiencing long-term climate change consequences, namely global warming. The findings present highly statistically significant levels when BDR-exposed firms confront climate-related externalities including the long-term proneness to natural disasters (DPS) and nationwide transition risk (CPU) with higher FL-CCE. The findings are empirically marginal effects of state-level economic policy uncertainty (SL-EPU) and BDR-exposed firms practice tax avoidance aggressively in times of heightened SL-EPU. The predicted heightened tax avoidance by firms presents its stronger statistical significance when the study controls for the joint effects of SL-EPU (BDR_NEGATIVE x SL-EPU) and the proneness of natural disasters (BDR_NEGATIVE x SL-EPU x DPS). The marginal effects of SL-EPU become negative and statistically insignificant when the study controls for the joint effects of disaster and climate transition risks (DPS x SL-EPU and DPS x SL-EPU x CPU). The impacts of BDR-exposed firms on tax avoidance are aggressive with remaining statistically significant levels in times of higher state-level economic conditions (SL-ECI). While the impacts of SL-EPU on CTA remain marginal, the long-term proneness to natural disaster risks (DPS) shows its statistically significant force inducing firms to avoid tax, specifically in times of lower SL-ECI. The findings might imply that, while SL-ECPU could be an additional frictional externality to corporate behavior, long-term climate risks and aggregate SL-ECI present inevitable roles of corporate behaviors. In times of low SL-ECI, the findings show that

climate change exposure marginally induces firms to decrease tax avoidance practices. It could be biased if we conclude such marginal effect to be true with endogeneity issues remaining without comprehensively controlling for potential drivers. The empirical findings so far have proved the economic story hypothesized that climate disasters induce firms with negative biodiversity risk exposure to practice tax avoidance to reserve liquidity needs under multifaceted other climate risk drivers through times of state-level policy uncertainty and aggregate economic conditions. The study proves its hypotheses in the upcoming tables of regression findings.

The impacts of BDR on CTA remain at statistically significant levels for firms with lower financial leverage (Table 7), financial performance (Tale 8), corporate liquidity (Table 9), lower payout (Table 10), higher market-to-book value (Table 11), and greater capital expenditure (Table 12). BDR-exposed firms avoid tax more aggressively when they are located in non-SAPF and chronically exposed to climate disaster risks. Additional analyses show that the impacts of BDR on tax avoidance become negative and significant for firms with lower capital expenditure located in US non-SPAF states. The findings imply the importance of access to credit (financial leverage) to BDR-exposed firms due to climate disaster risks leading to shrinking corporate liquidity. The impacts of BDR on corporate behavior, here is firms' tax avoidance, are driven by multifaceted climate risk drivers and endogenous corporate determinants. Under the long-term consequence of climate disaster risks, the findings imply that natural disasters induce firms to experience even more escalated liquidity shortfalls with earnings uncertainty and limited access to credit supplies. Such effects are pronounced for firms that are negatively exposed to biodiversity risk.

5. Conclusion

The study empirically examines the impacts of biodiversity risk on corporate tax avoidance for US firms over the past decades. Negative BDR-exposed firms have an incentive to avoid tax for liquidity needs. The study documents the positive association between firm-level biodiversity risk and tax avoidance for negative BDR-exposed firms. Long-term climate disaster risk exposure is the main driver with the pronounced impacts for negative BDR-exposed firms located in disaster-prone states, and higher statewide greenhouse gas intensity with observed global warming. The impacts of biodiversity risk on tax avoidance are pronounced for negative BDR-exposed firms with limited access to credit, shrining liquidity, poor financial performance, lower payouts, higher investment opportunities, and market-to-book value. The empirical findings are economically meaningful showing the strong links between climate disaster risks and biodiversity losses for negative BDR-exposed firms. Negative BDR-exposed firms are likely to avoid tax in times of heightened statewide economic policy uncertainty and aggregate economic conditions. Local climate action triggers corporate tax avoidance behaviors for negative BDR-exposed firms located in US states with state-led adaptation plans finalized.

Long-term climate risk drivers outperform in explaining corporate behaviors showing their major driving forces. Empirical findings show marginal impacts of statewide economic policy uncertainty and no significant findings for the impacts of nationwide economic policy uncertainty on tax avoidance. The findings are economically meaningful for firms that are negatively exposed to long-term climate risks, climate disasters in this case, leading to systematic liquidity shortfalls for firms due to biodiversity losses. Endogenous climate-related risk factors (e.g., industry-based polluting firms, firm-level climate change exposure, other types of transition risks, etc.) empirically show marginal and insignificant roles in firms' tax avoidance through the lens of biodiversity risks. The empirical findings imply that the impacts of endogenous risk factors on corporate behaviors are interdependently

conditional on externalities with the multifaceted and complex consequences of climate change risks imposed on firms. Through the friction of climate disasters to tax avoidance of negative BDR-exposed firms, controlling for exceptionally rich sets of (non)climate risk drivers the study optimally mitigates endogeneity concerns that remained in prior literature. It is worth noting that, uncertainty (in its broad terms and biodiversity risks in this current study) brings both opportunities and risks to firms and economies. Therefore, future studies are needed to investigate the bright sides of uncertainty with more meaningful and reliable policy implications for institutions and the wide economy toward inclusive growth.

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Table 1: Climate risk drivers, biodiversity risks, and corporate tax avoidance

VARIABLES	(1) TA_ETR	(2) TA_ETR	(3) TA_ETR	(4) TA_ETR	(5) TA_ETR	(6) TA_ETR	(7) TA_ETR	(8) TA_ETR	(9) TA_ETR	(10) TA_ETR	(11) TA_ETR
BDR_NEGATIVE	0.0287**			0.0277**	0.0277**	0.0277**	0.0277**	0.0273**	0.0276**	0.0276**	0.0276**
	(0.0135)			(0.0133)	(0.0133)	(0.0133)	(0.0133)	(0.0133)	(0.0133)	(0.0133)	(0.0133)
SIZE				-0.0045	-0.0045	-0.0045	-0.0045	-0.0045	-0.0046	-0.0046	-0.0046
				(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)	(0.0041)
R&D				0.0745	0.0745	0.0745	0.0742	0.0743	0.0723	0.0723	0.0722
				(0.0845)	(0.0845)	(0.0845)	(0.0848)	(0.0848)	(0.0849)	(0.0849)	(0.0849)
CAPX				-0.3344**	-0.3344**	-0.3344**	-0.3345**	-0.3297**	-0.3310**	-0.3310**	-0.3313**
				(0.1340)	(0.1340)	(0.1340)	(0.1339)	(0.1343)	(0.1344)	(0.1344)	(0.1344)
ROA				-0.2436***	-0.2436***	-0.2436***	-0.2437***	-0.2435***	-0.2439***	-0.2439***	-0.2437***
				(0.0550)	(0.0550)	(0.0550)	(0.0550)	(0.0550)	(0.0550)	(0.0550)	(0.0550)
TANG				0.0480**	0.0480**	0.0480**	0.0481**	0.0481**	0.0484**	0.0484**	0.0484**
				(0.0235)	(0.0235)	(0.0235)	(0.0235)	(0.0235)	(0.0235)	(0.0235)	(0.0235)
CASH				0.0747**	0.0747**	0.0747**	0.0734**	0.0748**	0.0740**	0.0740**	0.0740**
				(0.0371)	(0.0371)	(0.0371)	(0.0371)	(0.0371)	(0.0371)	(0.0371)	(0.0371)
PAYOUT				-0.3622***	-0.3622***	-0.3622***	-0.3654***	-0.3646***	-0.3669***	-0.3669***	-0.3671***
				(0.0676)	(0.0676)	(0.0676)	(0.0677)	(0.0676)	(0.0677)	(0.0677)	(0.0676)
OEX				-0.0070	-0.0070	-0.0070	-0.0066	-0.0068	-0.0068	-0.0068	-0.0068
				(0.0107)	(0.0107)	(0.0107)	(0.0107)	(0.0108)	(0.0108)	(0.0108)	(0.0108)
GDP				0.3756	0.3756	0.3756	0.3931	0.3975	0.3972	-0.0654	-0.0580
				(0.5227)	(0.5227)	(0.5227)	(0.5208)	(0.5207)	(0.5207)	(0.4927)	(0.4934)
FDI_NET				0.0579	0.0579	0.0579	0.0592	0.0595	0.0596	-0.0517	-0.0496
				(0.1062)	(0.1062)	(0.1062)	(0.1061)	(0.1061)	(0.1061)	(0.1437)	(0.1438)
TRADE				-0.8170	-0.8170	-0.8170	-0.8113	-0.8128	-0.8124	-0.5814	-0.6416
				(0.5603)	(0.5603)	(0.5603)	(0.5602)	(0.5603)	(0.5603)	(0.4056)	(0.4498)
INFLATION				0.1578*	0.1578*	0.1578*	0.1569*	0.1574*	0.1573*	0.1015	0.1171
				(0.0898)	(0.0898)	(0.0898)	(0.0898)	(0.0898)	(0.0898)	(0.1153)	(0.1227)
BDR_COUNT		0.0166									
		(0.0295)									
BDR_REGULATION			0.0368								
			(0.0352)								
DPS						0.3467***	0.3490***	0.3492***	0.3496***	0.3496***	0.3495***
						(0.1253)	(0.1257)	(0.1257)	(0.1258)	(0.1258)	(0.1258)
SAPF							-0.0119	-0.0119	-0.0119	-0.0119	-0.0119
							(0.0154)	(0.0154)	(0.0154)	(0.0154)	(0.0154)
EMITTER							-0.0137		-0.0121	-0.0121	-0.0121

							(0.0213)		(0.0216)	(0.0216)	(0.0216)
FL-CCE								-2.6882	-2.4998	-2.4998	-2.5040
								(3.2364)	(3.2801)	(3.2801)	(3.2809)
US_GHG										-0.6041	-0.7211
										(0.8288)	(0.8901)
CPU											-0.0181
											(0.0556)
Constant	0.2053	0.2056	0.2050	-9.1202	-9.1202	-9.1202	-9.6659	-9.7966	-9.7889	13.1876	15.0617
	(0.2465)	(0.2468)	(0.2467)	(16.1656)	(16.1656)	(16.1656)	(16.1035)	(16.1003)	(16.1005)	(26.0233)	(26.5218)
Observations	17,511	17,511	17,511	16,382	16,382	16,382	16,382	16,382	16,382	16,382	16,382
R-squared	0.0466	0.0464	0.0464	0.0569	0.0569	0.0569	0.0570	0.0570	0.0570	0.0570	0.0570

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 2: Disaster-prone states - DPS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	TA_ETR	TA_ETR Non-DPS	TA_ETR DPS	TA_ETR	TA_ETR	TA_ETR Non-DPS	TA_ETR DPS	TA_ETR DPS	TA_ETR DPS
BDR_NEGATIVE x DPS	0.0289**			0.0286**					
	(0.0139)			(0.0139)					
SAPF				-0.0121	-0.0120	-0.0086	-0.0047	-0.0046	-0.0034
				(0.0153)	(0.0153)	(0.0251)	(0.0222)	(0.0222)	(0.0220)
FL-CCE				-2.4604	-2.4613	-6.9689	0.8982	0.8979	0.4407
				(3.2818)	(3.2817)	(4.8058)	(4.6782)	(4.6782)	(4.6536)
EMITTER				-0.0116	-0.0116	-0.0387	0.0464	0.0464	0.0471
				(0.0216)	(0.0216)	(0.0284)	(0.0505)	(0.0505)	(0.0506)
US_GHG				-0.6000	-0.5988	-0.7405	-0.7888	-0.7859	-0.8074
				(0.8286)	(0.8286)	(1.0339)	(1.4530)	(1.4528)	(1.4528)
SIZE	-0.0046	0.0028	-0.0183***	-0.0047	-0.0047	0.0024	-0.0180***	-0.0180***	-0.0182***
	(0.0041)	(0.0057)	(0.0069)	(0.0041)	(0.0041)	(0.0056)	(0.0068)	(0.0068)	(0.0068)
R&D	0.0733	-0.0410	0.1292	0.0712	0.0712	-0.0481	0.1402	0.1401	0.1367
	(0.0845)	(0.1212)	(0.1237)	(0.0849)	(0.0849)	(0.1217)	(0.1238)	(0.1238)	(0.1239)
CAPX	-0.3369**	-0.5603***	-0.0920	-0.3334**	-0.3331**	-0.5687***	-0.0937	-0.0931	-0.0710
	(0.1343)	(0.2055)	(0.1814)	(0.1347)	(0.1346)	(0.2069)	(0.1813)	(0.1812)	(0.1799)
ROA	-0.2438***	-0.3279***	-0.1743***	-0.2441***	-0.2441***	-0.3277***	-0.1711***	-0.1712***	-0.1721***
	(0.0550)	(0.0636)	(0.0612)	(0.0551)	(0.0551)	(0.0638)	(0.0608)	(0.0608)	(0.0609)
TANG	0.0479**	0.1125***	-0.0013	0.0483**	0.0483**	0.1127***	-0.0026	-0.0027	-0.0025
	(0.0235)	(0.0311)	(0.0382)	(0.0235)	(0.0235)	(0.0310)	(0.0381)	(0.0380)	(0.0380)
CASH	0.0746**	0.0655	0.0793	0.0738**	0.0738**	0.0623	0.0803	0.0803	0.0808
	(0.0371)	(0.0476)	(0.0589)	(0.0371)	(0.0371)	(0.0480)	(0.0590)	(0.0590)	(0.0590)
PAYOUT	-0.3635***	-0.4020***	-0.2118*	-0.3680***	-0.3679***	-0.4129***	-0.2092*	-0.2090*	-0.2058*
	(0.0676)	(0.0800)	(0.1172)	(0.0677)	(0.0677)	(0.0802)	(0.1170)	(0.1170)	(0.1171)
OEX	-0.0070	0.0092	-0.0307*	-0.0067	-0.0068	0.0096	-0.0301*	-0.0301*	-0.0297*
	(0.0107)	(0.0143)	(0.0168)	(0.0108)	(0.0108)	(0.0144)	(0.0168)	(0.0168)	(0.0168)
GDP	0.3764	0.7056**	0.1842	-0.0613	-0.0614	0.1656	-0.1861	-0.1862	-0.1906
	(0.5228)	(0.2865)	(0.8657)	(0.4925)	(0.4925)	(0.5648)	(0.7923)	(0.7924)	(0.7919)

FDI_NET	0.0580	0.0898	0.0043	-0.0509	-0.0509	-0.0412	-0.0861	-0.0862	-0.0843
	(0.1062)	(0.1214)	(0.1799)	(0.1437)	(0.1437)	(0.1871)	(0.2219)	(0.2219)	(0.2213)
TRADE	-0.8125	-0.3379	-1.3356	-0.5784	-0.5777	-0.0693	-1.2805*	-1.2791*	-1.2862*
	(0.5601)	(0.7115)	(0.8760)	(0.4055)	(0.4055)	(0.4886)	(0.7113)	(0.7112)	(0.7108)
INFLATION	0.1577*	0.1589	0.1261	0.1018	0.1015	0.0957	0.1140	0.1136	0.1138
	(0.0898)	(0.1056)	(0.1484)	(0.1153)	(0.1153)	(0.1441)	(0.1926)	(0.1927)	(0.1923)
BDR_NEGATIVE		0.0188	0.0349**			0.0190	0.0347**		
		(0.0348)	(0.0146)			(0.0346)	(0.0148)		
BDR_NEGATIVE x DPS x CPU					0.0061**			0.0074**	
					(0.0029)			(0.0030)	
CPU						-0.0027	-0.0424	-0.0424	-0.0424
						(0.0739)	(0.0842)	(0.0842)	(0.0841)
BDR x DPS x CPU x FL-CCE									15.6692***
									(4.3248)
Constant	-9.1581	-20.7542**	-1.3536	12.9899	12.9717	6.6434	22.4153	22.3697	22.8618
	(16.1677)	(8.1285)	(26.7888)	(26.0149)	(26.0135)	(33.2366)	(42.8146)	(42.8107)	(42.7928)
Observations	16,382	8,899	7,483	16,382	16,382	8,899	7,483	7,483	7,483
R-squared	0.0569	0.0745	0.0683	0.0570	0.0570	0.0750	0.0685	0.0685	0.0693
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3: State-led adaptation plans finalized - SAPF

VARIABLES	(1) TA_ETR Non-SAPF	(2) TA_ETR SAPF	(3) TA_ETR Non-SAPF	(4) TA_ETR SAPF	(5) TA_ETR Non-SAPF	(6) TA_ETR SAPF	(7) TA_ETR Non-SAPF	(8) TA_ETR SAPF
BDR_NEGATIVE x DPS	0.0352**	-0.0176	0.0353**	-0.0184				
	(0.0138)	(0.0311)	(0.0138)	(0.0312)				
SIZE	0.0024	-0.0206**	0.0021	-0.0203**	0.0021	-0.0203**	0.0020	-0.0203**
	(0.0045)	(0.0090)	(0.0045)	(0.0090)	(0.0045)	(0.0090)	(0.0045)	(0.0090)
R&D	0.1176	0.0876	0.1100	0.0928	0.1100	0.0928	0.1086	0.0928
	(0.1270)	(0.1160)	(0.1274)	(0.1161)	(0.1274)	(0.1161)	(0.1274)	(0.1161)
CAPX	-0.3592**	-0.3411	-0.3548**	-0.3272	-0.3546**	-0.3269	-0.3366**	-0.3412
	(0.1502)	(0.2770)	(0.1506)	(0.2775)	(0.1505)	(0.2775)	(0.1501)	(0.2795)
ROA	-0.3428***	-0.1416**	-0.3438***	-0.1397**	-0.3438***	-0.1397**	-0.3443***	-0.1391**
	(0.0534)	(0.0629)	(0.0535)	(0.0625)	(0.0535)	(0.0625)	(0.0535)	(0.0624)
TANG	0.0653**	0.0273	0.0655**	0.0233	0.0655**	0.0233	0.0653**	0.0236
	(0.0270)	(0.0453)	(0.0270)	(0.0452)	(0.0270)	(0.0452)	(0.0270)	(0.0453)
CASH	0.0884*	0.0786	0.0896*	0.0858	0.0896*	0.0858	0.0896*	0.0860
	(0.0460)	(0.0657)	(0.0460)	(0.0663)	(0.0460)	(0.0663)	(0.0460)	(0.0663)
PAYOUT	-0.3692***	-0.2343	-0.3764***	-0.2233	-0.3762***	-0.2234	-0.3751***	-0.2227
	(0.0718)	(0.1451)	(0.0717)	(0.1463)	(0.0717)	(0.1463)	(0.0717)	(0.1463)
OEX	0.0031	-0.0314	0.0029	-0.0312	0.0029	-0.0312	0.0030	-0.0308
	(0.0117)	(0.0276)	(0.0118)	(0.0274)	(0.0118)	(0.0274)	(0.0118)	(0.0274)
GDP	0.2396	0.3143	-0.4341	-0.0263	-0.4346	-0.0264	-0.4309	-0.0338
	(0.5728)	(0.6334)	(0.6991)	(0.8661)	(0.6991)	(0.8662)	(0.6986)	(0.8653)
FDI_NET	-0.0434	0.1366	-0.2071	0.1463	-0.2072	0.1463	-0.2026	0.1457
	(0.1457)	(0.1588)	(0.2099)	(0.1659)	(0.2099)	(0.1659)	(0.2093)	(0.1659)
TRADE	-1.1049	-0.6482	-0.7154	-1.1666	-0.7142	-1.1668	-0.7072	-1.1762
	(0.8211)	(0.8496)	(0.5705)	(0.9020)	(0.5705)	(0.9021)	(0.5695)	(0.9014)
INFLATION	0.0984	0.2336**	0.0037	0.3554**	0.0032	0.3554**	0.0057	0.3564**
	(0.1220)	(0.1165)	(0.1636)	(0.1551)	(0.1636)	(0.1551)	(0.1632)	(0.1551)
SAPF			0.0000		0.0000		0.0000	
			(0.0000)		(0.0000)		(0.0000)	
FL-CCE			-4.3006	-0.3835	-4.3002	-0.3899	-4.5520	-0.3539

			(4.1735)	(5.3597)	(4.1734)	(5.3591)	(4.1655)	(5.3758)
EMITTER			-0.0192	0.0518	-0.0191	0.0518	-0.0193	0.0517
			(0.0267)	(0.0532)	(0.0267)	(0.0532)	(0.0267)	(0.0533)
US_GHG			-0.7806	-0.3948	-0.7782	-0.3948	-0.7853	-0.4009
			(1.2499)	(0.9494)	(1.2498)	(0.9494)	(1.2500)	(0.9490)
CPU			0.0159	-0.0889	0.0159	-0.0889	0.0166	-0.0894
			(0.0638)	(0.1173)	(0.0638)	(0.1173)	(0.0638)	(0.1173)
SAPF				0.0535*		0.0535*		0.0536*
				(0.0303)		(0.0303)		(0.0303)
BDR_NEGATIVE x DPS x CPU					0.0077***	-0.0043		
					(0.0028)	(0.0066)		
BDR_NEGATIVE x DPS x CPU x FL-CCE							15.8497***	6.5076
							(4.2511)	(8.4143)
Constant	-3.1975	-9.2510	28.4773	9.3329	28.4506	9.3359	28.4152	9.6922
	(17.4128)	(20.9752)	(39.5217)	(39.8790)	(39.5186)	(39.8804)	(39.4974)	(39.8416)
Observations	11,244	5,138	11,244	5,138	11,244	5,138	11,244	5,138
R-squared	0.0675	0.0769	0.0677	0.0777	0.0677	0.0777	0.0682	0.0777
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4A: State-level greenhouse gas emissions [SL-GHG]

VARIABLES	(1) TA_ETR Lower SL-GHG exposure	(2) TA_ETR Higher SL-GHG exposure	(3) TA_ETR Lower SL-GHG exposure	(4) TA_ETR Higher SL-GHG exposure	(5) TA_ETR Lower SL-GHG exposure	(6) TA_ETR Higher SL-GHG exposure	(7) TA_ETR Lower SL-GHG exposure	(8) TA_ETR Higher SL-GHG exposure	(9) TA_ETR Lower SL-GHG exposure	(10) TA_ETR Higher SL-GHG exposure
BDR_NEGATIVE	-0.0086	0.0467***								
	(0.0204)	(0.0147)								
SIZE	-0.0039	-0.0047	-0.0039	-0.0049	-0.0040	-0.0048	-0.0040	-0.0048	-0.0040	-0.0049
	(0.0058)	(0.0066)	(0.0058)	(0.0066)	(0.0057)	(0.0066)	(0.0057)	(0.0066)	(0.0057)	(0.0066)
R&D	0.1165	0.0937	0.1170	0.0928	0.1123	0.0952	0.1122	0.0951	0.1128	0.0931
	(0.1164)	(0.1224)	(0.1164)	(0.1225)	(0.1170)	(0.1225)	(0.1170)	(0.1225)	(0.1170)	(0.1225)
CAPX	-0.2076	-0.4133**	-0.2054	-0.4112**	-0.2046	-0.4112**	-0.2045	-0.4109**	-0.2061	-0.3859*
	(0.1850)	(0.1996)	(0.1848)	(0.2007)	(0.1865)	(0.2005)	(0.1865)	(0.2004)	(0.1864)	(0.2000)
ROA	-0.1640**	-0.3029***	-0.1639**	-0.3032***	-0.1649**	-0.3019***	-0.1649**	-0.3019***	-0.1645**	-0.3021***
	(0.0722)	(0.0544)	(0.0722)	(0.0544)	(0.0725)	(0.0545)	(0.0725)	(0.0545)	(0.0725)	(0.0544)
TANG	0.0670**	0.0427	0.0669**	0.0422	0.0668**	0.0426	0.0668**	0.0426	0.0668**	0.0418
	(0.0325)	(0.0362)	(0.0325)	(0.0362)	(0.0325)	(0.0363)	(0.0325)	(0.0362)	(0.0325)	(0.0362)
CASH	0.0796	0.0785	0.0796	0.0780	0.0788	0.0768	0.0788	0.0767	0.0788	0.0770
	(0.0498)	(0.0580)	(0.0498)	(0.0580)	(0.0501)	(0.0583)	(0.0501)	(0.0583)	(0.0501)	(0.0583)
PAYOUT	-0.4095***	-0.2535**	-0.4092***	-0.2546**	-0.4121***	-0.2567**	-0.4121***	-0.2565**	-0.4120***	-0.2535**
	(0.0829)	(0.1124)	(0.0829)	(0.1125)	(0.0830)	(0.1126)	(0.0830)	(0.1126)	(0.0830)	(0.1126)
OEX	-0.0170	0.0003	-0.0170	0.0005	-0.0171	0.0014	-0.0171	0.0014	-0.0171	0.0016
	(0.0155)	(0.0170)	(0.0155)	(0.0170)	(0.0156)	(0.0171)	(0.0156)	(0.0171)	(0.0156)	(0.0171)
GDP	1.0795***	-0.0854	1.0788***	-0.0833	0.4898	-0.5881	0.4899	-0.5884	0.4892	-0.5946
	(0.3061)	(0.8077)	(0.3061)	(0.8076)	(0.5610)	(0.7802)	(0.5610)	(0.7802)	(0.5610)	(0.7799)
FDI_NET	0.2549**	-0.1539	0.2546**	-0.1539	0.1135	-0.2805	0.1134	-0.2807	0.1135	-0.2787
	(0.1297)	(0.1683)	(0.1297)	(0.1683)	(0.1834)	(0.2245)	(0.1834)	(0.2245)	(0.1834)	(0.2240)
TRADE	-0.3107	-1.4186	-0.3133	-1.4191	-0.2445	-1.0942	-0.2447	-1.0932	-0.2439	-1.0968
	(0.7027)	(0.8792)	(0.7027)	(0.8793)	(0.4804)	(0.6959)	(0.4804)	(0.6958)	(0.4803)	(0.6952)
INFLATION	0.2148*	0.0772	0.2146*	0.0777	0.2037	-0.0010	0.2037	-0.0015	0.2039	-0.0010
	(0.1116)	(0.1410)	(0.1116)	(0.1410)	(0.1443)	(0.1898)	(0.1442)	(0.1898)	(0.1442)	(0.1895)
BDR_NEGATIVE x DPS			-0.0153	0.0387***	-0.0148	0.0376***				

			(0.0218)	(0.0142)	(0.0218)	(0.0143)				
SAPF					0.0002	-0.0207	0.0002	-0.0206	0.0001	-0.0200
					(0.0225)	(0.0232)	(0.0225)	(0.0232)	(0.0225)	(0.0231)
FL-CCE					-2.3231	-1.2289	-2.3241	-1.2273	-2.2824	-1.5430
					(4.6025)	(5.3866)	(4.6022)	(5.3868)	(4.6002)	(5.3772)
EMITTER					-0.0110	-0.0087	-0.0110	-0.0087	-0.0111	-0.0085
					(0.0318)	(0.0323)	(0.0318)	(0.0323)	(0.0318)	(0.0324)
US_GHG					-1.2985	-0.5890	-1.2986	-0.5865	-1.2993	-0.6090
					(1.0385)	(1.4247)	(1.0385)	(1.4245)	(1.0384)	(1.4244)
CPU					-0.0742	0.0159	-0.0742	0.0158	-0.0741	0.0161
					(0.0777)	(0.0794)	(0.0777)	(0.0794)	(0.0777)	(0.0794)
BDR_NEGATIVE x DPS x CPU							-0.0034	0.0081***		
							(0.0047)	(0.0029)		
BDR_NEGATIVE x DPS x CPU x FL-CCE									-3.5217	15.9278***
									(5.8463)	(4.2743)
Constant	-32.6072***	7.3145	-32.5764***	7.2532	6.0061	30.9543	6.0075	30.9204	6.0344	31.4680
	(8.7571)	(24.9282)	(8.7582)	(24.9247)	(32.9599)	(42.7633)	(32.9601)	(42.7594)	(32.9581)	(42.7449)
Observations	8,332	8,050	8,332	8,050	8,332	8,050	8,332	8,050	8,332	8,050
R-squared	0.0769	0.0704	0.0769	0.0702	0.0770	0.0703	0.0770	0.0703	0.0770	0.0710
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4B: Long-term climate change across US states

VARIABLES	(1) TA_ETR Abnormal warmer	(2) TA_ETR Abnormal cooler	(3) TA_ETR Abnormal cooler	(4) TA_ETR Abnormal warmer	(5) TA_ETR Abnormal warmer	(6) TA_ETR Abnormal cooler	(7) TA_ETR Abnormal warmer	(8) TA_ETR Abnormal cooler	(9) TA_ETR Abnormal warmer	(10) TA_ETR Abnormal cooler	(11) TA_ETR Abnormal warmer	(12) TA_ETR Abnormal cooler
BDR_NEGATIVE	0.0261**	-0.0151			0.0257*	-0.0128						
	(0.0132)	(0.1043)			(0.0132)	(0.1020)						
SAPF					-0.0110	0.1380	0.1381	-0.0110	0.1381	-0.0110	0.1377	-0.0105
					(0.0158)	(0.1286)	(0.1286)	(0.0158)	(0.1286)	(0.0158)	(0.1286)	(0.0157)
FL-CCE					-1.1198	-15.5881	-15.7314	-1.0840	-15.7376	-1.0853	-15.6499	-1.2801
					(3.4735)	(9.8756)	(9.9917)	(3.4764)	(9.9927)	(3.4763)	(9.9785)	(3.4726)
EMITTER					0.0020	-0.0743	-0.0760	0.0025	-0.0762	0.0026	-0.0742	0.0024
					(0.0223)	(0.0717)	(0.0720)	(0.0224)	(0.0721)	(0.0224)	(0.0717)	(0.0224)
US_GHG					-0.7980	-2.0667	-2.1470	-0.7960	-2.1508	-0.7949	-2.1046	-0.8042
					(0.9080)	(3.5868)	(3.5907)	(0.9079)	(3.5911)	(0.9078)	(3.5861)	(0.9077)
CPU					-0.0300	0.0194	0.0149	-0.0303	0.0146	-0.0303	0.0167	-0.0300
					(0.0623)	(0.3004)	(0.3017)	(0.0623)	(0.3017)	(0.0623)	(0.3017)	(0.0623)
SIZE	-0.0032	-0.0206	-0.0205	-0.0033	-0.0031	-0.0217	-0.0216	-0.0032	-0.0216	-0.0032	-0.0217	-0.0033
	(0.0043)	(0.0154)	(0.0153)	(0.0043)	(0.0043)	(0.0154)	(0.0153)	(0.0043)	(0.0153)	(0.0043)	(0.0153)	(0.0043)
R&D	0.0762	0.1249	0.1283	0.0752	0.0775	0.0904	0.0928	0.0767	0.0928	0.0766	0.0925	0.0750
	(0.0843)	(0.6275)	(0.6287)	(0.0843)	(0.0845)	(0.6328)	(0.6340)	(0.0845)	(0.6340)	(0.0845)	(0.6343)	(0.0845)
CAPX	-0.3497**	0.0365	0.0400	-0.3534**	-0.3475**	0.0497	0.0565	-0.3512**	0.0570	-0.3509**	0.0479	-0.3384**
	(0.1412)	(0.4415)	(0.4406)	(0.1415)	(0.1414)	(0.4437)	(0.4426)	(0.1417)	(0.4425)	(0.1416)	(0.4461)	(0.1412)
ROA	-0.2460***	0.1563	0.1582	-0.2460***	-0.2454***	0.1589	0.1611	-0.2454***	0.1611	-0.2454***	0.1595	-0.2461***
	(0.0556)	(0.3193)	(0.3199)	(0.0557)	(0.0556)	(0.3214)	(0.3220)	(0.0556)	(0.3220)	(0.0556)	(0.3223)	(0.0557)
TANG	0.0460*	0.0732	0.0730	0.0461*	0.0460*	0.0728	0.0723	0.0460*	0.0722	0.0460*	0.0729	0.0458*
	(0.0245)	(0.0644)	(0.0642)	(0.0245)	(0.0245)	(0.0652)	(0.0650)	(0.0245)	(0.0650)	(0.0245)	(0.0652)	(0.0245)
CASH	0.0713*	0.0408	0.0404	0.0710*	0.0714*	0.0354	0.0350	0.0712*	0.0349	0.0712*	0.0350	0.0711*
	(0.0388)	(0.1498)	(0.1499)	(0.0388)	(0.0388)	(0.1504)	(0.1505)	(0.0388)	(0.1505)	(0.0388)	(0.1506)	(0.0388)
PAYOUT	-0.3729***	-0.2612	-0.2614	-0.3740***	-0.3742***	-0.3077	-0.3091	-0.3751***	-0.3093	-0.3750***	-0.3073	-0.3741***
	(0.0702)	(0.2212)	(0.2214)	(0.0702)	(0.0703)	(0.2227)	(0.2228)	(0.0703)	(0.2229)	(0.0703)	(0.2228)	(0.0704)
OEX	-0.0068	-0.0340	-0.0339	-0.0067	-0.0066	-0.0340	-0.0338	-0.0065	-0.0338	-0.0065	-0.0339	-0.0064
	(0.0112)	(0.0314)	(0.0314)	(0.0112)	(0.0112)	(0.0316)	(0.0317)	(0.0112)	(0.0317)	(0.0112)	(0.0317)	(0.0113)
GDP	0.3464	0.5782	0.5799	0.3465	-0.0856	-0.1807	-0.1904	-0.0823	-0.1907	-0.0824	-0.1839	-0.0849
	(0.5254)	(0.4336)	(0.4336)	(0.5254)	(0.4973)	(0.6215)	(0.6193)	(0.4971)	(0.6193)	(0.4971)	(0.6185)	(0.4970)
FDI_NET	0.0577	-0.1740	-0.1743	0.0577	-0.0489	-0.5001	-0.5118	-0.0481	-0.5123	-0.0481	-0.5052	-0.0472
	(0.1081)	(0.4897)	(0.4896)	(0.1081)	(0.1449)	(0.6804)	(0.6798)	(0.1448)	(0.6799)	(0.1448)	(0.6794)	(0.1446)
TRADE	-0.8267	-0.5353	-0.5420	-0.8224	-0.6905	-0.7051	-0.7385	-0.6889	-0.7402	-0.6884	-0.7217	-0.6894
	(0.5624)	(0.6509)	(0.6507)	(0.5621)	(0.4599)	(1.5744)	(1.5805)	(0.4598)	(1.5808)	(0.4598)	(1.5793)	(0.4595)
INFLATION	0.1543*	-0.3401	-0.3413	0.1543*	0.1240	-0.4820	-0.4910	0.1246	-0.4915	0.1244	-0.4858	0.1243
	(0.0910)	(0.7407)	(0.7405)	(0.0909)	(0.1268)	(0.8213)	(0.8214)	(0.1268)	(0.8214)	(0.1268)	(0.8215)	(0.1267)

BDR_NEGATIVE x DPS			0.0478	0.0305**			0.0756	0.0300**				
			(0.1223)	(0.0137)			(0.1384)	(0.0137)				
BDR_NEGATIVE x DPS x CPU									0.0178	0.0064**		
									(0.0312)	(0.0028)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											-1.2134	14.4250***
											(22.1069)	(4.0914)
Constant	-8.4177	-14.6786	-14.7076	-8.4340	17.0924	41.8267	43.5317	16.9563	43.6078	16.9422	42.5927	17.1616
	(16.2574)	(13.3198)	(13.3207)	(16.2584)	(26.7207)	(73.3938)	(73.3396)	(26.7115)	(73.3484)	(26.7105)	(73.2194)	(26.7033)
Observations	14,816	1,286	1,286	14,816	14,816	1,286	1,286	14,816	1,286	14,816	1,286	14,816
R-squared	0.0579	0.2972	0.2972	0.0580	0.0580	0.2993	0.2994	0.0580	0.2994	0.0580	0.2993	0.0584
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5: Slate-level economic policy uncertainty

VARIABLES	(1) TA_ETR	(2) TA_ETR Low SL-EPU	(3) TA_ETR High SL-EPU	(4) TA_ETR	(5) TA_ETR	(6) TA_ETR	(7) TA_ETR	(8) TA_ETR	(9) TA_ETR
BDR_NEGATIVE	0.0278**	-0.0118	0.1114**						
	(0.0133)	(0.0116)	(0.0490)						
DPS	0.3377***	-0.2071	0.8698***	0.3376***					
	(0.1244)	(0.1347)	(0.1941)	(0.1244)					
SAPF	-0.0125	-0.0637***	0.0281	-0.0125	-0.0119	-0.0118	-0.0103	-0.0127	-0.0124
	(0.0154)	(0.0220)	(0.0256)	(0.0154)	(0.0154)	(0.0154)	(0.0156)	(0.0154)	(0.0154)
FL-CCE	-2.4362	-3.0026	-1.2771	-2.4339	-2.4111	-2.4105	-2.3857	-2.3960	-2.4333
	(3.2747)	(5.1416)	(4.4742)	(3.2748)	(3.2782)	(3.2781)	(3.2809)	(3.2763)	(3.2747)
EMITTER	-0.0118	-0.0049	-0.0194	-0.0118	-0.0119	-0.0119	-0.0120	-0.0113	-0.0118
	(0.0215)	(0.0292)	(0.0332)	(0.0215)	(0.0215)	(0.0215)	(0.0215)	(0.0215)	(0.0215)
US_GHG	-0.6333	0.0512	0.2013	-0.6333	-0.6465	-0.6453	-0.6416	-0.6302	-0.6321
	(0.8915)	(1.2105)	(1.5416)	(0.8916)	(0.8927)	(0.8927)	(0.8923)	(0.8915)	(0.8915)
CPU	-0.0245	-0.0521	-0.0428	-0.0246	-0.0238	-0.0238	-0.0169	-0.0248	-0.0247
	(0.0558)	(0.0855)	(0.1173)	(0.0558)	(0.0557)	(0.0557)	(0.0559)	(0.0558)	(0.0558)
SL-EPU	0.0346*	0.0259	0.0570*	0.0345*	0.0395*	0.0395*	0.0403*	0.0346*	0.0345*
	(0.0204)	(0.0297)	(0.0329)	(0.0204)	(0.0231)	(0.0231)	(0.0220)	(0.0204)	(0.0204)
R&D	0.0843	0.0145	0.2196*	0.0843	0.0842	0.0842	0.0847	0.0834	0.0844
	(0.0846)	(0.1054)	(0.1269)	(0.0846)	(0.0846)	(0.0846)	(0.0846)	(0.0846)	(0.0846)
CAPX	-0.3147**	-0.3015*	-0.3358	-0.3146**	-0.3156**	-0.3154**	-0.3160**	-0.3165**	-0.3144**
	(0.1333)	(0.1673)	(0.2137)	(0.1333)	(0.1332)	(0.1332)	(0.1331)	(0.1336)	(0.1332)
ROA	-0.2437***	-0.2779***	-0.1906***	-0.2437***	-0.2438***	-0.2437***	-0.2437***	-0.2439***	-0.2437***
	(0.0551)	(0.0933)	(0.0639)	(0.0551)	(0.0551)	(0.0551)	(0.0552)	(0.0551)	(0.0551)
TANG	0.0478**	0.0565*	0.0365	0.0478**	0.0478**	0.0478**	0.0481**	0.0477**	0.0478**
	(0.0235)	(0.0326)	(0.0355)	(0.0235)	(0.0235)	(0.0235)	(0.0234)	(0.0235)	(0.0235)
CASH	0.0877**	0.0902*	0.0791	0.0877**	0.0875**	0.0875**	0.0874**	0.0878**	0.0877**
	(0.0355)	(0.0463)	(0.0504)	(0.0355)	(0.0356)	(0.0355)	(0.0356)	(0.0355)	(0.0355)
PAYOUT	-0.3796***	-0.3380***	-0.4287***	-0.3796***	-0.3788***	-0.3786***	-0.3788***	-0.3810***	-0.3795***
	(0.0671)	(0.0917)	(0.0980)	(0.0671)	(0.0672)	(0.0672)	(0.0672)	(0.0671)	(0.0671)
OEX	-0.0039	0.0086	-0.0233	-0.0040	-0.0039	-0.0039	-0.0039	-0.0038	-0.0040

	(0.0104)	(0.0143)	(0.0154)	(0.0104)	(0.0104)	(0.0104)	(0.0104)	(0.0104)	(0.0104)
GDP	0.0024	1.0143*	0.7812	0.0025	-0.0062	-0.0066	-0.0066	0.0066	0.0021
	(0.4937)	(0.5775)	(0.9651)	(0.4937)	(0.4938)	(0.4937)	(0.4940)	(0.4936)	(0.4937)
FDI_NET	-0.0455	0.1032	0.2226	-0.0456	-0.0452	-0.0452	-0.0448	-0.0448	-0.0457
	(0.1438)	(0.1818)	(0.2816)	(0.1438)	(0.1438)	(0.1438)	(0.1438)	(0.1438)	(0.1438)
TRADE	-0.5228	0.1085	-0.6849	-0.5228	-0.5276	-0.5271	-0.5232	-0.5201	-0.5224
	(0.4548)	(0.5657)	(0.6987)	(0.4549)	(0.4551)	(0.4551)	(0.4550)	(0.4548)	(0.4548)
INFLATION	0.1025	0.2202	0.2303	0.1024	0.1042	0.1040	0.1040	0.1028	0.1022
	(0.1232)	(0.1446)	(0.2184)	(0.1232)	(0.1230)	(0.1230)	(0.1231)	(0.1232)	(0.1232)
BDR_NEGATIVE x SL-EPU				0.0055**	0.0055**				
				(0.0027)	(0.0027)				
DPS x SL-EPU					-0.0135	-0.0135			
					(0.0237)	(0.0237)			
BDR_NEGATIVE x SL-EPU x CPU						0.0012**	0.0012**		0.0012**
						(0.0006)	(0.0006)		(0.0006)
DPS x SL-EPU x CPU							-0.0030		
							(0.0035)		
BDR_NEGATIVE x SL-EPU x DPS								0.0056*	
								(0.0028)	
Constant	11.2921	-32.0702	-25.8859	11.2914	11.7463	11.7391	11.6323	11.1065	11.2825
	(26.5713)	(36.2019)	(50.7166)	(26.5724)	(26.5926)	(26.5909)	(26.5881)	(26.5662)	(26.5707)
Observations	16,361	8,322	8,039	16,361	16,361	16,361	16,361	16,361	16,361
R-squared	0.0569	0.0873	0.0721	0.0569	0.0569	0.0570	0.0570	0.0569	0.0569
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6: State-level economic condition – SL-ECI

VARIABLES	(1) TA_ETR	(2) TA_ETR Lower SL-ECI	(3) TA_ETR Higher SL-ECI	(4) TA_ETR	(5) TA_ETR	(6) TA_ETR	(7) TA_ETR	(8) TA_ETR	(9) TA_ETR
BDR_NEGATIVE	0.0278**	-0.0118	0.0453***						
	(0.0133)	(0.0293)	(0.0144)						
DPS	0.3392***	0.7009***	0.1117	0.3352***					
	(0.1245)	(0.1344)	(0.2272)	(0.1245)					
SAPF	-0.0129	0.0137	-0.0309	-0.0135	-0.0141	-0.0141	-0.0139	-0.0140	-0.0139
	(0.0156)	(0.0217)	(0.0242)	(0.0154)	(0.0155)	(0.0155)	(0.0155)	(0.0155)	(0.0155)
FL-CCE	-2.4084	-8.0073*	6.7570	-2.4817	-2.4315	-2.4323	-2.4663	-2.4338	-2.4542
	(3.2739)	(4.5522)	(4.9127)	(3.2709)	(3.2745)	(3.2744)	(3.2709)	(3.2719)	(3.2701)
EMITTER	-0.0114	-0.0410	0.0064	-0.0106	-0.0106	-0.0106	-0.0100	-0.0102	-0.0101
	(0.0215)	(0.0319)	(0.0307)	(0.0215)	(0.0215)	(0.0215)	(0.0215)	(0.0216)	(0.0215)
US_GHG	-0.7169	-2.7475	-2.1075*	-0.6170	-0.6944	-0.6936	-0.7008	-0.6939	-0.7006
	(0.8905)	(3.9229)	(1.2149)	(0.8911)	(0.8922)	(0.8922)	(0.8901)	(0.8896)	(0.8900)
CPU	-0.0183	0.0332	-0.0733	-0.0246	-0.0183	-0.0183	-0.0185	-0.0183	-0.0184
	(0.0557)	(0.0860)	(0.0967)	(0.0558)	(0.0557)	(0.0557)	(0.0557)	(0.0557)	(0.0557)
SL-ECI	-0.0022				-0.0021	-0.0021	-0.0009	-0.0021	-0.0021
	(0.0062)				(0.0065)	(0.0065)	(0.0072)	(0.0062)	(0.0062)
R&D	0.0829	0.1326	0.0939	0.0828	0.0827	0.0827	0.0813	0.0815	0.0813
	(0.0846)	(0.1347)	(0.1101)	(0.0847)	(0.0848)	(0.0848)	(0.0846)	(0.0846)	(0.0846)
CAPX	-0.3124**	-0.2468	-0.3421*	-0.3073**	-0.3042**	-0.3042**	-0.3044**	-0.3041**	-0.3051**
	(0.1331)	(0.1669)	(0.1997)	(0.1334)	(0.1334)	(0.1334)	(0.1334)	(0.1335)	(0.1333)
ROA	-0.2450***	-0.2944***	-0.2048***	-0.2444***	-0.2449***	-0.2449***	-0.2458***	-0.2455***	-0.2457***
	(0.0552)	(0.0602)	(0.0742)	(0.0551)	(0.0553)	(0.0553)	(0.0552)	(0.0552)	(0.0552)
TANG	0.0478**	0.1016***	-0.0082	0.0470**	0.0469**	0.0469**	0.0471**	0.0467**	0.0471**
	(0.0234)	(0.0348)	(0.0312)	(0.0235)	(0.0235)	(0.0235)	(0.0234)	(0.0234)	(0.0234)
CASH	0.0862**	0.1263***	0.0530	0.0881**	0.0873**	0.0873**	0.0867**	0.0867**	0.0866**
	(0.0355)	(0.0484)	(0.0473)	(0.0355)	(0.0356)	(0.0356)	(0.0355)	(0.0355)	(0.0355)
PAYOUT	-0.3787***	-0.4195***	-0.3281***	-0.3816***	-0.3798***	-0.3798***	-0.3813***	-0.3812***	-0.3807***
	(0.0672)	(0.0931)	(0.0978)	(0.0671)	(0.0673)	(0.0673)	(0.0673)	(0.0672)	(0.0672)
OEX	-0.0041	-0.0018	-0.0052	-0.0040	-0.0041	-0.0041	-0.0041	-0.0041	-0.0041
	(0.0104)	(0.0160)	(0.0129)	(0.0104)	(0.0104)	(0.0104)	(0.0104)	(0.0104)	(0.0104)
GDP	-0.0377	-2.3596	0.1755	0.0188	-0.0191	-0.0185	-0.0208	-0.0178	-0.0213
	(0.4960)	(2.3256)	(0.4381)	(0.4931)	(0.4952)	(0.4952)	(0.4954)	(0.4952)	(0.4954)
FDI_NET	-0.0470	-1.2251	-0.1630	-0.0428	-0.0444	-0.0443	-0.0443	-0.0435	-0.0443

	(0.1437)	(0.9371)	(0.1888)	(0.1437)	(0.1436)	(0.1436)	(0.1436)	(0.1435)	(0.1436)
TRADE	-0.6250	-3.5787*	-0.1955	-0.5158	-0.6146	-0.6145	-0.6181	-0.6145	-0.6185
	(0.4505)	(2.1743)	(0.3413)	(0.4545)	(0.4515)	(0.4515)	(0.4501)	(0.4498)	(0.4501)
INFLATION	0.1182	-0.9645	0.0336	0.1043	0.1190	0.1191	0.1208	0.1210	0.1201
	(0.1226)	(0.8159)	(0.1658)	(0.1231)	(0.1223)	(0.1223)	(0.1225)	(0.1224)	(0.1225)
SL-EPU		0.0213	0.0467	0.0347*					
		(0.0290)	(0.0328)	(0.0204)					
BDR_NEGATIVE x SL-ECI				-0.0120	-0.0120				
				(0.0141)	(0.0141)				
DPS x SL-EPU					0.0019	0.0019			
					(0.0217)	(0.0217)			
BDR_NEGATIVE x SL-ECI x CPU						-0.0026	-0.0026		-0.0026
						(0.0030)	(0.0030)		(0.0030)
DPS x SL-ECI x CPU							-0.0006		
							(0.0015)		
BDR_NEGATIVE x SL-ECI x DPS								-0.0255	
								(0.0173)	
Constant	14.2921	128.5367	28.3696	10.5133	13.3368	13.3052	13.5002	13.2851	13.5126
	(26.5980)	(134.5753)	(29.4920)	(26.5411)	(26.5964)	(26.5949)	(26.5658)	(26.5518)	(26.5668)
Observations	16,382	7,976	8,385	16,361	16,361	16,361	16,382	16,382	16,382
R-squared	0.0569	0.0774	0.0800	0.0568	0.0566	0.0566	0.0568	0.0568	0.0568
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 7: Corporate financial leverage

VARIABLES	(1) TA_ETR Low LEV	(2) TA_ETR High LEV	(3) TA_ETR Low LEV Located in non-DPS	(4) TA_ETR High LEV Located in DPS	(5) TA_ETR Low LEV Located in non-SAPF	(6) TA_ETR High LEV Located in SAPF	(7) TA_ETR Low LEV Located in non-SAPF	(8) TA_ETR High LEV Located in SAPF	(9) TA_ETR Low LEV Located in non-SAPF	(10) TA_ETR High LEV Located in SAPF	(11) TA_ETR Low LEV Located in non-SAPF	(12) TA_ETR High LEV Located in SAPF
BDR_NEGATIVE	0.0420***	0.0103	0.0136	0.0156	0.0444***	-0.0185						
	(0.0136)	(0.0211)	(0.0237)	(0.0252)	(0.0141)	(0.0346)						
FL-CCE	-7.9565*	3.5813	-3.8643	17.3271*	-8.6577	10.7957	-8.6298	10.5857	-8.6350	10.5731	-8.7576	10.7096
	(4.3118)	(5.2967)	(7.2342)	(9.1532)	(6.1146)	(9.2718)	(6.1144)	(9.2389)	(6.1143)	(9.2381)	(6.1139)	(9.2743)
EMITTER	-0.0077	-0.0109	-0.0312	0.0200	-0.0195	0.1002	-0.0194	0.1001	-0.0193	0.1001	-0.0183	0.1001
	(0.0350)	(0.0319)	(0.0389)	(0.0683)	(0.0483)	(0.0834)	(0.0483)	(0.0834)	(0.0483)	(0.0834)	(0.0483)	(0.0835)
US_GHG	-0.1439	-0.9525	-0.6683	-1.1990	0.6698	-0.1702	0.6785	-0.1696	0.6832	-0.1698	0.6255	-0.1683
	(1.4862)	(1.0635)	(1.5803)	(1.6946)	(2.2235)	(1.2749)	(2.2238)	(1.2747)	(2.2230)	(1.2747)	(2.2282)	(1.2739)
CPU	-0.0461	0.0279	-0.0852	-0.0435	-0.0095	-0.0720	-0.0095	-0.0722	-0.0095	-0.0722	-0.0091	-0.0711
	(0.0877)	(0.0743)	(0.1297)	(0.1277)	(0.1028)	(0.1809)	(0.1028)	(0.1809)	(0.1028)	(0.1809)	(0.1027)	(0.1809)
SIZE	-0.0180***	0.0052	-0.0229***	-0.0112	-0.0095	-0.0120	-0.0095	-0.0120	-0.0095	-0.0120	-0.0095	-0.0121
	(0.0057)	(0.0063)	(0.0085)	(0.0113)	(0.0063)	(0.0143)	(0.0063)	(0.0143)	(0.0063)	(0.0143)	(0.0063)	(0.0144)
R&D	0.1346	-0.0091	-0.0265	0.1002	0.2406	0.2796	0.2410	0.2793	0.2408	0.2792	0.2392	0.2802
	(0.1100)	(0.1347)	(0.1786)	(0.2053)	(0.1695)	(0.1787)	(0.1695)	(0.1787)	(0.1695)	(0.1787)	(0.1695)	(0.1787)
CAPX	-0.3283*	-0.2665	-0.4416	-0.0609	-0.4924**	-0.4487	-0.4933**	-0.4350	-0.4927**	-0.4350	-0.4879**	-0.4557
	(0.1832)	(0.2075)	(0.2729)	(0.2790)	(0.2200)	(0.4466)	(0.2201)	(0.4405)	(0.2201)	(0.4404)	(0.2197)	(0.4458)
ROA	-0.2555***	-0.1836**	-0.2824***	-0.1010	-0.2809***	-0.0468	-0.2809***	-0.0473	-0.2810***	-0.0473	-0.2820***	-0.0466
	(0.0524)	(0.0811)	(0.0832)	(0.0757)	(0.0615)	(0.0542)	(0.0615)	(0.0542)	(0.0615)	(0.0542)	(0.0615)	(0.0541)
TANG	0.1093***	0.0192	0.1979***	-0.0829	0.1174***	-0.0325	0.1173***	-0.0328	0.1173***	-0.0327	0.1180***	-0.0323
	(0.0352)	(0.0333)	(0.0486)	(0.0528)	(0.0429)	(0.0667)	(0.0429)	(0.0665)	(0.0429)	(0.0665)	(0.0428)	(0.0665)
CASH	0.0822*	0.0794	0.0636	0.0915	0.0722	0.0580	0.0720	0.0581	0.0720	0.0581	0.0728	0.0577
	(0.0457)	(0.0666)	(0.0672)	(0.1219)	(0.0583)	(0.1146)	(0.0583)	(0.1146)	(0.0583)	(0.1146)	(0.0583)	(0.1146)
PAYOUT	-0.3503***	-0.3578***	-0.4086***	-0.2329	-0.4563***	-0.2386	-0.4563***	-0.2388	-0.4562***	-0.2389	-0.4567***	-0.2368
	(0.0936)	(0.0958)	(0.1101)	(0.1632)	(0.1063)	(0.2163)	(0.1063)	(0.2163)	(0.1063)	(0.2163)	(0.1063)	(0.2164)
OEX	-0.0015	0.0058	0.0132	-0.0059	0.0035	-0.0366	0.0035	-0.0369	0.0034	-0.0369	0.0033	-0.0366
	(0.0167)	(0.0152)	(0.0241)	(0.0308)	(0.0195)	(0.0407)	(0.0195)	(0.0407)	(0.0195)	(0.0407)	(0.0195)	(0.0407)
GDP	0.2357	-0.2575	0.9279	0.0939	0.4362	-0.1008	0.4397	-0.1028	0.4403	-0.1032	0.4268	-0.1022
	(0.8316)	(0.5646)	(0.8068)	(0.8788)	(1.2010)	(1.1942)	(1.2010)	(1.1949)	(1.2006)	(1.1949)	(1.2034)	(1.1945)
FDI_NET	0.2142	-0.2510	0.1950	-0.2662	0.1413	0.0283	0.1419	0.0277	0.1420	0.0277	0.1453	0.0284
	(0.2362)	(0.1844)	(0.2687)	(0.2712)	(0.3681)	(0.2376)	(0.3681)	(0.2377)	(0.3680)	(0.2377)	(0.3682)	(0.2378)
TRADE	-0.8350	-0.4252	-0.0838	-0.8836	-1.3056	-1.3634	-1.3048	-1.3674	-1.3033	-1.3682	-1.2949	-1.3642
	(0.7782)	(0.4915)	(0.7053)	(0.7583)	(0.9910)	(1.2526)	(0.9910)	(1.2532)	(0.9910)	(1.2533)	(0.9912)	(1.2522)
INFLATION	0.4291**	-0.1400	0.3514	-0.1759	0.3551	0.1768	0.3556	0.1766	0.3549	0.1765	0.3589	0.1772
	(0.2031)	(0.1455)	(0.2244)	(0.2354)	(0.2925)	(0.2441)	(0.2925)	(0.2440)	(0.2926)	(0.2440)	(0.2923)	(0.2442)
BDR_NEGATIVE x							0.0445***	-0.0243				

DPS							(0.0143)	(0.0371)				
BDR_NEGATIVE x DPS x CPU									0.0092***	-0.0055		
									(0.0030)	(0.0077)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											13.7870***	2.3782
											(4.6052)	(22.5088)
Constant	-2.2306	24.2824	-17.6144	19.2112	-19.6620	8.8753	-19.9091	8.9433	-20.0046	8.9619	-18.7287	8.8865
	(42.7687)	(33.4826)	(47.8205)	(51.2209)	(67.5869)	(53.5521)	(67.5886)	(53.5750)	(67.5601)	(53.5783)	(67.7563)	(53.5348)
Observations	7,906	8,414	3,972	3,514	5,250	2,450	5,250	2,450	5,250	2,450	5,250	2,450
R-squared	0.0980	0.0672	0.1276	0.0868	0.1192	0.1199	0.1192	0.1199	0.1192	0.1199	0.1191	0.1198
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 8: Firm performance

VARIABLES	(1) TA_ETR Lower Performance	(2) TA_ETR Higher Performance	(3) TA_ETR Lower Performance located in non-DPS	(4) TA_ETR Higher Performance located in DPS	(5) TA_ETR Lower Performance located in non-SAPF	(6) TA_ETR Higher Performance located in SAPF	(7) TA_ETR Lower Performance located in non-SAPF	(8) TA_ETR Higher Performance located in SAPF	(9) TA_ETR Lower Performance located in non-SAPF	(10) TA_ETR Higher Performance located in SAPF	(11) TA_ETR Lower Performance located in non-SAPF	(12) TA_ETR Higher Performance located in SAPF
BDR_NEGATIVE	0.0470*	0.0080	0.0162	0.0066	0.0557**	-0.0089						
	(0.0262)	(0.0082)	(0.0678)	(0.0090)	(0.0279)	(0.0239)						
DPS	0.3282***	0.2320***			0.4361***	1.3710***	0.3862***	1.3706***	0.3858***	1.3707***	0.3870***	1.3701***
	(0.1268)	(0.0860)			(0.1315)	(0.1267)	(0.1136)	(0.1267)	(0.1136)	(0.1267)	(0.1134)	(0.1267)
SAPF	-0.0225	-0.0003	-0.0266	0.0115		0.0058		0.0059		0.0060		0.0057
	(0.0307)	(0.0104)	(0.0508)	(0.0160)		(0.0221)		(0.0221)		(0.0221)		(0.0221)
FL-CCE	-4.4967	-1.1907	-7.2193	1.1895	-7.5650	-0.3066	-7.4936	-0.3712	-7.5009	-0.3755	-8.0382	-0.2699
	(5.2364)	(2.5277)	(9.7967)	(5.2080)	(7.4028)	(5.3971)	(7.4025)	(5.3912)	(7.4025)	(5.3911)	(7.4034)	(5.4122)
EMITTER	-0.0009	-0.0209	-0.0385	-0.0301	-0.0139	-0.0144	-0.0146	-0.0146	-0.0146	-0.0146	-0.0143	-0.0145
	(0.0486)	(0.0218)	(0.0822)	(0.1155)	(0.0636)	(0.0529)	(0.0637)	(0.0529)	(0.0637)	(0.0529)	(0.0637)	(0.0529)
US_GHG	-1.2743	-0.2059	-3.6511	-1.5607	-1.9738	0.0982	-1.9535	0.0972	-1.9519	0.0962	-1.9224	0.0995
	(1.8450)	(0.6706)	(2.3125)	(1.2939)	(2.7323)	(0.8616)	(2.7318)	(0.8613)	(2.7313)	(0.8613)	(2.7284)	(0.8616)
CPU	-0.0448	-0.0037	-0.1424	-0.0643	0.0085	-0.0159	0.0085	-0.0160	0.0085	-0.0160	0.0096	-0.0157
	(0.1240)	(0.0327)	(0.1964)	(0.0502)	(0.1535)	(0.0838)	(0.1534)	(0.0838)	(0.1534)	(0.0838)	(0.1534)	(0.0838)
SIZE	-0.0071	0.0030	0.0008	-0.0058	-0.0003	-0.0110	-0.0002	-0.0110	-0.0002	-0.0110	-0.0002	-0.0110
	(0.0084)	(0.0034)	(0.0125)	(0.0061)	(0.0103)	(0.0113)	(0.0103)	(0.0113)	(0.0103)	(0.0113)	(0.0103)	(0.0113)
R&D	0.0635	0.3110*	-0.0467	0.2325	0.0660	0.3212	0.0655	0.3207	0.0655	0.3204	0.0623	0.3230
	(0.1026)	(0.1596)	(0.1451)	(0.1715)	(0.1736)	(0.2929)	(0.1736)	(0.2929)	(0.1736)	(0.2929)	(0.1736)	(0.2930)
CAPX	-0.3361	-0.1584	-0.2932	-0.0661	-0.2992	-0.3048	-0.3046	-0.3000	-0.3023	-0.2992	-0.2636	-0.3036
	(0.2531)	(0.1326)	(0.4465)	(0.2046)	(0.3149)	(0.3101)	(0.3148)	(0.3114)	(0.3145)	(0.3113)	(0.3142)	(0.3112)
ROA	-0.1135**	-0.2784***	-0.1794**	-0.1943**	-0.1893***	-0.1316	-0.1896***	-0.1323	-0.1896***	-0.1327	-0.1909***	-0.1301
	(0.0514)	(0.0687)	(0.0888)	(0.0961)	(0.0716)	(0.1151)	(0.0717)	(0.1152)	(0.0717)	(0.1153)	(0.0717)	(0.1147)
TANG	0.0747*	0.0614***	0.1883***	0.0297	0.0963*	0.1021*	0.0961*	0.1020*	0.0960*	0.1021*	0.0959*	0.1014*
	(0.0453)	(0.0237)	(0.0662)	(0.0414)	(0.0579)	(0.0526)	(0.0579)	(0.0526)	(0.0579)	(0.0526)	(0.0578)	(0.0526)
CASH	0.1211**	0.0308	0.0882	-0.0582	0.0982	-0.1099	0.0985	-0.1096	0.0986	-0.1096	0.0991	-0.1103
	(0.0584)	(0.0339)	(0.0823)	(0.0632)	(0.0787)	(0.0742)	(0.0787)	(0.0741)	(0.0787)	(0.0741)	(0.0787)	(0.0742)
PAYOUT	-0.0178	-0.1850***	-0.3558	-0.1959**	-0.2708	-0.2156*	-0.2732	-0.2155*	-0.2727	-0.2155*	-0.2700	-0.2159*
	(0.2143)	(0.0499)	(0.3009)	(0.0847)	(0.2664)	(0.1281)	(0.2662)	(0.1282)	(0.2662)	(0.1282)	(0.2663)	(0.1282)
OEX	-0.0108	0.0095	-0.0003	-0.0117	0.0152	0.0026	0.0150	0.0025	0.0150	0.0025	0.0150	0.0025
	(0.0183)	(0.0093)	(0.0312)	(0.0222)	(0.0217)	(0.0361)	(0.0217)	(0.0362)	(0.0217)	(0.0361)	(0.0217)	(0.0362)
GDP	-1.4202	0.7598**	-1.0253	0.5413	-2.4552	1.0489	-2.4422	1.0439	-2.4429	1.0424	-2.4064	1.0492
	(1.0514)	(0.3666)	(1.1893)	(0.6859)	(1.5185)	(0.8118)	(1.5182)	(0.8114)	(1.5180)	(0.8114)	(1.5141)	(0.8117)
FDI_NET	-0.2787	0.2154*	-0.4839	0.0729	-0.7184*	0.2374	-0.7120	0.2368	-0.7112	0.2365	-0.6934	0.2373

	(0.2676)	(0.1258)	(0.3870)	(0.2282)	(0.4359)	(0.1665)	(0.4358)	(0.1665)	(0.4357)	(0.1665)	(0.4339)	(0.1665)
TRADE	-2.0644**	0.3491	-1.2958	0.0062	-2.6882**	0.1110	-2.6692**	0.1072	-2.6634**	0.1062	-2.6391**	0.1128
	(1.0430)	(0.3403)	(1.1150)	(0.6443)	(1.3255)	(0.9157)	(1.3250)	(0.9154)	(1.3246)	(0.9154)	(1.3222)	(0.9158)
INFLATION	0.0547	0.2877***	-0.1448	0.1835	-0.2563	0.3072**	-0.2538	0.3068**	-0.2538	0.3067**	-0.2428	0.3070**
	(0.2698)	(0.0927)	(0.3195)	(0.1712)	(0.3708)	(0.1215)	(0.3708)	(0.1215)	(0.3708)	(0.1215)	(0.3697)	(0.1216)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							0.0559**	-0.0137				
							(0.0280)	(0.0251)				
BDR_NEGATIVE x DPS x CPU									0.0126**	-0.0033		
									(0.0059)	(0.0053)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											19.3756***	-3.4244
											(5.6780)	(7.0762)
Constant	70.5837	-22.2532	94.0524	7.6324	115.7505	-36.4143	115.0120	-36.2320	114.9896	-36.1646	113.2990	-36.4498
	(48.7420)	(22.0528)	(70.7505)	(40.8128)	(81.8422)	(37.6297)	(81.8195)	(37.6088)	(81.7996)	(37.6103)	(81.6151)	(37.6260)
Observations	7,756	8,624	3,797	3,522	4,961	2,343	4,961	2,343	4,961	2,343	4,961	2,343
R-squared	0.0717	0.1046	0.1098	0.1327	0.0928	0.1534	0.0927	0.1534	0.0927	0.1534	0.0933	0.1534
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 9: Corporate liquidity

VARIABLES	(1) TA_ETR Lower Liquidity	(2) TA_ETR Higher Liquidity	(3) TA_ETR Lower Liquidity located in non-DPS	(4) TA_ETR Higher Liquidity located in DPS	(5) TA_ETR Lower Liquidity located in non-SAPF	(6) TA_ETR Higher Liquidity located in SAPF	(7) TA_ETR Lower Liquidity located in non-SAPF	(8) TA_ETR Higher Liquidity located in SAPF	(9) TA_ETR Lower Liquidity located in non-SAPF	(10) TA_ETR Higher Liquidity located in SAPF	(11) TA_ETR Lower Liquidity located in non-SAPF	(12) TA_ETR Higher Liquidity located in SAPF
BDR_NEGATIVE	0.0324**	-0.0282	0.0327	-0.0227	0.0358**	0.0145						
	(0.0140)	(0.0210)	(0.0399)	(0.0283)	(0.0149)	(0.0300)						
DPS	0.2904**	-0.0307			-0.2520*	0.0760	-0.2516*	0.0760	-0.2519*	0.0760	-0.2468*	0.0760
	(0.1386)	(0.0666)			(0.1328)	(0.0565)	(0.1329)	(0.0565)	(0.1329)	(0.0565)	(0.1332)	(0.0565)
SAPF	-0.0186	0.0186	0.0323	0.0621*		0.0574		0.0574		0.0574		0.0574
	(0.0229)	(0.0226)	(0.0373)	(0.0373)		(0.0437)		(0.0437)		(0.0437)		(0.0437)
FL-CCE	-5.9716	-1.7171	-10.5201	-2.9656	-6.7720	-5.8708	-6.6892	-5.8673	-6.6877	-5.8673	-7.4054	-5.8717
	(5.4301)	(4.4024)	(6.8789)	(5.6176)	(7.0268)	(6.1215)	(7.0303)	(6.1218)	(7.0298)	(6.1218)	(7.0083)	(6.1219)
EMITTER	-0.0266	0.0069	-0.0291	0.1093	-0.0252	0.0939	-0.0233	0.0939	-0.0232	0.0939	-0.0233	0.0939
	(0.0290)	(0.0384)	(0.0461)	(0.0723)	(0.0384)	(0.0903)	(0.0384)	(0.0903)	(0.0384)	(0.0903)	(0.0384)	(0.0903)
US_GHG	-2.5961**	2.0867	-2.1656	2.0013	-2.2024	0.5929	-2.2073	0.5975	-2.2044	0.5968	-2.2118	0.5968
	(1.1558)	(1.4847)	(1.4199)	(2.0045)	(1.4856)	(1.2870)	(1.4854)	(1.2864)	(1.4853)	(1.2864)	(1.4843)	(1.2863)
CPU	-0.0745	0.0402	-0.0721	0.0236	-0.0618	-0.0744	-0.0619	-0.0742	-0.0620	-0.0743	-0.0618	-0.0744
	(0.0749)	(0.0878)	(0.1076)	(0.1309)	(0.0832)	(0.1610)	(0.0831)	(0.1610)	(0.0831)	(0.1610)	(0.0831)	(0.1610)
SIZE	0.0017	-0.0166***	0.0044	-0.0240**	0.0050	-0.0284**	0.0049	-0.0284**	0.0049	-0.0284**	0.0048	-0.0283**
	(0.0053)	(0.0064)	(0.0075)	(0.0098)	(0.0059)	(0.0113)	(0.0059)	(0.0113)	(0.0059)	(0.0113)	(0.0059)	(0.0113)
R&D	0.4688	0.0829	0.4438	0.1778	0.5868	0.0767	0.5767	0.0766	0.5766	0.0766	0.5733	0.0766
	(0.3406)	(0.0907)	(0.3786)	(0.1344)	(0.3863)	(0.1154)	(0.3846)	(0.1154)	(0.3846)	(0.1154)	(0.3844)	(0.1154)
CAPX	-0.2285	-0.3304	-0.3193	0.0425	-0.1360	0.1754	-0.1389	0.1734	-0.1383	0.1738	-0.1054	0.1732
	(0.1698)	(0.2092)	(0.2757)	(0.2801)	(0.1911)	(0.3393)	(0.1910)	(0.3387)	(0.1908)	(0.3388)	(0.1901)	(0.3383)
ROA	-0.6298***	-0.1572***	-0.7224***	-0.1322**	-0.6673***	-0.0952	-0.6694***	-0.0953	-0.6694***	-0.0953	-0.6719***	-0.0953
	(0.1255)	(0.0509)	(0.1956)	(0.0549)	(0.1473)	(0.0590)	(0.1478)	(0.0590)	(0.1478)	(0.0590)	(0.1473)	(0.0590)
TANG	0.0152	0.0889**	0.0927**	0.0360	0.0257	0.0001	0.0264	0.0001	0.0264	0.0001	0.0268	0.0001
	(0.0291)	(0.0428)	(0.0389)	(0.0637)	(0.0327)	(0.0606)	(0.0327)	(0.0606)	(0.0327)	(0.0606)	(0.0326)	(0.0606)
CASH	0.0872	0.0987**	0.0124	0.0765	0.1734	0.1854**	0.1735	0.1853**	0.1734	0.1853**	0.1723	0.1853**
	(0.1223)	(0.0493)	(0.1797)	(0.0734)	(0.1290)	(0.0825)	(0.1290)	(0.0825)	(0.1290)	(0.0825)	(0.1288)	(0.0825)
PAYOUT	-0.2863***	-0.2850***	-0.2592**	-0.1289	-0.2510**	0.0688	-0.2553**	0.0688	-0.2549**	0.0688	-0.2528**	0.0687
	(0.0962)	(0.0914)	(0.1284)	(0.1594)	(0.1043)	(0.1712)	(0.1044)	(0.1712)	(0.1044)	(0.1712)	(0.1043)	(0.1712)
OEX	0.0030	-0.0054	0.0063	-0.0532*	-0.0028	-0.0283	-0.0029	-0.0282	-0.0030	-0.0282	-0.0030	-0.0282
	(0.0118)	(0.0216)	(0.0173)	(0.0316)	(0.0130)	(0.0382)	(0.0130)	(0.0382)	(0.0130)	(0.0382)	(0.0130)	(0.0382)
GDP	-0.5817	0.5141	-0.4389	0.5108	-0.5786	1.1030	-0.5765	1.1057	-0.5774	1.1056	-0.5673	1.1058
	(0.5837)	(0.9152)	(0.7227)	(1.5548)	(0.7761)	(1.1616)	(0.7762)	(1.1612)	(0.7763)	(1.1611)	(0.7740)	(1.1611)

FDI_NET	-0.3961**	0.4354*	-0.2761	0.4200	-0.4184*	0.4265*	-0.4169*	0.4266*	-0.4173*	0.4267*	-0.4091*	0.4266*
	(0.1859)	(0.2356)	(0.2332)	(0.3194)	(0.2446)	(0.2343)	(0.2446)	(0.2343)	(0.2446)	(0.2343)	(0.2435)	(0.2343)
TRADE	-1.2779**	-0.1189	-0.7837	-0.2862	-1.1085*	0.0297	-1.1022*	0.0329	-1.1008*	0.0325	-1.0909*	0.0321
	(0.5184)	(0.9097)	(0.6623)	(1.0934)	(0.6348)	(1.1797)	(0.6346)	(1.1792)	(0.6345)	(1.1792)	(0.6330)	(1.1791)
INFLATION	-0.1564	0.5404**	-0.0369	0.5361*	-0.1457	0.5296**	-0.1450	0.5292**	-0.1458	0.5293**	-0.1410	0.5293**
	(0.1426)	(0.2339)	(0.1826)	(0.2900)	(0.1831)	(0.2298)	(0.1831)	(0.2299)	(0.1832)	(0.2299)	(0.1824)	(0.2298)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							0.0383***	0.0070				
							(0.0143)	(0.0442)				
BDR_NEGATIVE x DPS x CPU									0.0083***	0.0020		
									(0.0029)	(0.0090)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											16.9719***	3.7036
											(4.3550)	(10.7252)
Constant	63.3977*	-49.2407	50.5541	-47.1781	57.2804	-44.4842	57.2718	-44.6515	57.2506	-44.6359	57.0083	-44.6401
	(35.8567)	(39.5669)	(43.7196)	(57.4090)	(47.0683)	(50.7291)	(47.0658)	(50.6994)	(47.0651)	(50.6991)	(46.9672)	(50.6948)
Observations	8,521	7,861	5,224	4,186	6,490	3,107	6,490	3,107	6,490	3,107	6,490	3,107
R-squared	0.0753	0.0858	0.0939	0.0880	0.0913	0.0939	0.0913	0.0939	0.0913	0.0939	0.0923	0.0939
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 10: Corporate payout

VARIABLES	(1) TA_ETR Lower Payout	(2) TA_ETR Higher Payout	(3) TA_ETR Lower Payout located in non-DPS	(4) TA_ETR Higher Payout located in DPS	(5) TA_ETR Lower Payout located in non-SAPF	(6) TA_ETR Higher Payout located in SAPF	(7) TA_ETR Lower Payout located in non-SAPF	(8) TA_ETR Higher Payout located in SAPF	(9) TA_ETR Lower Payout located in non-SAPF	(10) TA_ETR Higher Payout located in SAPF	(11) TA_ETR Lower Payout located in non-SAPF	(12) TA_ETR Higher Payout located in SAPF
BDR_NEGATIVE	0.0313	0.0170	-0.0061	0.0146	0.0408*	-0.0256						
	(0.0228)	(0.0163)	(0.0675)	(0.0161)	(0.0233)	(0.0519)						
DPS	0.8669***	-0.1988			0.0221	0.0206	0.0229	0.0212	0.0229	0.0212	0.0277	0.0212
	(0.1131)	(0.2795)			(0.0964)	(0.0474)	(0.0963)	(0.0475)	(0.0963)	(0.0475)	(0.0964)	(0.0471)
SAPF	-0.0158	-0.0154	-0.0449	-0.0265		0.0172		0.0172		0.0172		0.0169
	(0.0247)	(0.0198)	(0.0380)	(0.0290)		(0.0379)		(0.0379)		(0.0379)		(0.0379)
FL-CCE	-4.2106	-1.6173	-6.5519	-0.2465	-3.5908	4.1865	-3.5205	4.1380	-3.5162	4.1272	-4.0855	4.0880
	(4.1727)	(5.3273)	(7.8544)	(9.6591)	(5.6053)	(9.5835)	(5.6015)	(9.5829)	(5.6014)	(9.5821)	(5.5963)	(9.5898)
EMITTER	0.0005	0.0022	-0.0180	0.1455	-0.0376	0.0080	-0.0380	0.0077	-0.0379	0.0077	-0.0378	0.0077
	(0.0353)	(0.0291)	(0.0466)	(0.1001)	(0.0383)	(0.0637)	(0.0383)	(0.0638)	(0.0383)	(0.0638)	(0.0384)	(0.0638)
US_GHG	-0.3531	-0.8006	-0.9927	0.0113	-0.3449	-0.8803	-0.3166	-0.8828	-0.3056	-0.8827	-0.2677	-0.9152
	(1.5616)	(1.0580)	(1.9303)	(1.6156)	(2.4343)	(1.2387)	(2.4330)	(1.2392)	(2.4328)	(1.2393)	(2.4311)	(1.2397)
CPU	0.1443	-0.1186*	0.0788		0.1807	-0.1636	0.1806	-0.1637	0.1805	-0.1636	0.1818	-0.1672
	(0.1009)	(0.0616)	(0.1319)		(0.1210)	(0.1312)	(0.1209)	(0.1312)	(0.1209)	(0.1312)	(0.1209)	(0.1313)
SIZE	0.0046	-0.0061	-0.0007	-0.0276***	0.0118	-0.0153	0.0117	-0.0152	0.0117	-0.0152	0.0115	-0.0154
	(0.0071)	(0.0052)	(0.0097)	(0.0094)	(0.0074)	(0.0110)	(0.0074)	(0.0110)	(0.0074)	(0.0110)	(0.0074)	(0.0111)
R&D	0.1302	0.1379	0.1213	0.1372	0.1673	-0.0193	0.1675	-0.0197	0.1675	-0.0198	0.1629	-0.0206
	(0.0900)	(0.1930)	(0.1214)	(0.2370)	(0.1606)	(0.3357)	(0.1607)	(0.3357)	(0.1607)	(0.3357)	(0.1608)	(0.3357)
CAPX	-0.4545**	-0.2267	-0.6719**	0.1341	-0.5973***	-0.4441	-0.5995***	-0.4421	-0.5995***	-0.4418	-0.5606***	-0.4466
	(0.1880)	(0.2041)	(0.2943)	(0.2917)	(0.2088)	(0.4121)	(0.2083)	(0.4117)	(0.2081)	(0.4116)	(0.2080)	(0.4142)
ROA	-0.1464***	-0.4276***	-0.1985**	-0.3590***	-0.2474***	-0.3819**	-0.2474***	-0.3823**	-0.2475***	-0.3825**	-0.2489***	-0.3799**
	(0.0535)	(0.0697)	(0.0899)	(0.1164)	(0.0722)	(0.1531)	(0.0724)	(0.1532)	(0.0724)	(0.1532)	(0.0723)	(0.1530)
TANG	0.0861**	0.0122	0.1509***	-0.0814	0.0966**	-0.0190	0.0966**	-0.0193	0.0966**	-0.0193	0.0961**	-0.0211
	(0.0356)	(0.0305)	(0.0498)	(0.0529)	(0.0409)	(0.0558)	(0.0409)	(0.0556)	(0.0409)	(0.0556)	(0.0408)	(0.0556)
CASH	0.1300**	0.0322	0.0458	-0.0090	0.1011	0.0097	0.1011	0.0101	0.1011	0.0101	0.1019	0.0106
	(0.0517)	(0.0541)	(0.0722)	(0.0798)	(0.0638)	(0.0993)	(0.0638)	(0.0993)	(0.0638)	(0.0993)	(0.0638)	(0.0993)
PAYOUT	-0.3248**	-0.2191***	-0.2838*	0.0204	-0.2731*	-0.0201	-0.2734*	-0.0201	-0.2732*	-0.0202	-0.2722*	-0.0185
	(0.1317)	(0.0812)	(0.1528)	(0.1355)	(0.1433)	(0.1803)	(0.1434)	(0.1803)	(0.1434)	(0.1803)	(0.1434)	(0.1803)
OEX	-0.0150	-0.0035	-0.0192	-0.0506*	0.0032	-0.0258	0.0030	-0.0257	0.0030	-0.0257	0.0030	-0.0252
	(0.0166)	(0.0123)	(0.0267)	(0.0260)	(0.0190)	(0.0333)	(0.0190)	(0.0333)	(0.0190)	(0.0333)	(0.0190)	(0.0333)
GDP	-0.3722	0.2566	-0.5606	-0.1483	-1.0002	-0.0545	-0.9901	-0.0591	-0.9897	-0.0597	-0.9511	-0.0856
	(0.8218)	(0.5977)	(1.0499)	(0.9385)	(1.3304)	(1.2421)	(1.3298)	(1.2433)	(1.3297)	(1.2433)	(1.3273)	(1.2425)
FDI_NET	-0.2963	0.1061	-0.3710	-0.0501	-0.4640	0.1962	-0.4644	0.1955	-0.4647	0.1954	-0.4525	0.1923
	(0.2566)	(0.1724)	(0.3408)	(0.2728)	(0.4144)	(0.2360)	(0.4141)	(0.2361)	(0.4140)	(0.2361)	(0.4126)	(0.2364)
TRADE	-0.0904	-0.9320*	-0.0456	-1.3088	0.5138	-1.1344	0.5079	-1.1373	0.5118	-1.1371	0.5154	-1.1818
	(0.6656)	(0.5513)	(0.8612)	(0.8119)	(0.9919)	(1.2386)	(0.9914)	(1.2394)	(0.9910)	(1.2395)	(0.9894)	(1.2409)

INFLATION	-0.2614	0.3543**	-0.2229	0.1918	-0.3586	0.4889***	-0.3594	0.4886***	-0.3607	0.4884***	-0.3532	0.4914***
	(0.1972)	(0.1532)	(0.2590)	(0.2278)	(0.3007)	(0.1817)	(0.3005)	(0.1816)	(0.3005)	(0.1816)	(0.2994)	(0.1815)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							0.0539***	-0.0250				
							(0.0169)	(0.0522)				
BDR_NEGATIVE x DPS x CPU									0.0120***	-0.0058		
									(0.0036)	(0.0107)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											20.2348***	14.3393
											(5.5755)	(11.6802)
Constant	16.2746	8.2977	32.4570	8.5145	34.3382	18.8214	33.6064	19.0116	33.4123	19.0292	31.6008	20.5015
	(49.2606)	(30.6355)	(62.1797)	(48.4952)	(79.4382)	(56.8475)	(79.4001)	(56.8949)	(79.3921)	(56.8980)	(79.2751)	(56.8913)
Observations	7,640	8,460	4,131	3,817	5,368	2,772	5,368	2,772	5,368	2,772	5,368	2,772
R-squared	0.0811	0.0769	0.1102	0.0940	0.1013	0.0960	0.1016	0.0960	0.1016	0.0960	0.1024	0.0963
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 11: Market to book value - MB

VARIABLES	(1) TA_ETR Lower MB	(2) TA_ETR Higher MB	(3) TA_ETR Lower MB located in non-DPS	(4) TA_ETR Higher MB located in DPS	(5) TA_ETR Lower MB located in non-SAPF	(6) TA_ETR Higher MB located in SAPF	(7) TA_ETR Lower MB located in non-SAPF	(8) TA_ETR Higher MB located in SAPF	(9) TA_ETR Lower MB located in non-SAPF	(10) TA_ETR Higher MB located in SAPF	(11) TA_ETR Lower MB located in non-SAPF	(12) TA_ETR Higher MB located in SAPF
BDR_NEGATIVE	0.0298	0.0463**	0.0268	0.0607***	0.0354	-0.0285						
	(0.0205)	(0.0182)	(0.0524)	(0.0222)	(0.0230)	(0.0350)						
DPS	-0.0249	0.5751***			-0.1621	2.1559***	-0.1634	2.1545***	-0.1640	2.1547***	-0.1564	2.1542***
	(0.1401)	(0.1342)			(0.1948)	(0.1652)	(0.1951)	(0.1650)	(0.1950)	(0.1650)	(0.1949)	(0.1649)
SAPF	-0.0189	0.0190	0.0392	0.0658**		0.0341		0.0341		0.0341		0.0341
	(0.0277)	(0.0170)	(0.0479)	(0.0327)		(0.0423)		(0.0423)		(0.0423)		(0.0423)
FL-CCE	-6.5609	2.5650	-11.2472	5.8904	-10.2860	-5.5897	-10.2644	-5.5279	-10.2636	-5.5309	-10.7290	-5.5135
	(5.5296)	(3.9231)	(7.9916)	(5.5178)	(6.7980)	(7.1208)	(6.7978)	(7.1400)	(6.7975)	(7.1398)	(6.8026)	(7.1402)
EMITTER	0.0016	-0.0217	0.0138	0.0159	-0.0449	-0.0806	-0.0451	-0.0808	-0.0450	-0.0807	-0.0457	-0.0808
	(0.0447)	(0.0222)	(0.0663)	(0.0607)	(0.0579)	(0.0531)	(0.0579)	(0.0532)	(0.0579)	(0.0532)	(0.0579)	(0.0532)
US_GHG	-2.6602*	0.2939	-2.6383	1.0041	-1.5116	0.9029	-1.5120	0.8926	-1.5108	0.8929	-1.5109	0.8911
	(1.6109)	(1.1006)	(2.3121)	(1.9581)	(2.2062)	(1.4007)	(2.2061)	(1.4008)	(2.2059)	(1.4008)	(2.2032)	(1.4011)
CPU	-0.0846	-0.0144	-0.1054		-0.0404	0.0022	-0.0407	0.0017	-0.0408	0.0017	-0.0395	0.0014
	(0.1037)	(0.0567)	(0.1512)		(0.1177)	(0.1468)	(0.1177)	(0.1469)	(0.1177)	(0.1469)	(0.1176)	(0.1469)
SIZE	0.0046	-0.0085*	0.0100	-0.0201**	0.0114	-0.0239**	0.0112	-0.0239**	0.0112	-0.0239**	0.0111	-0.0239**
	(0.0067)	(0.0051)	(0.0103)	(0.0089)	(0.0080)	(0.0119)	(0.0080)	(0.0119)	(0.0080)	(0.0119)	(0.0080)	(0.0119)
R&D	0.2443	0.1606*	0.1353	0.2653**	0.4744	0.1396	0.4734	0.1404	0.4733	0.1403	0.4714	0.1405
	(0.2581)	(0.0907)	(0.3445)	(0.1309)	(0.3790)	(0.1184)	(0.3788)	(0.1184)	(0.3788)	(0.1184)	(0.3785)	(0.1183)
CAPX	-0.3563*	-0.2288	-0.8150**	-0.1737	-0.2985	-0.5129	-0.2981	-0.5108	-0.2976	-0.5109	-0.2702	-0.5106
	(0.1988)	(0.1914)	(0.3829)	(0.3235)	(0.2221)	(0.3708)	(0.2222)	(0.3703)	(0.2221)	(0.3703)	(0.2202)	(0.3703)
ROA	-0.3474***	-0.1593***	-0.4141**	-0.0771	-0.4088***	-0.0893	-0.4095***	-0.0891	-0.4096***	-0.0891	-0.4088***	-0.0890
	(0.0936)	(0.0586)	(0.1726)	(0.0611)	(0.1184)	(0.0700)	(0.1186)	(0.0699)	(0.1186)	(0.0699)	(0.1185)	(0.0699)
TANG	0.0493	0.0533	0.1638***	0.0620	0.0642*	0.0574	0.0638	0.0567	0.0638	0.0568	0.0640*	0.0565
	(0.0334)	(0.0360)	(0.0457)	(0.0672)	(0.0389)	(0.0745)	(0.0389)	(0.0744)	(0.0389)	(0.0744)	(0.0388)	(0.0744)
CASH	0.1562**	0.0772*	0.1458	0.0927	0.1770*	0.0464	0.1767*	0.0466	0.1768*	0.0466	0.1762*	0.0467
	(0.0795)	(0.0410)	(0.1234)	(0.0761)	(0.0975)	(0.0771)	(0.0975)	(0.0771)	(0.0975)	(0.0771)	(0.0974)	(0.0771)
PAYOUT	0.0394	-0.3215***	0.0461	-0.1788	-0.1403	-0.3663**	-0.1399	-0.3660**	-0.1397	-0.3660**	-0.1347	-0.3659**
	(0.1762)	(0.0777)	(0.2511)	(0.1415)	(0.1959)	(0.1838)	(0.1960)	(0.1838)	(0.1960)	(0.1838)	(0.1959)	(0.1838)
OEX	-0.0233	0.0043	-0.0125	-0.0075	-0.0111	-0.0069	-0.0111	-0.0069	-0.0112	-0.0069	-0.0110	-0.0068
	(0.0155)	(0.0170)	(0.0262)	(0.0314)	(0.0171)	(0.0395)	(0.0171)	(0.0395)	(0.0171)	(0.0395)	(0.0171)	(0.0395)
GDP	-0.7761	0.2431	-1.1416	-0.2811	-0.6136	0.8967	-0.6142	0.8928	-0.6161	0.8926	-0.6044	0.8924
	(0.8345)	(0.6609)	(1.2260)	(1.2271)	(1.2053)	(1.1923)	(1.2059)	(1.1926)	(1.2060)	(1.1926)	(1.2025)	(1.1936)
FDI_NET	-0.4482*	0.2120	-0.5478	0.1776	-0.5016	0.3134	-0.5017	0.3131	-0.5023	0.3131	-0.4906	0.3131
	(0.2691)	(0.1743)	(0.4036)	(0.3266)	(0.3901)	(0.2227)	(0.3902)	(0.2227)	(0.3902)	(0.2227)	(0.3886)	(0.2230)
TRADE	-1.4159*	-0.5961	-1.1896	-1.0665	-1.2858	-0.1975	-1.2848	-0.2041	-1.2839	-0.2041	-1.2635	-0.2057
	(0.7268)	(0.6251)	(1.1094)	(1.0757)	(0.9578)	(1.2244)	(0.9576)	(1.2248)	(0.9575)	(1.2248)	(0.9550)	(1.2266)

INFLATION	-0.1400	0.3416**	-0.1758	0.3131	-0.1905	0.3540*	-0.1911	0.3553*	-0.1921	0.3552*	-0.1841	0.3556*
	(0.2096)	(0.1617)	(0.2943)	(0.2755)	(0.2886)	(0.2042)	(0.2887)	(0.2042)	(0.2888)	(0.2042)	(0.2875)	(0.2041)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							0.0358	-0.0054				
							(0.0239)	(0.0307)				
BDR_NEGATIVE x DPS x CPU									0.0076	-0.0015		
									(0.0049)	(0.0063)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											15.5857***	0.4806
											(5.8452)	(4.2795)
Constant	71.2183	-11.4527	81.5454	-4.2511	48.1209	-44.0591	48.1481	-43.7533	48.1859	-43.7527	47.7324	-43.7092
	(50.8006)	(30.5667)	(74.3821)	(58.1223)	(72.2458)	(55.7485)	(72.2653)	(55.7604)	(72.2652)	(55.7609)	(72.0916)	(55.8112)
Observations	7,843	7,539	4,299	3,377	5,812	2,686	5,812	2,686	5,812	2,686	5,812	2,686
R-squared	0.0692	0.1169	0.0949	0.1097	0.0895	0.1218	0.0894	0.1218	0.0895	0.1218	0.0901	0.1218
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 12: Corporate Investment - INV

VARIABLES	(1) TA_ETR Lower INV	(2) TA_ETR Higher INV	(3) TA_ETR Lower INV located in non-DPS	(4) TA_ETR Higher INV located in DPS	(5) TA_ETR Lower INV located in non-SAPF	(6) TA_ETR Higher INV located in SAPF	(7) TA_ETR Lower INV located in non-SAPF	(8) TA_ETR Higher INV located in SAPF	(9) TA_ETR Lower INV located in non-SAPF	(10) TA_ETR Higher INV located in SAPF	(11) TA_ETR Lower INV located in non-SAPF	(12) TA_ETR Higher INV located in SAPF
BDR_NEGATIVE	-0.0494	0.0341***	0.0348	0.0398***	-0.0876	-0.0274						
	(0.0694)	(0.0123)	(0.1279)	(0.0132)	(0.1206)	(0.0340)						
DPS	0.2437	0.2184**			0.2133	1.3443***	0.2414	1.3415***	0.2419	1.3419***	0.2444	1.3444***
	(0.2079)	(0.1067)			(0.1624)	(0.2194)	(0.1703)	(0.2186)	(0.1703)	(0.2186)	(0.1721)	(0.2193)
SAPF	-0.0163	-0.0211	-0.0355	-0.0369		0.0207		0.0209		0.0209		0.0208
	(0.0238)	(0.0205)	(0.0389)	(0.0287)		(0.0455)		(0.0455)		(0.0455)		(0.0456)
FL-CCE	-7.8176	0.7399	-7.9961	4.2621	-9.8238	-9.6222	-9.9842	-9.8538	-9.9841	-9.8631	-9.8372	-9.7299
	(6.2276)	(3.2578)	(8.5510)	(5.2568)	(8.5907)	(6.7469)	(8.5826)	(6.7028)	(8.5820)	(6.7021)	(8.5939)	(6.7529)
EMITTER	-0.0532*	0.0398	-0.0500	0.1188	-0.0555	0.2026*	-0.0541	0.2020*	-0.0543	0.2019*	-0.0554	0.2023*
	(0.0287)	(0.0315)	(0.0404)	(0.0931)	(0.0420)	(0.1054)	(0.0421)	(0.1054)	(0.0421)	(0.1054)	(0.0420)	(0.1057)
US_GHG	-0.5021	-1.5661	-1.2349	-2.2342	-0.5443	-1.3983	-0.5326	-1.4069	-0.5369	-1.4081	-0.5450	-1.4034
	(1.2647)	(1.2752)	(1.7201)	(2.1763)	(1.9058)	(1.4855)	(1.9057)	(1.4870)	(1.9056)	(1.4871)	(1.9053)	(1.4863)
CPU	-0.0166	-0.0289	0.0111		0.0259	-0.0575	0.0251	-0.0590	0.0250	-0.0590	0.0268	-0.0564
	(0.0815)	(0.0841)	(0.1292)		(0.1085)	(0.2121)	(0.1085)	(0.2122)	(0.1085)	(0.2121)	(0.1085)	(0.2120)
SIZE	-0.0120**	0.0020	-0.0010	-0.0015	-0.0082	-0.0227	-0.0093	-0.0226	-0.0093	-0.0226	-0.0081	-0.0229
	(0.0059)	(0.0056)	(0.0090)	(0.0090)	(0.0074)	(0.0148)	(0.0074)	(0.0148)	(0.0074)	(0.0148)	(0.0074)	(0.0148)
R&D	0.0380	0.1155	-0.0635	0.1307	0.0364	-0.1624	0.0343	-0.1635	0.0342	-0.1638	0.0383	-0.1606
	(0.1039)	(0.1392)	(0.1483)	(0.2137)	(0.1599)	(0.1930)	(0.1601)	(0.1929)	(0.1602)	(0.1930)	(0.1601)	(0.1931)
CAPX	-0.5123	-0.2268	-1.1315	-0.0485	-1.2450**	-0.3691	-1.2449**	-0.3460	-1.2448**	-0.3467	-1.2361**	-0.3777
	(0.4686)	(0.1478)	(0.9219)	(0.2029)	(0.6278)	(0.3323)	(0.6269)	(0.3250)	(0.6269)	(0.3250)	(0.6267)	(0.3300)
ROA	-0.1956***	-0.3179***	-0.3119***	-0.3276***	-0.3266***	-0.3592***	-0.3245***	-0.3617***	-0.3244***	-0.3621***	-0.3267***	-0.3570***
	(0.0642)	(0.0683)	(0.0764)	(0.0835)	(0.0714)	(0.1156)	(0.0712)	(0.1156)	(0.0712)	(0.1156)	(0.0712)	(0.1156)
TANG	0.0974*	0.0354	0.2074***	0.0025	0.1591**	0.0297	0.1621**	0.0292	0.1619**	0.0293	0.1550**	0.0296
	(0.0511)	(0.0292)	(0.0790)	(0.0455)	(0.0688)	(0.0652)	(0.0685)	(0.0651)	(0.0685)	(0.0651)	(0.0691)	(0.0650)
CASH	0.0339	0.1138**	0.0462	0.1634*	0.0534	0.1814	0.0512	0.1819	0.0510	0.1818	0.0533	0.1817
	(0.0485)	(0.0539)	(0.0664)	(0.0921)	(0.0663)	(0.1239)	(0.0663)	(0.1239)	(0.0663)	(0.1239)	(0.0664)	(0.1238)
PAYOUT	-0.2708**	-0.3426***	-0.4069***	-0.3267**	-0.3364**	-0.2844	-0.3336**	-0.2832	-0.3337**	-0.2832	-0.3352**	-0.2824
	(0.1129)	(0.0784)	(0.1382)	(0.1401)	(0.1304)	(0.1739)	(0.1302)	(0.1737)	(0.1302)	(0.1738)	(0.1304)	(0.1738)
OEX	-0.0166	0.0058	0.0186	0.0075	0.0072	0.0138	0.0072	0.0133	0.0071	0.0132	0.0078	0.0135
	(0.0158)	(0.0139)	(0.0228)	(0.0220)	(0.0202)	(0.0416)	(0.0202)	(0.0416)	(0.0202)	(0.0416)	(0.0202)	(0.0416)
GDP	0.2643	-0.6082	-0.2732	-1.4455	-0.2009	-0.4031	-0.1890	-0.4124	-0.1896	-0.4139	-0.2072	-0.4094
	(0.6508)	(0.6989)	(0.8880)	(1.2854)	(1.0302)	(1.2293)	(1.0299)	(1.2317)	(1.0299)	(1.2319)	(1.0301)	(1.2286)
FDI_NET	-0.0309	-0.1566	-0.1380	-0.3047	-0.2856	-0.0210	-0.2856	-0.0220	-0.2859	-0.0223	-0.2871	-0.0217
	(0.2056)	(0.2021)	(0.2865)	(0.3413)	(0.3124)	(0.2394)	(0.3124)	(0.2396)	(0.3124)	(0.2396)	(0.3125)	(0.2396)
TRADE	-0.2990	-1.1542*	-0.1690	-1.9968*	-0.5716	-1.5516	-0.5819	-1.5625	-0.5841	-1.5640	-0.5699	-1.5527
	(0.5407)	(0.6682)	(0.7710)	(1.1396)	(0.7536)	(1.3378)	(0.7537)	(1.3399)	(0.7537)	(1.3400)	(0.7537)	(1.3366)

INFLATION	0.1292	0.0599	0.0929	0.0184	-0.0591	0.2237	-0.0613	0.2231	-0.0611	0.2230	-0.0602	0.2248
	(0.1530)	(0.1855)	(0.2265)	(0.3119)	(0.2277)	(0.2715)	(0.2277)	(0.2715)	(0.2277)	(0.2715)	(0.2278)	(0.2715)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							-0.2451**	-0.0508				
							(0.1008)	(0.0407)				
BDR_NEGATIVE x DPS x CPU									-0.0541**	-0.0110		
									(0.0220)	(0.0084)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											-0.5846	2.5537
											(18.2731)	(18.4083)
Constant	1.0872	46.9202	28.5936	85.9322	17.1474	38.0792	16.6237	38.5478	16.7166	38.6162	17.3135	38.3505
	(39.4458)	(36.7026)	(53.2545)	(62.9919)	(61.1322)	(56.9629)	(61.1244)	(57.0797)	(61.1236)	(57.0894)	(61.1220)	(56.9552)
Observations	8,058	8,322	4,420	3,843	5,136	2,216	5,136	2,216	5,136	2,216	5,136	2,216
R-squared	0.0743	0.0900	0.1090	0.1019	0.0985	0.1465	0.0990	0.1468	0.0991	0.1469	0.0983	0.1464
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 13: Firm maturity

VARIABLES	(1) TA_ETR Younger Firms	(2) TA_ETR Older Firms	(3) TA_ETR Younger Firms located in non-DPS	(4) TA_ETR Higher INV located in DPS	(5) TA_ETR Younger Firms located in non-SAPF	(6) TA_ETR Older Firms located in SAPF	(7) TA_ETR Younger Firms located in non-SAPF	(8) TA_ETR Older Firms located in SAPF	(9) TA_ETR Younger Firms located in non-SAPF	(10) TA_ETR Older Firms located in SAPF	(11) TA_ETR Younger Firms located in non-SAPF	(12) TA_ETR Older Firms located in SAPF
BDR_NEGATIVE	-0.0191	0.0307	-0.0538*	0.0273	-0.0208	-0.0078						
	(0.0284)	(0.0321)	(0.0277)	(0.0300)	(0.0371)	(0.0306)						
DPS	0.3650***	0.2469**			-0.0944	-0.0348	-0.0945	-0.0348	-0.0946	-0.0348	-0.0946	-0.0348
	(0.1305)	(0.1208)			(0.1898)	(0.0713)	(0.1897)	(0.0713)	(0.1897)	(0.0713)	(0.1896)	(0.0713)
SAPF	0.0025	0.0178	-0.0319	0.0281		0.0866*		0.0866*		0.0866*		0.0872*
	(0.0368)	(0.0268)	(0.0612)	(0.0373)		(0.0475)		(0.0475)		(0.0475)		(0.0475)
FL-CCE	-2.6681	3.5085	-1.0320	9.1943	-5.8210	-3.9421	-5.7741	-3.9421	-5.7669	-3.9472	-5.7544	-4.0105
	(6.5876)	(7.0109)	(11.1082)	(10.0750)	(8.8452)	(13.5512)	(8.8473)	(13.5512)	(8.8465)	(13.5516)	(8.8362)	(13.5320)
EMITTER	0.0977*	-0.0543	0.0322	-0.0816	0.0531	-0.3235**	0.0532	-0.3235**	0.0533	-0.3236**	0.0532	-0.3229**
	(0.0590)	(0.0612)	(0.0613)	(0.0643)	(0.0666)	(0.1565)	(0.0666)	(0.1565)	(0.0666)	(0.1564)	(0.0666)	(0.1567)
US_GHG	-1.3430	1.8013	-1.5539	2.9648	-4.1444**	-2.3095	-4.1533**	-2.3095	-4.1537**	-2.3086	-4.1485**	-2.3314
	(1.4486)	(1.9808)	(2.1699)	(2.4412)	(2.0774)	(1.7887)	(2.0761)	(1.7887)	(2.0760)	(1.7888)	(2.0782)	(1.7886)
CPU	-0.0191	0.0777	-0.0156		-0.0901	-0.2915	-0.0894	-0.2915	-0.0894	-0.2914	-0.0895	-0.2948
	(0.1099)	(0.1088)	(0.1512)		(0.1314)	(0.2203)	(0.1314)	(0.2203)	(0.1314)	(0.2203)	(0.1314)	(0.2204)
SIZE	-0.0172	-0.0102	-0.0234	-0.0498***	-0.0050	-0.0377*	-0.0051	-0.0377*	-0.0051	-0.0377*	-0.0051	-0.0377*
	(0.0110)	(0.0099)	(0.0171)	(0.0159)	(0.0157)	(0.0197)	(0.0157)	(0.0197)	(0.0157)	(0.0197)	(0.0157)	(0.0197)
R&D	0.1298	0.0888	0.0103	0.1629	0.2707	-0.1112	0.2696	-0.1112	0.2697	-0.1113	0.2696	-0.1122
	(0.1067)	(0.1691)	(0.1331)	(0.2473)	(0.1967)	(0.3335)	(0.1966)	(0.3335)	(0.1966)	(0.3335)	(0.1966)	(0.3337)
CAPX	-0.2073	-0.5223**	-0.5341	-0.5645*	-0.0680	-1.5566**	-0.0688	-1.5566**	-0.0690	-1.5566**	-0.0686	-1.5521**
	(0.2524)	(0.2334)	(0.3424)	(0.3033)	(0.3227)	(0.6248)	(0.3216)	(0.6248)	(0.3217)	(0.6247)	(0.3223)	(0.6253)
ROA	-0.1471**	-0.3085***	-0.2464***	-0.2597**	-0.2198***	-0.2752	-0.2197***	-0.2752	-0.2197***	-0.2753	-0.2196***	-0.2742
	(0.0580)	(0.0799)	(0.0886)	(0.1221)	(0.0722)	(0.1755)	(0.0722)	(0.1755)	(0.0722)	(0.1755)	(0.0723)	(0.1753)
TANG	0.1522**	-0.0282	0.2428**	-0.1182	0.1280	-0.0188	0.1274	-0.0188	0.1274	-0.0187	0.1273	-0.0201
	(0.0683)	(0.0486)	(0.0943)	(0.0723)	(0.0855)	(0.1071)	(0.0853)	(0.1071)	(0.0852)	(0.1071)	(0.0849)	(0.1071)
CASH	0.1492**	-0.0476	0.0909	-0.1138	0.0612	-0.1123	0.0601	-0.1123	0.0600	-0.1124	0.0602	-0.1090
	(0.0686)	(0.0692)	(0.0962)	(0.1206)	(0.0914)	(0.1595)	(0.0914)	(0.1595)	(0.0914)	(0.1595)	(0.0914)	(0.1592)
PAYOUT	-0.2618*	-0.2146*	-0.4779***	-0.0289	-0.3678**	-0.0002	-0.3671**	-0.0002	-0.3669**	-0.0002	-0.3672**	0.0003
	(0.1354)	(0.1254)	(0.1722)	(0.2423)	(0.1637)	(0.3164)	(0.1638)	(0.3164)	(0.1638)	(0.3164)	(0.1637)	(0.3164)
OEX	-0.0470*	-0.0333	-0.0204	-0.0835**	-0.0338	-0.0792	-0.0336	-0.0792	-0.0336	-0.0791	-0.0336	-0.0794
	(0.0244)	(0.0231)	(0.0321)	(0.0415)	(0.0313)	(0.0626)	(0.0313)	(0.0626)	(0.0313)	(0.0626)	(0.0313)	(0.0625)
GDP	0.4569	-1.1704	1.5357*	-0.0584	-1.5363	-2.5160	-1.5467	-2.5160	-1.5479	-2.5160	-1.5449	-2.5433
	(0.7852)	(1.1767)	(0.8817)	(1.4560)	(1.2115)	(1.7174)	(1.2106)	(1.7174)	(1.2106)	(1.7174)	(1.2120)	(1.7203)
FDI_NET	0.0863	-0.1413	0.2427	0.2366	-0.5058	-0.4595	-0.5057	-0.4595	-0.5058	-0.4595	-0.5062	-0.4650
	(0.2545)	(0.2966)	(0.3890)	(0.3883)	(0.4011)	(0.3419)	(0.4006)	(0.3419)	(0.4006)	(0.3419)	(0.4010)	(0.3426)
TRADE	0.0041	-1.0862	1.7185*	-0.7539	-1.1260	-3.5523*	-1.1158	-3.5523*	-1.1151	-3.5517*	-1.1170	-3.6019*
	(0.6521)	(1.1967)	(0.9040)	(1.2361)	(0.9367)	(1.9184)	(0.9359)	(1.9184)	(0.9360)	(1.9184)	(0.9340)	(1.9241)
INFLATION	0.1322	0.0954	0.1883	0.3913	-0.1580	0.1745	-0.1575	0.1745	-0.1576	0.1743	-0.1577	0.1753

	(0.2035)	(0.2972)	(0.3918)	(0.3464)	(0.3201)	(0.2866)	(0.3199)	(0.2866)	(0.3198)	(0.2866)	(0.3200)	(0.2863)
DPS			0.0000	0.0000								
			(0.0000)	(0.0000)								
SAPF					0.0000		0.0000		0.0000		0.0000	
					(0.0000)		(0.0000)		(0.0000)		(0.0000)	
BDR_NEGATIVE x DPS							-0.0019	-0.0078				
							(0.0366)	(0.0306)				
BDR_NEGATIVE x DPS x CPU									0.0001	-0.0020		
									(0.0074)	(0.0064)		
BDR_NEGATIVE x DPS x CPU x FL-CCE											-2.6065	8.2903**
											(11.6543)	(3.4346)
Constant	6.0558	10.8641	-29.6030	-42.1738	116.0675*	127.4874	116.4864*	127.4874	116.5262*	127.4736	116.3626*	128.7739
	(46.1471)	(53.0774)	(53.6213)	(72.9598)	(69.5162)	(80.3449)	(69.4653)	(80.3449)	(69.4663)	(80.3466)	(69.5411)	(80.4638)
Observations	4,699	4,892	2,266	2,431	2,711	1,463	2,711	1,463	2,711	1,463	2,711	1,463
R-squared	0.0988	0.0836	0.1437	0.0803	0.1439	0.1192	0.1438	0.1192	0.1438	0.1192	0.1438	0.1193
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 14: Robustness checks

VARIABLES	(1) TA_ETR Full sample	(2) TA_ETR Full sample	(3) TA_ETR Firms located in DPS	(4) TA_ETR Firms located in Non-DPS	(5) TA_ETR Low SL-GHG Exposure	(6) TA_ETR High SL-GHG Exposure	(7) TA_ETR Emitter	(8) TA_ETR Non-emitter	(9) TA_ETR Low corporate leverage	(10) TA_ETR High corporate leverage	(11) TA_ETR Low corporate liquidity	(12) TA_ETR High corporate liquidity
US_EPU	-0.0030		0.0309	-0.0413	-0.0403	0.0237	-0.0682	-0.0438	0.0139	-0.0288	-0.0030	
	(0.0417)		(0.0547)	(0.0625)	(0.0589)	(0.0601)	(0.1010)	(0.0426)	(0.0650)	(0.0509)	(0.0417)	
BDR_NEGATIVE	0.0276**	0.0276**	0.0347**	0.0191	-0.0080	0.0456***	0.0281**	0.0421***	0.0324**	-0.0280	0.0276**	0.0276**
	(0.0133)	(0.0133)	(0.0148)	(0.0346)	(0.0204)	(0.0149)	(0.0136)	(0.0136)	(0.0140)	(0.0210)	(0.0133)	(0.0133)
DPS	0.3495***	0.3495***			0.5193***	0.0560*	0.2434**	0.0311	0.2901**	-0.0296	0.3495***	0.3495***
	(0.1258)	(0.1258)			(0.1174)	(0.0310)	(0.1201)	(0.0538)	(0.1386)	(0.0663)	(0.1258)	(0.1258)
SAPF	-0.0119	-0.0119	-0.0045	-0.0086	-0.0004	-0.0196	-0.0355	-0.0004	-0.0186	0.0185	-0.0119	-0.0119
	(0.0154)	(0.0154)	(0.0222)	(0.0251)	(0.0225)	(0.0233)	(0.0243)	(0.0197)	(0.0229)	(0.0226)	(0.0154)	(0.0154)
FL-CCE	-2.5029	-2.5034	0.8724	-6.9683	-2.2852	-1.2963	3.0854	-7.9480*	-5.9702	-1.6908	-2.5029	-2.5034
	(3.2802)	(3.2805)	(4.6794)	(4.8070)	(4.6000)	(5.3818)	(4.2044)	(4.3040)	(5.4295)	(4.3964)	(3.2802)	(3.2805)
EMITTER	-0.0121	-0.0121	0.0464	-0.0387	-0.0111	-0.0096		-0.0076	-0.0267	0.0069	-0.0121	-0.0121
	(0.0216)	(0.0216)	(0.0505)	(0.0284)	(0.0317)	(0.0322)		(0.0350)	(0.0290)	(0.0384)	(0.0216)	(0.0216)
SL-GHG	-0.7263	-0.7152	-0.7320	-0.8082	-1.3630	-0.5474	-1.2107	-0.2271	-2.5706**	2.0380	-0.7263	-0.7152
	(0.8937)	(0.8925)	(1.4610)	(1.0337)	(1.0381)	(1.4309)	(1.3919)	(1.4917)	(1.1632)	(1.4871)	(0.8937)	(0.8925)
US_CPU	-0.0176	-0.0172	-0.0471	0.0046	-0.0671	0.0122	-0.0184	-0.0404	-0.0767	0.0451	-0.0176	-0.0172
	(0.0550)	(0.0557)	(0.0827)	(0.0746)	(0.0780)	(0.0784)	(0.0651)	(0.0863)	(0.0749)	(0.0862)	(0.0550)	(0.0557)
SIZE	-0.0046	-0.0046	-0.0180***	0.0024	-0.0041	-0.0047	0.0034	-0.0180***	0.0017	-0.0167***	-0.0046	-0.0046
	(0.0041)	(0.0041)	(0.0068)	(0.0056)	(0.0058)	(0.0066)	(0.0068)	(0.0057)	(0.0053)	(0.0064)	(0.0041)	(0.0041)
R&D	0.0722	0.0722	0.1412	-0.0487	0.1112	0.0963	0.9608**	0.1332	0.4684	0.0822	0.0722	0.0722
	(0.0850)	(0.0849)	(0.1242)	(0.1217)	(0.1170)	(0.1227)	(0.4402)	(0.1102)	(0.3408)	(0.0910)	(0.0850)	(0.0849)
CAPX	-0.3313**	-0.3313**	-0.0942	-0.5701***	-0.2085	-0.4137**	-0.5663***	-0.3277*	-0.2284	-0.3309	-0.3313**	-0.3313**
	(0.1344)	(0.1344)	(0.1813)	(0.2070)	(0.1868)	(0.1994)	(0.1809)	(0.1832)	(0.1698)	(0.2092)	(0.1344)	(0.1344)
ROA	-0.2438***	-0.2438***	-0.1706***	-0.3280***	-0.1651**	-0.3011***	-0.2871***	-0.2563***	-0.6297***	-0.1577***	-0.2438***	-0.2438***
	(0.0551)	(0.0551)	(0.0609)	(0.0638)	(0.0725)	(0.0547)	(0.0997)	(0.0527)	(0.1255)	(0.0511)	(0.0551)	(0.0551)
TANG	0.0484**	0.0484**	-0.0027	0.1128***	0.0670**	0.0432	0.0399	0.1094***	0.0151	0.0889**	0.0484**	0.0484**
	(0.0235)	(0.0235)	(0.0381)	(0.0310)	(0.0326)	(0.0363)	(0.0350)	(0.0352)	(0.0291)	(0.0428)	(0.0235)	(0.0235)
CASH	0.0740**	0.0740**	0.0807	0.0620	0.0783	0.0776	-0.0300	0.0816*	0.0872	0.0982**	0.0740**	0.0740**
	(0.0371)	(0.0371)	(0.0591)	(0.0480)	(0.0501)	(0.0584)	(0.0934)	(0.0457)	(0.1223)	(0.0493)	(0.0371)	(0.0371)
PAYOUT	-0.3669***	-0.3668***	-0.2119*	-0.4118***	-0.4109***	-0.2575**	-0.3770***	-0.3474***	-0.2868***	-0.2832***	-0.3669***	-0.3668***
	(0.0677)	(0.0678)	(0.1177)	(0.0800)	(0.0830)	(0.1127)	(0.1271)	(0.0941)	(0.0961)	(0.0917)	(0.0677)	(0.0678)
OEX	-0.0068	-0.0068	-0.0301*	0.0096	-0.0172	0.0011	0.0008	-0.0014	0.0030	-0.0054	-0.0068	-0.0068
	(0.0108)	(0.0108)	(0.0168)	(0.0144)	(0.0156)	(0.0171)	(0.0166)	(0.0168)	(0.0118)	(0.0216)	(0.0108)	(0.0108)
GDP	-0.0618	-0.0555	-0.1465	0.1125	0.4402	-0.5613	-0.3212	0.1805	-0.5639	0.4761	-0.0618	-0.0555
	(0.4951)	(0.4948)	(0.7953)	(0.5661)	(0.5612)	(0.7848)	(0.7412)	(0.8313)	(0.5875)	(0.9184)	(0.4951)	(0.4948)
FDI_NET	-0.0497	-0.0506	-0.0846	-0.0429	0.1123	-0.2797	-0.2522	0.2122	-0.3955**	0.4341*	-0.0497	-0.0506
	(0.1437)	(0.1438)	(0.2218)	(0.1870)	(0.1832)	(0.2244)	(0.2472)	(0.2362)	(0.1859)	(0.2355)	(0.1437)	(0.1438)
TRADE	-0.6495	-0.6584	-1.1985	-0.1757	-0.3470	-1.0308	-0.5434	-0.9559	-1.2413**	-0.1950	-0.6495	-0.6584

	(0.4692)	(0.4892)	(0.7419)	(0.5121)	(0.5039)	(0.7270)	(0.7331)	(0.8000)	(0.5498)	(0.9350)	(0.4692)	(0.4892)
INFLATION	0.1186	0.1169	0.0994	0.1150	0.2229	-0.0129	-0.0835	0.4505**	-0.1631	0.5538**	0.1186	0.1169
	(0.1258)	(0.1226)	(0.1971)	(0.1481)	(0.1484)	(0.1942)	(0.2024)	(0.2061)	(0.1473)	(0.2379)	(0.1258)	(0.1226)
US_EPU_NEWS		-0.0046										-0.0046
		(0.0496)										(0.0496)
Constant	15.2978	14.9695	19.9443	9.8103	8.9983	29.1367	30.7688	1.3086	62.2899*	-46.9719	15.2978	14.9695
	(26.7082)	(26.5543)	(43.1663)	(33.3220)	(33.0029)	(43.1240)	(45.4423)	(42.9740)	(36.1986)	(39.8495)	(26.7082)	(26.5543)
Observations	16,382	16,382	7,483	8,899	8,332	8,050	5,407	7,906	8,521	7,861	16,382	16,382
R-squared	0.0570	0.0570	0.0685	0.0750	0.0771	0.0705	0.0768	0.0980	0.0753	0.0858	0.0570	0.0570
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SE Clustered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix A1: Variables, descriptions, and data sources

Variable	Description	Data source
	Firm-level Biodiversity Measures	
BDR_NEGATIVE	Firm-level biodiversity risk measure - negative	Stefano Giglio et al. (2023)
BDR_COUNT	Firm-level biodiversity risk measure – count	Stefano Giglio et al. (2023)
BDR-REGULATION	Firm-level biodiversity risk measure – regulation	Stefano Giglio et al. (2023)
	Corporate Tax Avoidance Measures	
TA_ETR	Cash Effective tax rate as the product of Income Taxes Paid [TXPD] divided by Pretax Income [PI] minus Special Items [SPI].]. Consistent to HASAN et al. (2017), the measure is multiplied by -1.	COMPUSTAT & Author's calculation
TA_CETR	Cash Effective tax rate as the product of Income Taxes - Total [TXT] divided by Pretax Income [PI] minus Special Items [SPI]. Consistent to HASAN et al. (2017), the measure is multiplied by -1.	COMPUSTAT & Author's calculation
	Climate Risk Drivers	
DPS	A dummy variable that is set equal to one for firms located in disaster-prone states, otherwise is set equal to zero.	COMPUSTAT & Author's calculation
SAPF	A dummy variable that is set equal to one for firms located in US states with state-led adaptation plans finalized, otherwise is set equal to zero.	COMPUSTAT & Author's calculation
US GHG	The logarithm value of one plus Total greenhouse gas emissions (kt of CO2 equivalent) [EN.ATM.GHGT.KT. CE]	World Bank & Author's calculation
SL-GHG	The logarithm value of one plus state-level greenhouse gas emissions.	U.S. Environmental Protection Agency
SL-GW	State-level global warming measured by temperature anomalies for long-term climate change.	NCEI-NOAA
US CPU	US yearly mean climate policy uncertainty.	Konstantinos Gavriilidis (2021)
FL-CCE	Firm-level climate change exposure [CC_EXPO_EW]	SAUTNER et al. (2023)

EMITTER	A dummy variable that is set equal to one for polluting firms from the top carbon-intensive industries, which are exposed to biodiversity risks. GIC Sectors [GSECTOR] equal to 10, 15, 20.	COMPUSTAT & Author's calculation
	Corporate Fundamentals	
SIZE	The logarithm value of one plus assets total [AT]	COMPUSTAT & Author's calculation
R&D	Firms' Research and Development Expense [XRD] to assets total [AT].	COMPUSTAT & Author's calculation
CAPX	Firms' Capital Expenditures [CAPX] to assets total [AT].	COMPUSTAT & Author's calculation
ROA	Firms' profitability measured by return on assets.	COMPUSTAT & Author's calculation
TANG	Firms' tangibility measured by Property, Plant and Equipment - Total (Gross) [PPEGT] to assets total [AT].	COMPUSTAT & Author's calculation
CASH	Firms' Cash and Short-Term Investments [CHE] to assets total [AT].	COMPUSTAT & Author's calculation
PAYOUT	Firms' gross payout as the product of Dividends Common/Ordinary [DVC] plus shares repurchase [SRP] minus lagged DVC, divided by assets total [AT].	COMPUSTAT & Author's calculation
OEX	Firms' operating expense [XOPR] to assets total [AT].	COMPUSTAT & Author's calculation
LEV	Firms' book leverage as the sum of Long-Term Debt – Total [DLTT] and Debt in Current Liabilities – Total [DLC] to assets total [AT].	COMPUSTAT & Author's calculation
Q	Tobin's Q is the product of a firm's year-end market capitalization and the difference between assets total [AT] and common/ordinary equity [CEQ] to assets total [AT]: Q=(AT-CEQ + PRCC_F × CSHO)/AT. The measure is consistent to Ginglinger and Moreau (2023)	COMPUSTAT & Author's calculation
	Macroeconomic Variables	
GDP	The logarithm value of one plus GDP (constant 2015 US$) [NY.GDP.MKTP.KD]	World Bank & Author's calculation

FDI_NET	The logarithm value of one plus Foreign direct investment, net inflows (% of GDP) [BX.KLT.DINV.WD.GD.ZS]	World Bank & Author's calculation
TRADE	The logarithm value of one plus Trade (% of GDP) [NE.TRD.GNFS.ZS]	World Bank & Author's calculation
INFLATION	The logarithm value of one plus Inflation, GDP deflator (annual %) [NY.GDP.DEFL.KD.ZG]	World Bank & Author's calculation
State-Level Economic Uncertainty and Aggregate Economic Condition Indexes		
US EPU	US yearly mean economic policy uncertainty	Baker et al. (2016) & Author's work
SL-EPU	State-level yearly-mean economic policy uncertainty – composite.	Baker et al. (2022) & Author's work
SL-ECI	State-level yearly-mean aggregate economic conditions.	Baumeister et al. (2024) & Author's work

The study extracts COMPUSTAT Annual File from Wharton Research Data Services using the licensed account h.h.trinh@massey.ac.nz offered by the School of Accountancy and Finance, Massey Business School, Massey University, 4442 New Zealand.

Appendix A2: Descriptive statistics

Variable	Mean	Min	p50	Max	SD
Firm-level Biodiversity Measures					
BDR_NEGATIVE	0.0242	-6.0000	0.0000	8.0000	0.2968
BDR_COUNT	0.0283	0.0000	0.0000	1.0000	0.1659
BDR-REGULATION	0.0183	0.0000	0.0000	1.0000	0.1340
Corporate Tax Avoidance Measures					
TA_ETR	-0.1787	-2.1975	-0.2606	2.8351	0.5193
TA_CETR	-0.1878	-1.7072	-0.1887	1.1858	0.3072
Climate Risk Drivers					
DPS	0.4697	0.0000	0.0000	1.0000	0.4991
SAPF	0.3041	0.0000	0.0000	1.0000	0.4600
US GHG	15.6618	15.5985	15.6440	15.7340	0.0458
SL-GHG	5.2396	2.0386	5.2354	6.7564	0.8681
SL-GW	1.6378	-1.9167	1.5833	4.2500	1.2139
US CPU	4.6234	4.1928	4.6065	5.2627	0.3061
FL-CCE	0.0007	0.0000	0.0003	0.0315	0.0015
EMITTER	0.3167	0.0000	0.0000	1.0000	0.4652
Corporate Fundamentals					
SIZE	7.1509	1.4743	7.0465	10.2088	1.5766
R&D	0.0526	0.0000	0.0080	0.9635	0.1000
CAPX	0.0476	0.0000	0.0313	0.4327	0.0524
ROA	0.0123	-6.6432	0.0461	0.3156	0.1846
TANG	0.4561	0.0000	0.3381	2.2665	0.3781
CASH	0.2101	0.0000	0.1261	0.9598	0.2218
PAYOUT	0.0425	0.0000	0.0155	0.3381	0.0652
OEX	0.9435	0.0592	0.7586	9.1429	0.7344
LEV	0.2278	0.0000	0.1970	3.8920	0.2309
Q	2.3278	0.5370	1.7697	67.3455	1.8469
Macroeconomic Variables					

GDP	30.4620	30.2497	30.4401	30.6336	0.0978
FDI_NET	0.9885	0.7012	0.9958	1.4829	0.1966
TRADE	3.3403	3.1479	3.3480	3.4608	0.0864
INFLATION	1.0271	0.4804	1.0263	1.4196	0.2487
National and State-Level Economic Uncertainty and Aggregate Economic Condition Indexes					
US EPU	4.9489	3.7200	4.9925	5.8172	0.3509
SL-EPU	4.5167	4.0441	4.5390	4.9071	0.3002
SL-ECI	-0.1657	-5.7566	0.1931	2.1850	1.2151

The table reports the final merged data including 20,617 firm-year observations for US listed firms for the period 2001-2019. All the firm-level variables are winsorized at the 1st and 99th percentile for mitigating potential effects of outliers.