Climate Postures*

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Abstract

Climate-induced industrial transformations may cause firms to undergo competitive sorting. Drawing inspiration from Roy (1951) – where the best fishers focus on fishing, and the best hunters focus on hunting, – we define climate postures as the focus of firm climate efforts reflecting value-maximizing sorting. Firms reinforcing their position in the status quo economy focus climate efforts on cost efficiencies; firms finding new competitive advantages focus on transition growth opportunities. To test for climate postures, we create a novel dataset capturing corporations' manual editing of their ESG information as a compendium of snapshots. We posit theories of why managers would edit for better or worse ESG scores, especially in light of not editing being an option. Among theories, the editing signs and predicted market reactions allowing us to identify the existence of climate postures and the effect of societal pressures, controlling for fundamentals of underlying ESG. Our evidence suggests an industry-agnostic effect of value-destroying societal pressures toward improving ESG scores, which is most intensified in mining and minerals. We find little evidence of transition opportunities in Europe and high-environmental policy stringency countries. However, transition opportunity sorting in the US and Canada yields a statistically significant 3% or higher excess two-week return for energy firms and a 2.9% return for industrials firms. Conversely, sorting into status quo climate postures focusing on cost efficiency for industrials and energy firms also yield positive returns in the US and Canada, suggesting active Roy-like sorting. In countries with lower environmental policy stringency, the energy transition opportunities are even more value-creating, but not so for countries with high environmental stringency, thereby suggesting the fiscal versus regulatory policy approaches at work.

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I. Introduction

Climate-prompted transitions are impacting production and value chains across many sectors in the economy. These climate-induced transformations interact with security shocks to supply chains (e.g., pandemic, war) and innovation shocks in technology (e.g. AI, Big Data), implying that companies face vast uncertainties in their understanding of the future vis-a-vis competitive positioning in changing sectors. Perhaps nowhere is this felt more than in the industrial base of the economy, impacting sectors such as energy, mining, basic materials, and industrials.

Despite enormous implications, thus far, financial economists' attentions to the value relevance from climate transition pressures have focused on the cost and risk exposures faced by industrial base firms in their reaction to decarbonization mandates, commitments, and pressures on status quo business lines (e.g., Deng et al., 2022). This literature has produced countering theories and evidence. On the one hand, some recent literature argues that brown firms (those with status quo use of energy and environmental lenses) provide higher expected returns to investors through two channels. Brown firms may have higher exposure to transition risks, which causes investors holding these firms to expect a risk premium (Bolton & Kacperczyk, 2021; Faccini et al., 2023; Giglio et al., 2021; Huij et al., 2021; Li et al., 2023; Sautner et al., 2023b). Alternatively, green preference investors are willing to accept lower returns due to the increased utility they receive from owning such firms (e.g., Pedersen et al., 2021). On the other hand, another strand of literature posits that investors' tastes for sustainability increases demand for their equity, leading to higher prices and a short-term outperformance over brown firms (e.g., Pástor et al., 2021). This strand of literature generally assumes that any short-term outperformance will disappear given a green-brown equilibrium a la Pástor et al. (2021). Notably, both strands of literature define firms as green or brown rather than studying the decisions of firms to choose the green or brown paths.

Less discussed is the impact of climate on the industrial base through the opening up of new opportunities in the decarbonizing economy. A notable exception concerns the role of innovation by incumbents. In particular, Cohen et al. (2023) document that it is brown economy firms who are most responsible for the growth in green patenting, while Bolton et al. (2022) counter, that the increasing green innovation over time is being driven by firms with lower emissions within each sector. Brown firms are active, however – in an important added finding of Bolton et al (2022) – as they are improving the efficiency of their brown activities.

What has thus-far been not recognized is the possibility that a competitive landscape dynamic is happening within industries. If both opportunities and risks exist (as is documented by Sautner et al. (2023) using earnings calls to capture a firm's climate risks and opportunities), it is likely that firms may take different approaches to dealing with the climate transition within their industries; i.e., a sorting as to firms' relative climate postures. By climate posture, we mean the extent to which a firm is reacting to climate pressures by focusing its climate strategy toward being operationally efficient in costs and risks in the status quo economy versus navigating its climate strategy to transition opportunity spaces for future growth.

A recent example would be that of the oil sector. Shell, for example, has been investing considerably in hydrogen and renewables with a climate posture toward transition opportunities, but recently under new leadership included in its language a climate posture towards the status quo economy citing the need to "get more focused [and] … more disciplined" while cutting back on hydrogen and renewables.[2] Shell is not alone among the traditional oil companies to be walking both of these climate posture lines, but it is not just in the energy sector where such strategic decisions are paramount in importance.

Our paper starts with the premise that firms intentionally choose climate postures within their competitive landscape and that a climate posture choice reflects a value relevant decision by the firm. We have in mind the setting of competitive labor decisions of the classic Roy model (1951). In Roy (1951), there is hunting and fishing to be done; the question is whether those best at hunting hunt, and those best at fishing fish. The problem Roy sets out to identify is how to understand signals supporting that realization and the properties of those determinants. In our case, we are interested in the value-relevant competitive positioning of the firm either enacting climate actions to efficiently face costs while remaining in the status quo economy or expanding corporation activities to benefit from transition opportunities, thus enhancing their competitive strategy.

We sketch a very simple Gordon growth model framing of this competitive positioning, where valuation equals discounted cash flows defined as earnings times the payout ratio. In our framing, the optimal competitive sorting for a firm depends on the ability of retaining more earnings (for transition opportunity investment) which results in a higher long term growth rate sufficient to induce a higher valuation.

Our agenda is a simple one: to test for evidence that climate postures are at work in the industrial base sectors, with inference to the importance of such competitive positioning. Yet, a firm's climate posture is a strategic decision, not one that usually shows up transparently in firm documents, and one that starts with and is confounded with the predetermined physical, human, and intangible capital assets of the company. Managers steer competitive advantages in the transition environment, but such steering is difficult to disentangle from fundamentals,

[2] https://www.ft.com/content/37f2f393-4542-43b3-971d-75fe1acbfd97

especially where media pressures cause much nominal discussion of how green firms' actions are (sometimes but not always appropriately called greenwashing).

We test theories of price relevance of climate postures by focusing on the actions of management as signals. If one assumes that all firms start from a pre-climate equilibrium of firms not having a climate posture such that all firms pool in their facing transitions and policy, a sorting into competitive climate postures with comparative advantage positions as well as any change to these positions should be price relevant. Our paper sets out to test this joint hypothesis of climate postures existing and their being price relevant.

We measure management signals using a novel data set we created by capturing intentional, manual changes in the London Stock Exchange Group's Refinitiv ESG data points made by firms, . London Stock Exchange claims that Refinitiv represents the "largest ESG content collection operations in the world".[3] In contrast to other ESG data providers,[4] it explicitly offers firms in its ESG Contributor Tool a mechanism to provide new data or edit existing information manually (i.e., not algorithmically) at no cost. Given Refinitiv's continuous ESG scoring mechanisms, asset managers with algorithmic Application Programming Interface (API) feeds relating Refinitiv's ESG scores to their portfolios will process these changes immediately. We capture nine dataset snapshots taken between September 2020 and January 2021. Just focusing on the most transition relevant sectors (Energy, Industrials and Base Materials, and Mining and Metals) and ESG themes (Climate, Resource Use and Workforce), we identify over four thousand managerial edits, which speak to the magnitude of managerial rewriting of their own ESG data.

The logic of why firm managers would exert effort to monitor and correct (either upwards or downwards) ESG data and thereby aggregated ESG scores is critical in our design. We try to be inclusive of models explaining why managers take such action in one direction or the other (*Edit Better* or *Edit Worse*), always being cognizant that the inaction choice is available to managers.

We posit six models describing signed action with anticipated or confirmatory stock price reactions (or the lack thereof).[5] First, managers might *Edit Better* as costly signaling of transition opportunities; an associated positive stock return would be indicative of this positive updating climate posture.

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[3] https://www.lseg.com/en/data-analytics/sustainable-finance/esg-scores
[4] https://sustainabilitymag.com/top10/top-10-esg-platforms
[5] Please note that we are controlling for the Refinitiv ESG category scoring change over the period in question and thus are not picking up the fundamental and transparent ESG score changes, but rather increments edited by managers.

Second, Managers might also *Edit Better* for agency reasons if compensation contracts are conditioned on ESG data, or they might *Edit Worse* for agency reasons, especially prevalent for incoming CEOs wanting to have a low bar from which to improve. This editing action is unlikely to create positive value relevance.

Third, managers might *Edit Better* if algorithmic ESG portfolio rebalancing brings benefits to the firm, especially in terms of clientele effects. As we lay out in more detail, these agency motives would be expected to be neutral to expected stock changes, based in the literature.

A fourth model is one of societal pressure reactions. Managers might *Edit Better* due to societal or policy pressures causing the need to maintain high marks in ESG scores. If such actions were to induce positive returns, this model collapses to one revealing a climate posture toward transition opportunities. However, such actions might inform the market that the firm is spending resources on reputation, risk management, or adaptation to the climate change setting that are not creating more revenue or growth. In such cases, the market response from *Edit Better* would be negative.

Fifth, managers might *Edit Worse* to mitigate litigation or greenwashing accusations risks, or to reduce risk that a large uncertainty shock could negatively affect confidence in the firm. The alternative is to not edit, hiding any negative news. The act of doing this *Edit Worse*, would thus send a signal that these firms are most likely to be the ones with large uncertainties over costs or other climate disaster shocks and that the cost of the signal in value destruction in the market is lower than the cost of inaction, i.e. not taking *Edit Worse* action. In turn, this selection thus reveals evidence for firms with a climate posture facing the status quo economy with risk mitigation and cost efficiency as the climate activity. The final sixth story of *Edit Worse* is one of signaling of the cost efficiency climate posture. A firm with a higher valuation in the status quo economy may want to reinforce that stance with signals, with an expected positive revaluation.

These six models lead to a matrix where the combination of the sign of the editing and the sign of the return provide ways to untangle any stock reactions to the edit management activities observed by firms. We test the predictions from this joint hypothesis matrix in 2-week returns estimated within the Fama-French five factor model. We limit our study to a set of three "E" and "S" of the overall ESG score categories as particularly relevant to Industrial Base firms and climate postures. These three are Resource Use, Emissions, and Workforce, where workforce has become a critical issue the transition economy needs (Bowen, 2012; Darendeli et al., 2022; Sautner et al., 2023a). Likewise, Resource Use has an explicit description covering both risks and opportunities. Emissions, however, offers lesser opportunities, as it is predominantly a category scoring firms on facets of operations with climate risks (often regulatory) and operational costs.

We define the Industrial Base as firms being in one of the following set of industry sectors – Energy, Industrials and Base Materials, and Mining and Metals, with the oversized role these industries are playing in the transition to a net zero economy, both in the regulatory and transition opportunities realms (Boer et al., 2023; Davis et al., 2018; Sautner et al., 2023b).

Our results begin with two sector-neutral results, both negative. Across all industries, firms that *Edit Better* have a significantly negative return of 0.8%, consistent with a societal pressures interpretation. The market seems to infer that these actions reflect the firm revealing greater costs related to maintaining progress toward targets or policy goals for societal pressure reasons. In addition, for the United States and Canada, *Edit Worse* is associated with a negative abnormal return of -1.1% to -2.3%, consistent with litigation and shock prevention model, where firms chose to endure devaluation now in order to forego larger future revaluations in the event of a negative event shock or information emergence.

Delving into the industrial base, we find compelling evidence for climate postures in both fishers' and hunters' realms. Specifically, we find eight main climate posture findings, identified only when a climate posture interpretation is the only model explaining the joint results of edit and return signs, plus an overarching result of societal pressures. We divide the results by sector as follows.

Energy Sector

1. We find statistically significant and economical strong evidence for optimal strategic positioning for energy companies toward the transition opportunities. Climate transition opportunity signaling in Resource Use edit management results in a 3.6% increase in valuation relative to others in the energy sector and offsetting the negative societal pressures effect. However, this climate posture toward transition opportunities is being rewarded as optimal strategic competitive positioning only in the mid-level and less environmentally stringent countries. These countries include the United States and Canada (mid level), some lower stringency European countries (Ireland, Greece, etc.) plus the BRICS, and Australia. Excluded are many EU and East Asia economies.
2. We also find evidence for optimal competitive positioning in the status quo economy within the energy sector. Energy firms in the United States and Canada that *Edit Worse* in the Resource Use category are rewarded with a 3.7% positive revaluation. This evidence is consistent with the market approving of a climate posture towards the status quo economy. It is worth noting that Not Editing, by contrast, underperforms

statistically significantly by 3.2% in this specification, thereby implying that the market values decisiveness.

3. In countries with a high environmental policy stringency (EPS), we find a very different setting for energy companies. The Emissions ESG category is that which is most focused on compliance and risks/costs mitigation. In these countries, energy sector managers who *Edit Better* face a large 6.5% devaluation, whereas globally those which *Edit Worse* underperform. This result reinforces a societal pressures costs in high EPS countries rather than reward for opportunity-facing climate postures, as in the United States' results.

In sum for the important energy sector, the market has distinct interpretations of climate postures conditional on regulatory strength. In the United States and Canada, for instance, the market rewards climate postures in either direction but penalizes inaction. In high stringency countries, we cannot uncover value-creating climate postures in this sector, potentially because of regulatory environments dominating competitive strategies. Notably, however, we can infer high societal pressure costs.

Industrials and Basic Materials

4. Firms in industrials and basic materials exhibit patterns strongly consistent with climate postures toward transition opportunities, being entirely driven by firms in the United States and Canada, where firms with *Edit Better* actions by managers exhibiting 2.1% higher returns than others in their sector and offsetting societal pressures negative effects.
5. We also find evidence for industrials in US/CA exhibiting positive returns for *Edit Worse*, consistent with being rewarded for climate postures in cost efficiencies in the status quo economy. Again, inaction is penalized in the US/CA context.

Mining and Metals

6. We find that the societal pressures model is even more economically and statistically powerful for firms in mining and metals. When firms *Edit Better*, the market imposes a 2.4% loss on valuation relative to others in the industry and over and above the underlying penalty of 0.8% for all industries. The result is driven by mining and metals firms in the United States and Canada.
7. We find that for mining and metals firms in environmentally stringent countries, *Edit Worse* in the Workforce category results in large positive returns, evidence of a positive

market reaction to firms taking a competitive position in the status quo economy with a climate posture toward efficiently managing climate costs.

8. Finally, for mining and metals firms in lower environmentally stringent countries, we find evidence for climate postures toward the status quo economy via litigation and shock prevention actions, where firms are willing to undergo devaluation in the short-term to avoid possibly larger future devaluations.

Our results shed light on the need for more work to understand competitive landscapes in the transition economy. Our results bring to light evidence for climate postures being priced but are just the tip of the iceberg in understanding of corporate strategies in this period of economic disruptions and transitions. Policy, financing decisions, and even optimal portfolio construction should be affected by optimal mixes of climate posture firms and within-firm actions.

II. Models and Empirical Predictions

Our goal is to test for the existence of climate postures, where we define climate postures as the result of optimal competitive sorting a la the classical Roy model (1951). In Roy, society has two professions, hunting and fishing. Roy addresses the determination of whether workers sort so that the best hunters are hunting and the best fishers, fishing, showing that this determination depends on skill distribution, its correlation in the population, and the availability of tools to use these skills, thus pinning down influences in sorting to the optimal selection.

In our case, we focus on the idea of competitive market optimal sorting in terms of present-day position vis-à-vis the transition economy. We impose Roy's hunters and fishers into two types of firms – firms that value maximize in the status quo economy and firms that value maximize by grabbing market share by seeking opportunities in the transition economy. (In the market, some firms may not have climate postures, and some firms may have both climate postures. This does not affect our agenda.)

II.a. Framing Climate Postures in Gordon Growth Model

A simple framing in a discounted earning (or, equivalently, cash flow) representation of firm valuation may help fix ideas. In the below formulation, a version of the Gordon growth model (Gordon & Shapiro, 1956), a firm's valuation V is the period 1 earnings times the static payout ratio *k*, divided by the difference in the discount rate *r* and the static long term growth rate *g*:

$$V = \frac{earnings_1 \times k}{r - g}.$$

It is perhaps useful to think of $(1 - k)$ as the amount of retained earnings needed to keep the long term growth rate at *g*. Firms for which this representation leads to the highest valuation are, in our climate posture labeling, status quo economy firms.

Imagine that a second set of firms is instead represented as:

$$V^* = \frac{earnings_1 \times k^*}{r - g^*},$$

where $k^* < k,$ and $g^* > g$. These firms must retain a higher portion of earnings, but in doing so, they are able to exhibit a higher long term growth. In practical terms, firms must sort into the path leading to the highest valuation, as:

$$\frac{earnings_1 \times k^*}{r - g^*} > \frac{earnings_1 \times k}{r - g}$$

or

$$\frac{k^*}{k} > \frac{(r - g^*)}{(r - g)}.$$

The percentage decrease in payout of earnings must be more than offset by a percentage increase in the perpetuity factor present valuing the cash flows into the future.

Market participants may not be able to infer the true nature of a firm's status quo economy versus transition opportunities position within the industry. For instance, if a firm makes statements leading to the suggestion that it is a transition opportunity firm. It reduces retained earnings to k^* to fund actions aimed at the transition economy. The firm will want the market to increase its long term growth expectations from status quo level g to g^*. Yet, the market may not believe that the climate posture toward the new economy for this particular firm will lead to higher growth.

Herein lies the problem of inference of the optimal sorting of firms into their competitive best positioning for the future, and how the market reacts on a firm-by-firm basis. A different explanation of the increase in retained earnings might be that the firm is suffering reduced payouts to shareholders because of gross margin declines, including costs of climate adaption. In this scenario, a status quo economy firm may be in a period of reduced operating margins, unable to generation its status quo level of payout. One consequence might be that the market assesses that the firm is sub-optimally investing retained earnings in the new economy, which would be value destroying if the firm had no special growth opportunities.

II.b. Models of ESG Edit Management

Our empirical design uses the active editing of ESG scores to draw out evidence of climate postures. Edit management may happen for a number of reasons. As empiricists, we begin by asking why a manager would actively correct ESG scores, seeking to uproot all predictive patterns and use pattern uniqueness to test for climate postures.

Why would a manager choose actions among the set of not editing scores, edit scores upwards (*Edit Better*), and/or edit scores downward (*Edit Worse*)? We posit six motivation models, which lead to different predictions in dimensions of returns and editing direction.

(1) Signaling of Transition Opportunities: Imagine the sorting of firms into status quo economy and transition opportunities with competitive advantages being at least partially latent to the market. From the simple framework above, firms with high transition growth opportunities would want to signal their higher g^*, which would induce a higher valuation. For credibility, the signaling should be costly (Spence, 1973), as in the case of dedicating staff and effort to monitor and edit ESG scores. This signaling would be most natural to be edits for improvements in scores, *Edit Better,* and to be in ESG score categories where the scores are indicative of firms seeking new green opportunities. Likewise, this edit management model would be most consistent with being in industries where the ESG score description describes the opportunity space for the transition economy. Active management of editing in this costly signaling framing would be associated with a positive stock return, as valuations increase.

(2) Agency Model: A second motivation of *Edit Better* might be one of personal compensation motives. Increasingly, sustainability measures enter the metrics set used by the board for executive compensation. Thus, it may be that *Edit Better* reflects such motive.[6] If such action induces a positive return, this model collapses to being a signal of a climate posture toward the transition opportunities. Thus, in eliminating such covariation, if compensation were the only motive for edit management, we would expect such actions to be neutral vis-à-vis market returns. Managers would likely avoid editing actions if there was a risk that the market would infer the action as indicative of managerial agency weakness, (i.e. with a negative market reaction). However, managerial incentives are multi-year and CEOs turn over. Hence, incoming CEOs may have an incentive to lower their baseline and perform and hence earn more in subsequent years by *Editing Worse* without expecting a costly market reaction. Editing directionality allows us to differentiate between the incumbent and incoming CEO case in the Agency model.

[6] In the next draft, we will provide evidence in executive compensation data to test the outcome of this theory.

(3) Investor ESG Demand: Managers may undertake *Edit Better* actions to induce stock demand that may result from algorithmic portfolio rebalancing on ESG scores. Among other things, higher ESG scores makes them more appealing to ESG-oriented investors, who, due to their reliability, are more favorable shareholders (Bollen, 2007). Evidence suggests that this scenario should result in zero measurable market reaction (Starks (2023), Hartzmark and Sussman (2019), Pastor, Stambaugh, and Taylor (2022)).

(4) Societal Pressures Model: Managers may undertake *Edit Better* with motives either of providing compliance (or targets achievement) information to reduce regulatory or societal pressures or of achieving social objectives. For example, Pinnuck et al. (2021: 2376) find that firms are increasingly under pressure to maintain a higher sustainability standard and editing/revising "increased monotonically with 39% of [corporate social responsibility] reports including one or more line-item [being altered]." There are various possible market reactions to such information, with different interpretations. If *Edit Better* actions relating to societal pressures, compliance, or social objectives were return positive, then the market would be accepting such actions as a signal of a climate posture toward the transition economy. Thus, this model would collapse to the Signaling of Transition Opportunities Model. If *Edit Better* actions were met with negative returns, the market either could be seeing these actions as resulting from pressures that cause firm costs, undesirable for short term valuation, or could be inferring that these actions reflecting forced firm efforts that take the firm toward being a transition opportunity type of climate posture firm, when the firm is in fact in a better competitive position as a status quo firm. In terms of the Gordon framing, the firm might be implementing k^*, with no prospects of realizing g^*.[7]

(5) Litigation and Shock Prevention Model: The first *Edit Worse* model we consider is one of lowering uncertainty around shocks, reputation risks, and litigation costs. The key question here is why would a firm actively engage in ESG score editing, especially in the *Edit Worse* mode, when just "not editing" is a possibility? If a firm has large negative exposure to economic and policy costs coming from climate transitions, it may be that the precision on information (in particular, lower ESG information) matters in removing risks of litigation, greenwashing accusations, or negative media campaigns. The scenario we have in mind is that these costs will be higher ex post than any consequences today in taking the *Edit Worse* action. In this model, *Edit Worse* predicts negative returns, as it reveals a vulnerability or heightened risk. *Edit Worse* also predicts that the firm has a climate posture toward the status quo economy with cost and risk management attention.

[7] If the Edit Better actions are met with no returns, it may be that the costs are immaterial or that there are offsetting effects. Thus, we could make no inference under this model about the climate posture.

(6) Signaling of Being Climate Cost Efficient: In stark contrast to the prior *Edit Worse* model, it may be that firms want to signal their climate posture of trying to manage climate costs as efficiently as possibly but have their competitive positioning in the status quo economy. They may do this by indicating that the firm is acting in a reduced way vis-a-vis environmental and risk management, reinforcing their positioning in the status quo economy. This story has a non-negative market return prediction, with the positive return uniquely revealing a climate posture.

II.c. Empirical Predictions and Sector Differences

Table 1 summarizes the insights from our six models. Depending on the assumed model, we anticipate varying effects on the returns of companies that edit their ESG data and belong to one of the two climate posture groups.

Results on our empirical predictions may (likely) vary by sector. In the empirical sector, we focus on the industrial base of the economy, which we divide into three subsectors – "energy", "mining and metals", and "industrials and basic materials". We also look at all industries' effects. Yet, our focus on the industrial base is because not only is it relatively transparent to understand climate postures, but these are the sectors in which climate postures may matter most for the transition economy of opportunities.

Energy firms, especially traditional fossil fuel firms, provide an easy context for illustrating varying within-sector climate postures. Some, traditionally oil, firms may see their competitive advantage in retaining their role as fossil fuel companies, while working on risks, compliance, and costs for the climate posture. Conversely, other oil companies may seek to rebrand themselves as energy companies, investing in new energy infrastructure and new fuels and therein grabbing market share in the new economy. A third set may be doing both.

Industrials and basic materials include large participants in the transition including chemical industries, manufacturing, and cement. The varying stories here are quite similar to the resulting within-sector dispersion as energy. Take, for instance, cement. Cement firms face pressures to reduce and substitute in their large consumption of electricity. Cement also faces emissions from the organic change in the rock crushing and mixing. Some cement firms might choose their market share strategy, and thus their climate posture, as a provider of new "green cement" compounds, using different materials but also with different product markets. Others may focus on status quo products and markets, thus just spending on new electricity sources, capturing emissions, and the like. Again, a third set might have a climate posture in both sectors.

Mining is somewhat unique in our industrials in that although mining has a key role in the transition, the overlay to E and S scores is largely in the cost and risk management side. Even when mining is being done for transition sectors (e.g., critical minerals for electric vehicles), the ESG scoring largely covers mining in its process risk management rather than investing in new, more environmental, supply chains or operational procedures. Thus, we do not expect to be able to detect any climate postures toward the transition economy within the ESG edits method we use. This does not mean that climate postures toward the decarbonized economy are not a feature of many mining companies; we just lack the mechanism to detect them.

III. Data and Descriptive Statistics

III.a. Edit Management Data

The focus of our work uses our version of the ESG score change dataset explored by Berg et al. (2021). While most rating agencies depend on both public information and questionnaires filled out by the rated firm, Refinitiv is the only rating agency (to our knowledge)[8] that actively encourages firms to correct and update the current and prior years of information leading to ESG ratings via their back-end ESG Contributor Tool (Refinitiv, 2023). Specifically, Refinitiv explicitly invites firms to "*review and edit the historical ESG data that is already available for your company*".[9] While Berg et al. (2021) focus on the changing nature of ESG ratings, we focus on implications of active corporate ESG data editing.

We downloaded the Refinitiv data for the complete universe of rated companies from Refinitiv Workspace nine times over the course of three days in a two-week rhythm starting on the week of September 9, 2020 and ending on the week of January 17, 2021. [10] We identify intensive and extensive edits if there is a change between a download and the previous download. Importantly, our empirics control for the Refinitiv changes in ESG scores, so we are not capturing fundamentals that are revising due to ESG scoring mechanically, but only to edit management. We chose this time period to avoid the methodological change announced by Refinitiv in April of 2020 (Refinitiv, 2020).

Edits can take on two different forms. Intensive edits occur when a firm changes an indicator value for better or worse based on indicator polarity. Extensive edits happen if a firm either adds a value that was previously missing or deletes a value that was previously reported.

[8] https://sustainabilitymag.com/top10/top-10-esg-platforms
[9] https://www.lseg.com/en/data-analytics/sustainable-finance/esg-scores
[10] There was a four-week period between the seventh and eight download due to the Christmas break.

Empirically, we assign *Edits Better* and *Edits Worse* to the intensive margin or extensive margins. These intensive and extensive edits interact immediately with algorithmic coding and API downloads of ESG data from market users, making the timing of ESG changes we observe immediately of market relevance.

We focus on three of Refinitiv's ESG category scores that are of particular interest in measuring climate posture: Resource Use, Emissions, and Workforce, defined as follows.

1) "Resource use category score reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management."

2) "Emission category score measures a company's commitment and effectiveness towards reducing environmental emission in the production and operational processes."

3) "Workforce category score measures a company's effectiveness towards job satisfaction, healthy and safe workplace, maintaining diversity and equal opportunities, and development opportunities for its workforce."

These scores capture, in varying degrees, both the transition opportunity scoring (especially Resource and Workforce, but not Emissions) and the being efficient with cost (all three, but especially Emissions) targets we have in mind with climate postures.

Table 2 provides an overview of the editing observations by sector and category score, covering 4,310 edits across a universe of 9,109 firms. Almost half of the firms in the mining and metals sector edit their data compared to 37, and 39 percent of firms in the industrials and base materials, and energy sectors respectively.

Table 3 presents summary statistics for the editing impact on ESG scorings (i.e., the extent of the changes in the cardinal level of ESG scores) at the sector and category score-level. Refinitiv's category scores range from 0 (worst) to 100 (best). The mean, standard deviation (SD) and range (the unreported difference between the minimum and the maximum) are quite large indicating that there might be some outliers in the category score changes. This finding is supported by the large gap between the minimum and 5% level category score changes and the large gap between the maximum and 95% level category score changes. The median category score changes are highest for the mining and metals sector. While the median category score changes are similar in size for the industrials and base materials sector, the energy and mining and metals sectors demonstrate more variance.

III.b. Market Data

Financial data from Refinitiv Workspace consists of all firms from Refinitiv's ESG rated universe from each of our nine downloads. We start with a total of 10,246 unique firms and remove delisted firms and other firms with static prices inside our dataset for five consecutive days. We focus on log biweekly returns, covering eight two-week periods from September 25, 2020 to January 29, 2021. We download daily Fama-French factors from Kenneth French's data library,[11] to implement the Fama-French (2015) five-factor model of returns. Summary statistics for these variables can be found in Table 4.

The firms in our sample have a higher average 2-week return than the 2-week excess market return, but the returns' standard deviation is also much larger. Overall, we seem to capture a time of market upturn in our sample period given the average excess market return of 2%.

IV. Results

Our results seek to test for evidence of climate posture strategies by considering the signed edit management activity jointly with returns effects. In all models, we include the Fama-French five factors, where the factors included are at the global level. We also have constructed factors at the continent level, with such results, consistent with our findings, will be available in an internet appendix.

Before delving into our main results to test the theories, we first present a full regression specification, Table 5, that displays all of the coefficients from the factors and sector dummies. We later suppress showing all such coefficients for brevity's sake since they do not vary meaningfully from estimation to estimation. In Table 5, the dependent variable is a two-week log return, with global firm data limited by the inclusion in the Refinitiv database. The estimate is pooled OLS, and thus an equal weighted specification. We are interested in firm-level inference; thus we choose equal rather than value weighting. The standard errors displayed are heteroscedasticity robust. This baseline estimation model is used in all further estimations.

We find Fama-French factor coefficients are, as expected, highly significant with the expected sign and magnitude. Any differences, which are slight, from coefficient norms

[11] https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/f-f_5developed.html
We convert daily factor returns to continuous returns and then summed to generate two-week factor returns.

result from the coverage of the Refinitiv sample vis-à-vis the market sample used in the French construction. Yet, the market coefficient, for example, is close to one.

The sector dummy variables reveal an artifact from the period under our analysis. The valuation of energy firms increases across the board by around 2% compared to the baseline sectors, presumably reflecting the oil price performance during our sample period.

Table 6 column 1 is the same estimation as Table 5 but with the Fama-French factor coefficients suppressed. The columns going across Table 6 vary by the definition of the Edit category. Columns 1-4, 5-8, 9-12 and 13-16 present estimation results varying across the three ESG category scores (i.e., what is being edited), with the four blocks being all three ESG categories combined (1-4), the Resource Use category (5-9); the Emissions category (9-12), and the Workforce category (13-16). The odd columns report intensive margin Edits. The even numbered columns report intensive + extensive Edits. (We lack sufficient data to estimate extensive margins solo.) Finally, the columns differentiate in whether the Edit is *Edit Better* or *Edit Worse* as indicated, with a set of four columns covering each set of ESG categories. Note that the observation counts are a consistent 62,849 with Adjusted R-squares of 0.121 across all columns of Table 6. The 62,849 observations are 2-week returns for the universe of firms with an ESG score and price information from our downloads.

We divide the main results discussions into subsections. One important inference that we will draw from the estimations concerns the societal pressure theory, which does not speak to climate postures. We first pull out this result for discussion, as it concerns the edit management coefficients not interacted with an industry sector. Then we study the climate posture results that we can infer by delving into the specific industry effects on the interaction of the edit coefficients with industry, in the presence of the level effect. We make important caveats as to our interpretations of these industry differentials from the level effect where appropriate.

IV.a. Evidence of Societal Pressure

The first row of Table 6 reports the coefficients for the edit variable (varying in the definition of edit as labelled in the column header and footer). We find, in column 1 and 2, that when managers *Edit Better,* stock returns decrease by 1.0% in two-week forward returns. Note that this is above and beyond the fundamental changes in ESG score changes, which are reported in the bottom row under the label *Δ Category Score*.

Looking across the columns, we can see that the result that *Edit Better* precedes a negative stock return is being driven by such *Edit Better* actions in Resource Use, Emissions, and Workforce categories of ESG scores, with the evidence robust in three of the four intensive margin *Edit Better* regressions and across all four intensive and extensive margin *Edit Better* regressions. For ease of interpretation, we color such associations in peach.

Returning to Table 1, we can look to our models for drawing inference. Under the assumption that our models span explanations of edit management, the finding on *Edit Better* with negative stock returns implies that when firms react to societal pressures in reporting to performance on climate compliance or other targets, they are incurring (or will incur) expenses that reduce valuation. Recall that we are looking at edit management, not the fundamentals of changes in ESG scores. Thus, the signal of management focusing on these metrics is informative of the exposure of the firm if it were to choose to ignore edit management, which the firm could easily do. These results do not point to evidence, one way or another, on climate posture actions.

IV.b. Evidence of Climate Postures

The subsequent rows of Table 6 report the coefficient of Edit interacted with one of the industrial base sectors. We interpret the results by industry sector.

Energy

In considering the interaction of edit management with the energy sector across the columns of Table 6, we find evidence consistent with two edit management models. Both of these results are in a model prediction-return outcome cell in Table 1 that leads to an inference on climate posture.

The interaction of the energy sector and *Edit Better* is positive and significant for the all ESG scores category (columns 1 and 2). We color this *Edit Better* and positive return result green. This result is being driven by the result in columns 5 and 6 for the Resource Use category. Under this assumption that the overall role of societal pressure is captured in the *Edit Better* level effect, the green cells provide evidence for climate posture signaling transition opportunities in the energy sector, especially when the signaling takes place with respect to Resource Use scores. Our evidence is consistent with the interpretation that when managers in public corporations in the energy sector edit the Resource Use category score for the better, the market rewards them with an increased valuation of 3.6%. This magnitude more than offsets the societal pressure penalty in the overall effect (the un-interacted Edit coefficient). Thus, at least for some firms in energy, signaling a position in the transition opportunity economy results in a positive re-valuation, reflecting a higher growth expectation in the Gordon growth model framing.

Our second energy result emerges in the Emissions category, which is the ESG category most tied to costs of climate transition as opposed to opportunity-side scoring. We find that firms in the energy sector that *Edit Worse* in the Emissions category experience a devaluation of -2.6% to -2.9%. We color *Edit Worse* and negative returns cells blue. In viewing the predictions models of Table 1, the only model consistent with the blue coloring cells is the litigation and shock prevention.

This finding thus supports the proposition that some energy firms face uncertainties over large shocks. The only reason they act to *Edit Worse* is that the consequences to not editing and waiting for the category score to catch up on its own must be worse. Note that in the Emissions columns 9 to 12, any changes in the category scores are statistically associated with negative returns. Because of the answer to the `why edit at all?' framing we laid out in the models section, the evidence suggests that these firms have a climate posture toward the status quo economy, focusing their climate efforts on facing these large uncertainties.

Thus, in sum, in the energy sector, we find evidence for both climate postures toward transition opportunities and climate postures toward risk management in the status quo economy. It might be that the results reflect a sorting of firms toward one versus the other, or that some firms strategically seek to have strategies over both postures.

Industrials and Basic Materials

The estimates in Table 6 leads to a one-sided inference for climate posture strategies for industrial and base materials sectors. As the table reports in columns 1 and 2, the industrials interaction with *Edit Better* has a positive, significant coefficient. This result is being driven by the *Edit Better* management in the Resource Use and Workforce categories. As before, these results are shaded green.

The interpretation is the same as for the energy sector. Under the assumption that the levels effect of *Edit Better* captures the societal pressures role for all sectors, we find that managers in industrials and base materials firms *Edit Better* to signal having a climate posture of transition opportunities and are rewarded with an increase in valuation of 1.9% (when the edit management is in the Resource Use category, column 6) and 1.5% (when *Edit Better* is in the Workforce category, columns 13 and 14).

Mining and Metals

Our results in the mining and metals sector are quite different. In almost all specifications, the interaction of *Edit Better* and the mining and metals sector results in a statistically and economically significant negative return, over and above the *Edit Better* level negative return effect.

These findings are in line with two postulations, that we cannot disentangle. It may be that the revelation to the market that a mining company has exposure to compliance and targets to such an extent as the managers *Edit Worse* rather than to not edit (waiting for the scoring agency adjustments). In such a case, the devaluation would reflect added social pressures arguments. Alternatively, it may be (a climate posture result) that firms in the mining and metals sector, whose products are key to the transition, face devaluation when managing their ESG data reveals that these firms are exerting efforts (perhaps forced by societal pressures) to become a transition opportunity type of climate posture firm, when the firm given its industry is in fact in a better competitive position as a status quo firm. In terms of the Gordon framing, the firm might be implementing k^*, with no prospects of realizing g^*.

Since we cannot disentangle these stories, we only infer that active participation by managers in the ESG process in the mining sector is indicative of exposures to risk. Such a generalization of the result is intuitive with the nature of the mining industry. We should, however, point out that our empirical design is not well suited to pick up transition opportunities in mining, such as in the critical minerals sector or in green steel. The reason is because the ESG scores we use in our edit management design do not ask questions about transition opportunities that would give "green" credit to expansion in these areas. We leave such uncovering to other authors.

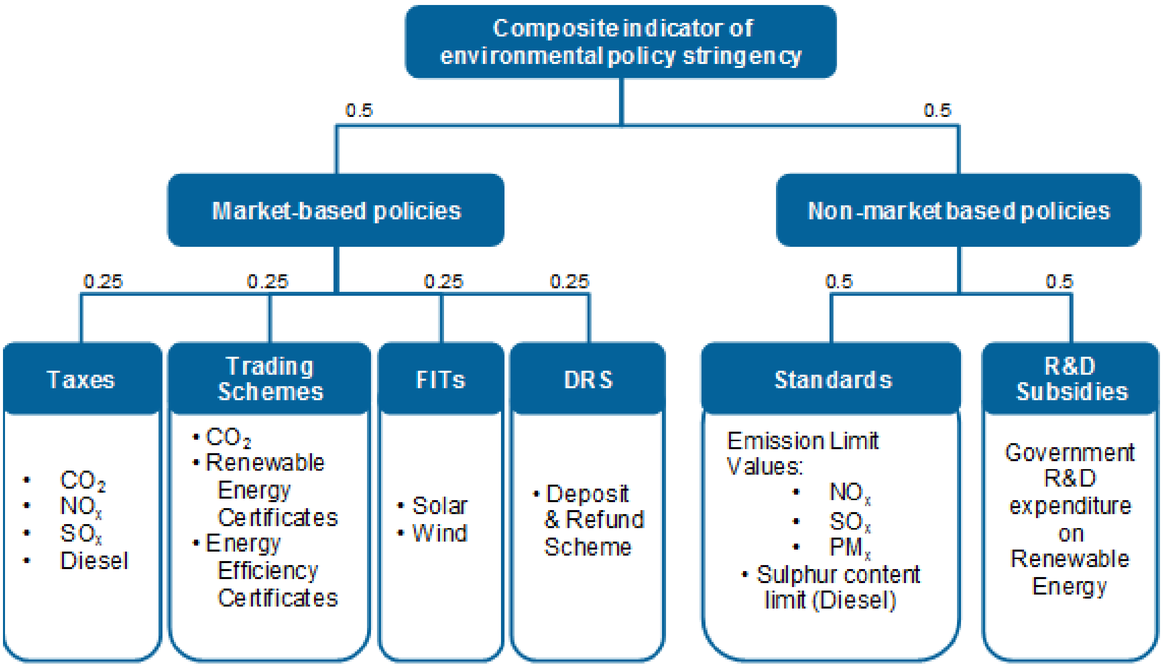
IV.c. Test Refinements via Geography

In our model section, we intentionally sought to cover all models of why managements might choose to edit ESG scores. We sought then to combine such motivations with return predictions to build an empirical prediction table, Table 1, that guides our being able to draw direct inference as to climate postures, rather than to be interpreting associative patterns with consistency language. However, we are careful to caveat our inference in that we cannot know whether we have the universe of models of edit management. Thus, in this section, we do refinements of our results so as to lend credence to our interpretation of climate postures. In particular, we use a geographic approach.

IV.c.1. Environmental Policy Stringency

Our approach uses the stringency of environmental policies as a sorting device to isolate settings where we would expect the climate posture evidence to play out with greater or lesser intensity. Of course, such evidence does not prove our arguments, but lends credibility to the findings. In the process, we also bring out addition geographic findings of interest to corporate and market participants.

We utilize the country-level Environmental Policy Stringency (EPS) measure of the OECD Environmental Policy Stringency Index. The EPS covers 27 OECD and 6 non-OECD economies. We focus on the 2020 data, aligned with our return estimations. It is likely that policies and regulations, both on the risk and the opportunity side, overlap with many of our findings. The structure of the weighting of scores in the creation of the EPS composite index aggregation is depicted below and available from the OECD and described in Botta and Koźluk (2014).[12]



We direct the interested reader to the OECD material references above for more detail, but what is important is that the EPS measures stringency covering topics relevant for corporate strategy decision-making and competitive positioning across our sectors of the industrial base.

We set out to subdivide firms based on country-level EPS. Table 7 presents the EPS scores for 2020. Conveniently, the United States and Canada (US/CA) are right in the middle of the countries in ranking. Thus, we can reflect the unique policy and natural resource setting of the US/CA, as well as the size of these combined markets, we divide the sample countries

[12] https://www.oecd.org/economy/greeneco/how-stringent-are-environmental-policies.htm.
FITs denotes feed-in-tariffs.

into three groups – high stringency EPS, middle stringency EPS: US/CA, and low stringency EPS, noting that some countries are not covered by the index and thus dropped. The high stringency countries are European (many EU countries, UK, Switzerland, Norway) plus east Asia (Japan, South Korea, and China). The low stringency countries include some European countries (Ireland, Greece, etc.) plus the BRICS, and Australia.

IV.c.2. Results by Environmental Stringency

Table 8, Panels A, B, and C report the estimation specification of Table 6, but subsampled by environmental stringency.

Stringent Environmental Policy Countries

Returning to our model predictions laid out in Table 1, it is likely that stringency rules affect the ability of firms to exert competitive positioning via climate postures and may impact heterogeneity in exposure to social pressures in that all large public firms were already exposed to climate regulation rules or forthcoming rules by 2020. In other words, if firms are competitively positioned by regulation toward either or both climate postures, our specification will not uncover such postures. We find this (no result) to be the case, but with two important exceptions. The results for high EPS stringency countries are reported in Table 8, panel A.

First, energy firms in the high EPS group that *Edit Better* in the Emissions category experience an economically large return decline of -6.5%, relative to energy firms without *Edit Better* settings or those who *Edit Better* in other industries. This negative return is consistent with the societal pressures model. The result is statistically significant, but weakly so. Thus, we caveat this result. Nevertheless, it is notable that the only energy inference we make in environmentally stringent European and East Asian countries is concerning the updating of the market to potential costs due to societal pressure updating.

The second result that we find in high EPS countries is one that speaks to model 5, the litigation and shock prevention model of edit management. In this model, managers could choose to stay quiet when the EPS scores appear too favorable to the firm relative to the internal knowledge. However, instead, managers who face a greater exposure to having wrong data in the public domain (because of exposure to litigation or large market shock reactions) if bad information should emerge, choose to *Edit Worse*. Such a revealing action by the manager causes the market price to decline because of the revealed risk. This model is consistent with a climate posture toward risk management in the status quo economy. In our specification for high EPS countries, we find that firms that *Edit Worse* exhibit a 0.8% decline in their stock price. This result leads to the interpretation that firms exposed to policy stringency may exhibit a climate posture towards risk management. This effect is ten-fold larger in economic significance for mining and metals *Edit Worse* actions in workforce categories.

In summary, we find no evidence of climate postures toward transition opportunities in the high EPS countries, and only a little evidence of differentiation on social pressure effects or climate postures toward risk management in the status quo economy.

Mid-Range Stringent Environmental Policy Countries: The United States and Canada

If our empirical design was challenged in its power to identify climate postures in the high stringency countries, the opposite is true for firms in the United States and Canada, reported in panel B of Table 8. First, we find that the social pressure results from Table 6 are driven by results from the US/CA. Firms that *Edit Better* exhibit a negative subsequent return of 1.7%, evidence found in edits to the Resource Use and Workforce categories. This result is enhanced for firms in the mining and metals sector.

Second, we find a wide degree of support for climate postures toward transition opportunities. These results are captured in the green-shaded cells. In particular, when firms *Edit Better* in energy and industrials and basic materials, they exhibit two week abnormal returns of 3.3%-3.7% and 2.1%-2.9%, respectively, which more than offsets the societal pressure negative return for the *Edit Better* level effect. The subsequent columns reveal that this effect is being driven by *Edit Better* management in the Resource Use and Workforce categories. These are the ESG categories most likely to include terms consistent with transition investment opportunities.

One interpretation of these results emanates from the fiscal policy approach the United States has taken toward climate, spurring investment in green technologies with the Inflation Reduction Act, the CHIPs Act, and the Bipartisan Infrastructure Law. In our results, energy, industrials and basic materials companies can create value, consistent with the Gordon growth model updating on k^*, if they have a climate posture to the transition.

We find also find the opposite in the US/CA, evidenced by the brown-colored cells. US/CA energy firms that *Edit Worse* in the Resource Use category exhibit 3.7%-4.3% higher returns. US/CA industrial firms that *Edit Worse* across all categories exhibit 2.3% in abnormal positive returns. From our Table 1 model predictions, these results are only consistent with the model in which firms signal a cost management efficiency and a climate posture toward the status quo economy. Thus, our evidence points to payoffs in both directions in the US/CA for energy and industrials and basic materials firms in climate posturing.

Finally, we turn to the blue shaded results for US/CA, which are not sector specific. *Edit Worse* is associated with a negative abnormal return of -1.1% to -2.3%, consistently across the columns of the aggregated ESG, Resource Use, Emissions and Workforce categories. This negative *Edit Worse* finding speaks to the litigation and shock prevention model, where firms chose to endure devaluation now in order to forego larger future revaluations in the event of a negative event shock or information emergence. In the legal environment of the United States, it is perhaps not surprising to find evidence for litigation risk being important and priced.

Lower Stringency Environmental Policy Countries

Two important and intuitive results emerge from the subsample of countries with low EPS. First, we find that some energy firms in the lower EPS group exhibit a positive-return inducing climate posture toward transition opportunities. The valuation of energy firms in most ESG score categories who *Edit Better* increases, with abnormal returns between 3.4 and 5.9%. These valuation increases alongside the *Edit Better* sign are indicative of a climate posture of opportunities amongst lower EPS energy firms in our model assumptions.

Lastly, mining and metals firms in the lower EPS group face devaluation of -3.5% when editing the aggregated ESG categories to the worse and -5.9% when editing the Workforce category to the worse. Applying our Table 1 identification leads to the inference that the firms that choose to *Edit Worse* (as opposed to not editing) are those facing litigation and shock prevention. In low EPS countries, mining and metals companies face this exposure. Furthermore, these mining companies take the *Edit Worse* action primarily in the Workforce category, where shocks happen that can drastically destroy firm value.

V. Conclusion

We set out to investigate whether firms self-sort into climate transition opportunities and status quo cost reduction groups along the lines of Roy's (1951) hunters and fishers. Given the intra and inter-industrial restructuring required to transition to a net-zero economy, it is important to understand how firms respond to the reordering and how the market values these responses. While the costs and risks borne by industrial firms in response to decarbonization mandates have been center stage for some time, our research highlights the crucial yet overlooked dimension of the opportunities emerging in the decarbonizing economy. We introduce the concept of climate postures as the strategic choices that firms make in response to decarbonization pressures. We define climate posture as the extent to which a firm is reacting to climate pressures by focusing its climate strategy toward costs and risks versus navigating its climate strategy to opportunity spaces for future growth. These climate postures are framed in a simple Gordon growth model where firms either minimize costs from the climate transition or maximize climate opportunities by increasing investments. This simple construct allows us to create a framework explaining why managers could be motivated to edit ESG data – a method to signal climate opportunity maximation or cost minimization.

We examine manual changes in Refinitiv ESG indicators, the values used to create scores, as signals of management actions. We propose six distinct models to interpret these signals: (1) Signaling of Transition Opportunities, (2) Agency, (3) Investor ESG Demand, (4) Societal Pressures, (5) Litigation and Shock Prevention, and (6) Signaling of Being Climate Cost Efficient. These models provide different predictions on the relationship between editing actions and stock returns, allowing us to infer the climate postures of firms.

In the empirical analysis, we focus on three key ESG categories—Resource Use, Emissions, and Workforce—within the Industrial Base sectors, namely "Energy", "Industrials and Base Materials", and "Mining and Metals". Our findings reveal nuanced relationships between editing actions and stock returns, shedding light on the complex interplay between climate postures, market signals, and shareholder value. We show that climate postures exist and are value relevant.

We find support in particular for the (i) *climate transition opportunities,* (ii) *climate cost efficiency* (iii) *societal pressures,* and (iv) *litigation and shock prevention* models of which the last two are of special interest for policy implications. We find evidence supporting the *societal pressures* hypothesis for both firms in the transition opportunities and the status quo economy groups depending on the opportunities/costs in their respective industries. Furthermore, we find evidence supporting our *litigation and shock prevention* hypothesis in the middle and the lower EPS groups. These findings result in two main policy implications for policy makers committed to the Paris Agreement.

First, policies can be a crucial factor in determining the cost benefit analysis between climate posturing towards the climate transition economy or the status quo economy. For instance, the methane related charges included in the Inflation Reduction Act (IRA) fundamentally affected costs of posturing to the status quo economy for energy companies as these openly disclosed in their SEC risk filings referring to a "material and adverse effect"[13] or even litigation.[14] Given that our societal pressures model involves a substantial part of regulatory pressure whereby regulators are responding to society's increasing awareness of

[13] https://www.sec.gov/Archives/edgar/data/1539838/000153983823000022/fang-20221231.htm
[14] https://www.sec.gov/ix?doc=/Archives/edgar/data/1163165/000116316523000011/cop-20230331.htm

climate science, further targeted policies like the IRA appear key in amending the incentives underlying climate posturing in an industry such as mining and metals.

Second, our finding that the *litigation and shock prevention* hypothesis holds in the US and Canada (the middle EPS group) but not in more environmentally stringent countries signals to the latter's policy makers that their litigation laws may not be effective enough to create similar incentives that lead companies to edit sustainability data to a worse value to avoid subsequent legal challenges.

In essence, our research contributes valuable insights into the dynamic relationship between firms' climate posture, market signals, and their impact on shareholder value within the context of a transitioning global economy. As the world moves towards a net-zero economy, understanding the intricate dynamics of climate postures becomes increasingly essential for both firms and investors navigating this complex terrain.

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Table 1 Models of Edit Management

	Edit Better	Edit Worse
Positive Returns	✓ (1) Signaling of Transition Opportunities	✓ (6) Signaling of Being Climate Cost Efficient
No Returns	(2) Agency (3) Investor ESG Demand (4) Societal Pressures	× (2) Agency
Negative Returns	× (4) Societal Pressures	✓ (5) Litigation and Shock Prevention

This table places each model within a grid of the predicted capital market response to the editing of ESG data by the sign of the editing (worse or better). Both the check mark ✓ and the cross mark × indicate a unique story in the cell. For the check marks, however, because each of these unique story checks line up with a signal regarding their climate posture, we can use the grid to test for evidence of climate postures. × indicates a unique story which is not a climate posture. Editing is defined as follows: companies edit and either enhance ("edit better") or reduce ("edit worse") the data. Climate postures differentiate between companies that value maximize in the status quo economy ("costs") and companies that value maximize by grabbing market share through seeking opportunities in the transition economy ("opportunity").

Table 2 Overview of Edits

Panel A

		Better		Worse	
		Intensive	Both	Intensive	Both
Industrials and Base Materials	Emission	97	174	78	112
	Resource Use	83	137	80	102
	Workforce	107	230	117	162
Energy	Emission	37	75	32	42
	Resource Use	26	48	29	33
	Workforce	32	71	38	47
Mining and Metals	Emission	32	64	35	53
	Resource Use	38	64	27	35
	Workforce	36	81	39	48
Edit Type Totals		1,288	2,556	1,308	1,754

Panel B

		Industrials and Base Materials	Energy	Mining and Metals
Sector Totals	Edit	640	206	214
	No edit	1,111	318	224
	Total	1,751	524	438

This table presents a summary of editing at the edit-observation level in panel A and at the firm-level in panel B. Panel A presents the number of editing observations by type, sector and category score. The Edit Type Totals are the total number of edits by edit type. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indicator was better or changed from NA to a value; or was worse or changed from a value to NA. Panel B presents firm observations by sector and if a firm edited. The Sector Totals are the number of firms by sector with and without an edit to their ESG data.

Table 3 Category Score Change

		Mean	Median	SD	Min	5^{th}	95^{th}	Max	N
Industrials and Base Materials	Emission Score	5.9	0.4	18.3	-54.5	-14.2	46.8	92.1	286
	Resource Use Score	5.2	0.3	19.2	-67.5	-10.7	32.8	82.9	239
	Workforce Score	2.8	0.8	14.4	-72.1	-11.6	20.0	78.7	392
Energy	Emission Score	4.2	1.6	8.0	-7.7	-3.9	24.1	34.5	117
	Resource Use Score	3.6	0.4	8.2	-13.8	-6.5	19.1	30.9	81
	Workforce Score	3.5	1.8	7.5	-12.8	-4.1	17.9	30.9	118
Mining and Metals	Emission Score	5.1	1.8	14.8	-18.2	-10.5	44.6	58.6	117
	Resource Use Score	8.6	3.0	15.5	-13.2	-5.9	40.0	69.5	99
	Workforce Score	4.6	2.1	11.4	-32.4	-8.6	26.9	51.7	129

This table presents summary statistics for the category score changes caused by editing. SD stands for standard deviation, Min for minimum, 5^{th} and 95^{th} for the 5^{th} and 95^{th} percentiles, Max for maximum and N for the number of companies with a category score change.

Table 4 Return Summary Statistics

	Mean	Median	SD
All Firms	0.03	0.02	0.10
Industrials and Base Materials	0.03	0.02	0.09
Energy	0.05	0.03	0.16
Mining and Metals	0.03	0.02	0.12
Mkt-Rf	0.02	0.01	0.02
SMB	0.01	0.01	0.01
HML	0.01	0.02	0.03
CMA	0.00	0.00	0.02
RMW	-0.01	-0.01	0.01

This table presents summary statistics for the 2-week returns (n = 62,849) and five Fama-French Factors. All Firms, Industrials and Base Materials, Energy, Mining and Metals are the continuous two-week returns for all the firms in the sample, the firms in the Industrials and Base Materials, energy and mining & metals sectors respectively. Mkt-Rf is the excess market return, SMB is the size factor, HML is the value factor, RMW is the operating profitability factor and CMA is the investment style factor. The 5 Fama-French Factors are the natural logarithm of the developed market factors downloaded from Kenneth French's data library.

Table 5 Return Regression — Resource Use, Emissions and Workforce Scores

Dependent Variable: Two-Week Stock Returns			
Edit	-0.010*** (0.003)	RMW	0.302*** (0.050)
Industrials and Base Materials * Edit	0.015** (0.007)	CMA	-0.200*** (0.072)
Mining and Metals * Edit	-0.024** (0.012)	Energy	0.019*** (0.002)
Energy *Edit	0.027** (0.013)	Industrials and Base Materials	0.001 (0.001)
Mkt-Rf	1.096*** (0.018)	Mining and Metals	0.003 (0.002)
SMB	0.915*** (0.055)	Δ Category Score	-0.01 (0.004)
HML	0.399*** (0.037)	Constant	-0.002*** (0.001)
Observations	62,849	R^2	0.121
Adjusted R^2	0.121	F Statistic	665.534***

This table presents the results of a pooled OLS regression where the dependent variable is a series of continuous 2-week stock returns for firm *f* from week w_{-1} to w_{+1} where w_0 is the week of the respective download *d*. This table presents the full regression specification for the intensive Edit Better type of edit. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indictor was better or changed from NA to a value; or was worse or changed from a value to NA. These editing variables are coded as dummy variables that take the value of one if indicator i was edited for firm f in download d and zero otherwise. We report the interactions between each type of editing and energy firms (Energy * Edit), Base Industrial firms (Industrials and Base Materials * Edit) and mining and metals firms (Mining and Metals * Edit). The unreported base contains all other sectors. The Δ Category Score variable is the absolute difference between the respective category scores from t-1 to t0 for each firm f in download d. It was multiplied by 100 for ease of reading. The Δ Category Score for the combined categories is the simple average of the single categories. The unreported Fama-French 5 Factors are the natural logarithm of the developed market factors downloaded from Kenneth French's data library. Heteroskedasticity robust standard errors are reported in parentheses. Significance is denoted by *p<0.1; **p<0.05 and ***p<0.01 respectively.

Table 6 Return Regressions

	Dependent Variable: Two-Week Stock Returns all countries																			
	Resource Use, Emissions & Workforce Scores					Resource Use Score					Emissions Score					Workforce Score				
	Better		None	Worse		Better		None	Worse		Better		None	Worse		Better		None	Worse	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Edit Coefficient	-0.010*** (0.003)	-0.009*** (0.002)	0.005*** (0.002)	-0.003 (0.003)	-0.003 (0.002)	-0.010** (0.004)	-0.011*** (0.003)	0.007** (0.003)	-0.005 (0.004)	-0.002 (0.004)	-0.004 (0.004)	-0.005* (0.003)	0.005** (0.003)	-0.002 (0.004)	-0.004 (0.003)	-0.009** (0.004)	-0.007** (0.003)	0.004* (0.002)	-0.002 (0.004)	-0.002 (0.003)
Mining and Metals * Edit	-0.024** (0.012)	-0.015 (0.010)	0.013* (0.008)	-0.009 (0.010)	-0.015 (0.010)	-0.035* (0.018)	-0.021 (0.015)	0.019* (0.012)	-0.016 (0.017)	-0.020 (0.016)	-0.024 (0.019)	-0.028* (0.015)	0.015 (0.012)	-0.001 (0.017)	-0.002 (0.014)	-0.032* (0.018)	-0.035*** (0.014)	0.030*** (0.011)	-0.010 (0.015)	-0.022 (0.013)
Industrials/Base Materials * Edit	0.015** (0.007)	0.015*** (0.005)	-0.009** (0.005)	0.004 (0.007)	0.003 (0.006)	0.014 (0.009)	0.019** (0.009)	-0.012* (0.007)	0.002 (0.008)	0.001 (0.007)	0.009 (0.010)	0.011 (0.008)	-0.013* (0.007)	-0.001 (0.009)	0.004 (0.009)	0.016* (0.008)	0.015** (0.007)	-0.008 (0.006)	0.005 (0.009)	-0.001 (0.008)
Energy * Edit	0.027** (0.013)	0.021* (0.011)	-0.008 (0.010)	-0.003 (0.012)	-0.006 (0.011)	0.036** (0.018)	0.029* (0.017)	-0.025* (0.013)	0.021 (0.018)	0.018 (0.017)	0.020 (0.020)	0.013 (0.015)	-0.0004 (0.014)	-0.029** (0.015)	-0.026* (0.016)	0.017 (0.019)	0.006 (0.014)	0.001 (0.011)	-0.003 (0.017)	0.001 (0.015)
Δ Category Score	-0.01 (0.004)	-0.01 (0.004)	-0.0001 (0.00004)	-0.01 (0.004)	-0.01 (0.004)	-0.003 (0.003)	-0.004 (0.003)	-0.00003 (0.00003)	-0.004 (0.003)	-0.004 (0.003)	-0.01** (0.003)	-0.01** (0.003)	-0.0001** (0.00003)	-0.01** (0.003)	-0.01** (0.003)	-0.000 (0.003)	-0.000 (0.003)	-0.00000 (0.00003)	-0.000 (0.003)	-0.000 (0.003)
FF5 Factors & Sector F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edit Defined as	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both
Observations	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849	62,849
Adj. R^2	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121

This table presents the results of pooled OLS regressions where the dependent variable is a series of continuous 2-week stock returns for firm *f* from week w_{-1} to w_{+1} where w_0 is the week of the respective download *d*. The results in column one are the same as the results in Table 5. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indictor was better or changed from NA to a value; or was worse or changed from a value to NA. These editing variables are coded as dummy variables that take the value of one if indicator *i* was edited for firm *f* in download *d* and zero otherwise. We report the interactions between each type of editing and energy firms (Energy * Edit), Base Industrial firms (Industrials and Base Materials * Edit) and mining and metals firms (Mining and Metals * Edit). The unreported base contains all other sectors. The Δ Category Score variable is the absolute difference between the respective category scores from t_{-1} to t_0 for each firm *f* in download *d*. It was multiplied by 100 for ease of reading. The Δ Category Score for the combined categories is the simple average of the single categories. The unreported Fama-French 5 Factors are the natural logarithm of the developed market factors downloaded from Kenneth French's data library. The significant results are color coded: peach (societal pressures) highlights results that have Edit Better and a negative coefficient, green (climate posture opportunity) highlights results that have Edit Better and a positive coefficient, brown (climate posture status quo economy) highlights results that have Edit Worse and a positive coefficient, and blue (litigation and shock prevention) highlights results that have Edit Worse and a significant negative return. Heteroskedasticity robust standard errors are reported in parentheses. Significance is denoted by *p<0.1; **p<0.05 and ***p<0.01 respectively.

Table 7 Environmental Policy Stringency

Country	Index	Country	Index
Higher Group		*Middle Group*	
France	4.89	Canada	3.03
Switzerland	4.50	United States	3.03
Finland	4.11	*Lower Group*	
Norway	3.94	Ireland	3.00
Sweden	3.83	Czechia	2.94
Japan	3.78	Australia	2.92
Denmark	3.72	Greece	2.89
Italy	3.72	Türkiye	2.89
United Kingdom	3.61	India	2.83
Germany	3.47	Hungary	2.81
Netherlands	3.47	Portugal	2.78
Poland	3.47	Slovak Republic	2.50
Belgium	3.44	Spain	2.50
Austria	3.31	Indonesia	1.64
Slovenia	3.22	Russia	1.17
South Korea	3.17	South Africa	0.92
China	3.14	Brazil	0.89

This table presents the countries and their index score from the 2020 OECD Environmental Policy Stringency index.

Table 8 Panel A Higher Environmental Policy Stringency Return Regressions

	Dependent Variable: Two-Week Stock Returns Higher EPS Group																			
	Resource Use, Emissions & Workforce Scores					Resource Use Score					Emissions Score					Workforce Score				
	Better		None	Worse		Better		None	Worse		Better		None	Worse		Better		None	Worse	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Edit Coefficient	0.002	0.001	-0.004	0.008*	0.008**	-0.002	-0.003	-0.002	0.005	0.006	0.008	0.005	-0.006	0.010	0.010	0.006	0.006	-0.007*	0.004	0.006
	(0.005)	(0.004)	(0.003)	(0.004)	(0.004)	(0.007)	(0.006)	(0.005)	(0.008)	(0.007)	(0.007)	(0.006)	(0.005)	(0.007)	(0.006)	(0.008)	(0.005)	(0.004)	(0.005)	(0.005)
Mining and Metals * Edit	0.002	0.010	-0.016	0.027	0.027	0.024	0.029	0.001	-0.052	-0.026	0.027	0.015	-0.018	0.056	0.033	0.051	0.034	-0.048**	0.093***	0.080***
	(0.024)	(0.021)	(0.016)	(0.028)	(0.023)	(0.055)	(0.047)	(0.032)	(0.043)	(0.047)	(0.053)	(0.035)	(0.022)	(0.041)	(0.030)	(0.040)	(0.038)	(0.024)	(0.026)	(0.025)
Industrials/Base Materials * Edit	0.007	0.011	-0.005	0.00001	-0.0004	0.006	0.027	-0.013	0.002	-0.0002	-0.002	0.005	-0.009	-0.015	-0.005	-0.001	0.010	-0.003	0.009	-0.001
	(0.011)	(0.009)	(0.008)	(0.010)	(0.009)	(0.013)	(0.019)	(0.013)	(0.014)	(0.013)	(0.019)	(0.015)	(0.012)	(0.012)	(0.014)	(0.013)	(0.013)	(0.010)	(0.014)	(0.012)
Energy * Edit	-0.011	0.027	-0.015	-0.026	-0.012	-0.003	0.060	-0.017	-0.029	-0.032	-0.051	-0.065*	0.011	-0.035	0.017	-0.027	-0.037	0.011	-0.028	-0.013
	(0.020)	(0.042)	(0.025)	(0.019)	(0.021)	(0.029)	(0.073)	(0.039)	(0.027)	(0.022)	(0.051)	(0.034)	(0.035)	(0.027)	(0.040)	(0.032)	(0.029)	(0.024)	(0.032)	(0.032)
Δ Category Score	-0.002	-0.002	-0.00002	-0.002	-0.002	0.000	0.000	0.00000	0.000	0.000	0.003	0.003	0.00002	0.003	0.003	-0.01	-0.01	-0.0001	-0.01	-0.01
	(0.01)	(0.01)	(0.0001)	(0.01)	(0.01)	(0.005)	(0.01)	(0.0001)	(0.005)	(0.005)	(0.004)	(0.004)	(0.00004)	(0.004)	(0.004)	(0.01)	(0.01)	(0.0001)	(0.01)	(0.01)
FF5 Factors & Sector F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edit Defined as	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both
Observations	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833	20,833
Adj. R^2	0.124	0.125	0.125	0.125	0.125	0.124	0.124	0.124	0.125	0.125	0.124	0.125	0.125	0.124	0.124	0.125	0.125	0.125	0.125	0.125

This table presents the results of pooled OLS regressions where the dependent variable is a series of continuous 2-week stock returns for firm *f* from week w_{-1} to w_{+1} where w_0 is the week of the respective download *d*. The sample for the regressions includes all firms from our universe in countries with an OECD Environmental Policy Stringency Index that is higher than that of the US and CA. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indictor was better or changed from NA to a value; or was worse or changed from a value to NA. These editing variables are coded as dummy variables that take the value of one if indicator *i* was edited for firm *f* in download *d* and zero otherwise. We report the interactions between each type of editing and energy firms (Energy * Edit), Base Industrial firms (Industrials and Base Materials * Edit) and mining and metals firms (Mining and Metals * Edit). The unreported base contains all other sectors. The Δ Category Score variable is the absolute difference between the respective category scores from t_{-1} to t_0 for each firm *f* in download *d*. It was multiplied by 100 for ease of reading. The Δ Category Score for the combined categories is the simple average of the single categories. The unreported Fama-French 5 Factors are the natural logarithm of the developed market factors downloaded from Kenneth French's data library. The significant results are color coded: peach (societal pressures) highlights results that have Edit Better and a negative coefficient, green (climate posture opportunity) highlights results that have Edit Better and a positive coefficient, brown (climate posture status quo economy) highlights results that have Edit Worse and a positive coefficient, and blue (litigation and shock prevention) highlights results that have Edit Worse and a significant negative return. Heteroskedasticity robust standard errors are reported in parentheses. Significance is denoted by *p<0.1; **p<0.05 and ***p<0.01 respectively.

Table 8 Panel B Middle Environmental Policy Stringency Return Regressions

	Dependent Variable: Two-Week Stock Returns Middle EPS Group																			
	Resource Use, Emissions & Workforce Scores					Resource Use Score					Emissions Score					Workforce Score				
	Better		None	Worse		Better		None	Worse		Better		None	Worse		Better		None	Worse	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Edit Coefficient	-0.017*** (0.004)	-0.018*** (0.004)	0.016*** (0.003)	-0.019*** (0.004)	-0.014*** (0.004)	-0.016** (0.006)	-0.017*** (0.006)	0.014*** (0.005)	-0.018*** (0.007)	-0.011* (0.006)	-0.005 (0.006)	-0.005 (0.005)	0.011** (0.004)	-0.022*** (0.006)	-0.023*** (0.005)	-0.021*** (0.007)	-0.020*** (0.004)	0.016*** (0.004)	-0.013** (0.006)	-0.007 (0.007)
Mining and Metals * Edit	-0.035* (0.020)	-0.023 (0.016)	0.017 (0.014)	-0.006 (0.016)	-0.016 (0.016)	-0.045* (0.028)	-0.026 (0.024)	0.028 (0.020)	-0.029 (0.037)	-0.037 (0.039)	-0.031 (0.032)	-0.055** (0.026)	0.030 (0.021)	-0.001 (0.025)	0.002 (0.023)	-0.032 (0.027)	-0.037* (0.020)	0.038** (0.017)	-0.019 (0.023)	-0.030 (0.019)
Industrials/Base Materials * Edit	0.029** (0.012)	0.021*** (0.008)	-0.018** (0.007)	0.023* (0.013)	0.013 (0.010)	0.029* (0.016)	0.029** (0.012)	-0.020** (0.010)	0.014 (0.014)	0.005 (0.012)	0.003 (0.012)	0.010 (0.010)	-0.016* (0.009)	0.007 (0.019)	0.010 (0.016)	0.040** (0.016)	0.017* (0.009)	-0.013 (0.008)	0.021 (0.020)	0.012 (0.015)
Energy * Edit	0.038** (0.018)	0.033** (0.015)	-0.022 (0.014)	0.023 (0.018)	0.008 (0.018)	0.046** (0.023)	0.026 (0.017)	-0.032** (0.016)	0.043* (0.024)	0.037* (0.023)	0.021 (0.025)	0.016 (0.019)	-0.008 (0.018)	-0.008 (0.020)	-0.019 (0.021)	0.025 (0.027)	0.018 (0.018)	-0.010 (0.017)	0.014 (0.027)	0.010 (0.026)
Δ Category Score	-0.01 (0.01)	-0.01 (0.01)	-0.0001 (0.0001)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.0001 (0.0001)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.0001 (0.0001)	-0.01* (0.01)	-0.01* (0.01)	-0.001 (0.01)	-0.001 (0.01)	-0.00001 (0.0001)	-0.001 (0.01)	-0.001 (0.01)
FF5 Factors & Sector F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edit Defined as	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both
Observations	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933	25,933
Adj. R^2	0.144	0.144	0.144	0.144	0.144	0.143	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.143	0.143	0.144	0.144	0.144	0.143	0.143

This table presents the results of pooled OLS regressions where the dependent variable is a series of continuous 2-week stock returns for firm *f* from week w_{-1} to w_{+1} where w_0 is the week of the respective download *d*. The sample for the regressions includes all firms from our universe in countries with an OECD Environmental Policy Stringency Index from the United States and Canada. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indictor was better or changed from NA to a value; or was worse or changed from a value to NA. These editing variables are coded as dummy variables that take the value of one if indicator *i* was edited for firm *f* in download *d* and zero otherwise. We report the interactions between each type of editing and energy firms (Energy * Edit), Base Industrial firms (Industrials and Base Materials * Edit) and mining and metals firms (Mining and Metals * Edit). The unreported base contains all other sectors. The Δ Category Score variable is the absolute difference between the respective category scores from t_{-1} to t_0 for each firm *f* in download *d*. It was multiplied by 100 for ease of reading. The Δ Category Score for the combined categories is the simple average of the single categories. The unreported Fama-French 5 Factors are the natural logarithm of the North American market factors downloaded from Kenneth French's data library. The significant results are color coded: peach (societal pressures) highlights results that have Edit Better and a negative coefficient, green (climate posture opportunity) highlights results that have Edit Better and a positive coefficient, brown (climate posture status quo economy) highlights results that have Edit Worse and a positive coefficient, and blue (litigation and shock prevention) highlights results that have Edit Worse and a significant negative return. Heteroskedasticity robust standard errors are reported in parentheses. Significance is denoted by *p<0.1; **p<0.05 and ***p<0.01 respectively.

Table 8 Panel C Lower Environmental Policy Stringency Return Regressions

	Dependent Variable: Two-Week Stock Returns Lower EPS Group																			
	Resource Use, Emissions & Workforce Scores					Resource Use Score					Emissions Score					Workforce Score				
	Better		Worse		None	Better		Worse		None	Better		Worse		None	Better		Worse		None
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Edit Coefficient	-0.012* (0.007)	-0.010 (0.006)	0.001 (0.005)	0.002 (0.008)	0.003 (0.006)	-0.006 (0.011)	-0.006 (0.008)	0.006 (0.007)	-0.008 (0.011)	-0.006 (0.010)	-0.010 (0.009)	-0.013* (0.008)	0.006 (0.006)	-0.005 (0.010)	-0.002 (0.008)	-0.009 (0.011)	-0.007 (0.008)	0.0003 (0.007)	0.007 (0.011)	0.007 (0.009)
Mining and Metals * Edit	-0.005 (0.016)	0.003 (0.015)	0.020 (0.013)	-0.024 (0.016)	-0.035** (0.015)	-0.029 (0.026)	-0.019 (0.021)	0.006 (0.017)	0.015 (0.021)	0.004 (0.019)	-0.019 (0.029)	-0.009 (0.021)	0.013 (0.018)	-0.018 (0.028)	-0.019 (0.026)	-0.027 (0.028)	-0.017 (0.022)	0.026 (0.017)	-0.046** (0.023)	-0.059*** (0.021)
Industrials and Base Materials * Edit	-0.001 (0.019)	0.004 (0.016)	0.007 (0.013)	-0.012 (0.017)	-0.017 (0.014)	-0.027 (0.026)	-0.037 (0.025)	0.023 (0.017)	-0.008 (0.021)	-0.010 (0.018)	0.012 (0.027)	0.002 (0.020)	-0.003 (0.019)	0.032 (0.035)	0.009 (0.028)	0.007 (0.020)	0.010 (0.016)	0.003 (0.015)	-0.020 (0.022)	-0.027 (0.019)
Energy * Edit	0.056** (0.022)	0.034** (0.015)	-0.005 (0.019)	0.005 (0.030)	-0.003 (0.027)	0.086* (0.049)	0.059* (0.032)	-0.053** (0.024)	0.046 (0.045)	0.043 (0.045)	0.057** (0.028)	0.049* (0.027)	-0.030 (0.024)	0.034 (0.053)	0.028 (0.040)	0.080 (0.058)	0.030 (0.024)	-0.003 (0.026)	-0.003 (0.039)	-0.001 (0.036)
Δ Category Score	0.002 (0.01)	0.002 (0.01)	0.00001 (0.0001)	0.001 (0.01)	0.001 (0.01)	0.001 (0.01)	0.001 (0.01)	0.00001 (0.0001)	0.001 (0.01)	0.001 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.0001 (0.0001)	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.0001 (0.0001)	0.01 (0.01)	0.01 (0.01)
FF5 Factors & Sector F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edit Defined as	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both	Intensive	Both	None	Intensive	Both
Observations	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064	8,064
Adj. R^2	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102

This table presents the results of pooled OLS regressions where the dependent variable is a series of continuous 2-week stock returns for firm *f* from week w_{-1} to w_{+1} where w_0 is the week of the respective download *d*. The sample for the regressions includes all firms from our universe in countries with an OECD Environmental Policy Stringency Index that is lower than that of the US and CA. We identify two types of editing between downloads and categorized them as either intensive or extensive edits. Intensive edits captures if an indicator was either better (based on polarity), or worse (based on polarity), Intensive + Extensive edits (Both) captures if either the indictor was better or changed from NA to a value; or was worse or changed from a value to NA. These editing variables are coded as dummy variables that take the value of one if indicator *i* was edited for firm *f* in download *d* and zero otherwise. We report the interactions between each type of editing and energy firms (Energy * Edit), Base Industrial firms (Industrials and Base Materials * Edit) and mining and metals firms (Mining and Metals * Edit). The unreported base contains all other sectors. The Δ Category Score variable is the absolute difference between the respective category scores from t_{-1} to t_0 for each firm *f* in download *d*. It was multiplied by 100 for ease of reading. The Δ Category Score for the combined categories is the simple average of the single categories. The unreported Fama-French 5 Factors are the natural logarithm of the developed market factors downloaded from Kenneth French's data library. The significant results are color coded: peach (societal pressures) highlights results that have Edit Better and a negative coefficient, green (climate posture opportunity) highlights results that have Edit Better and a positive coefficient, brown (climate posture status quo economy) highlights results that have Edit Worse and a positive coefficient, and blue (litigation and shock prevention) highlights results that have Edit Worse and a significant negative return. Heteroskedasticity robust standard errors are reported in parentheses. Significance is denoted by *p<0.1; **p<0.05 and ***p<0.01 respectively.