

GREEN TILTS

Conference on Energy Finance and the Energy Transition

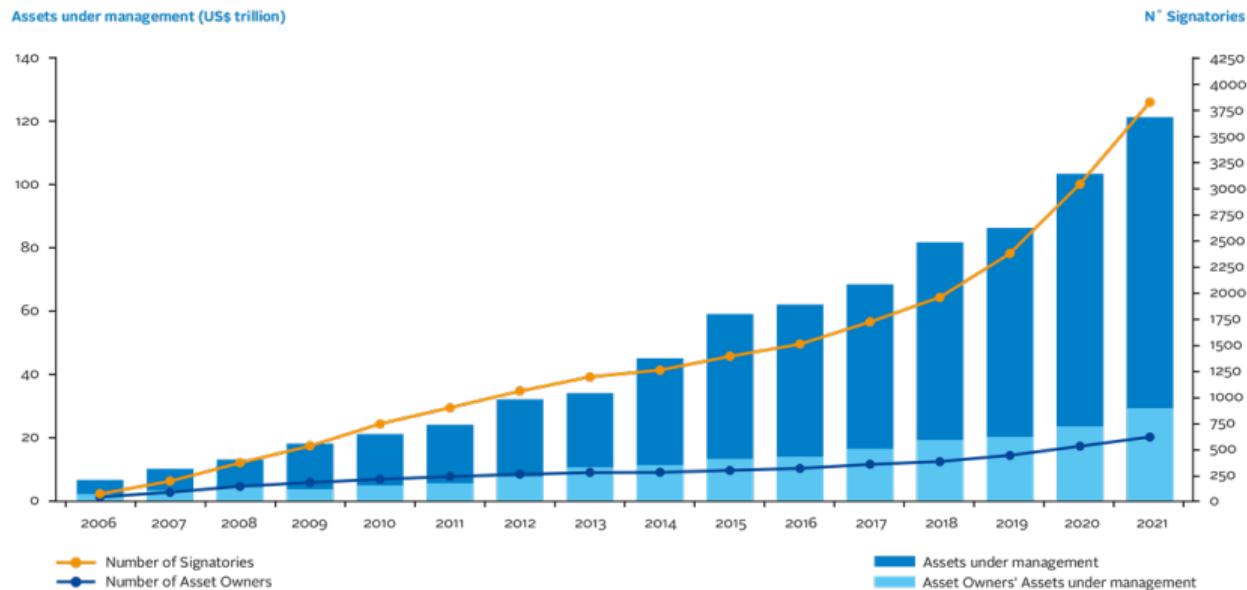
Kunal Sachdeva

May 19th, 2023

Measuring ESG Investing

PRI growth 2006-2021, Assets Under Management and Number of Signatories

Over \$121 Trillion in Assets Under Management and 3,826 signatories.

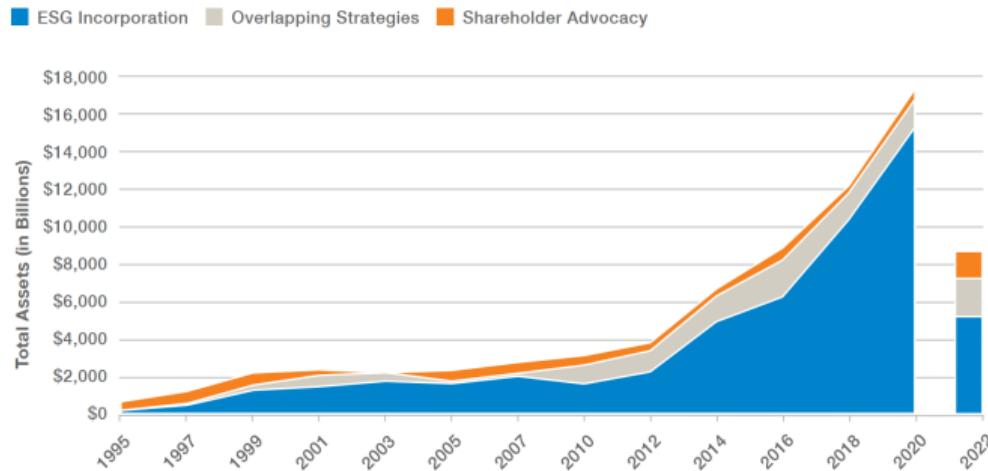


Measuring ESG Investing

Sustainable Investing in the United States, US SIF Foundation

Roughly \$17 Trillion as of 2020 according to US SIF

Sustainable Investing in the United States 1995–2022



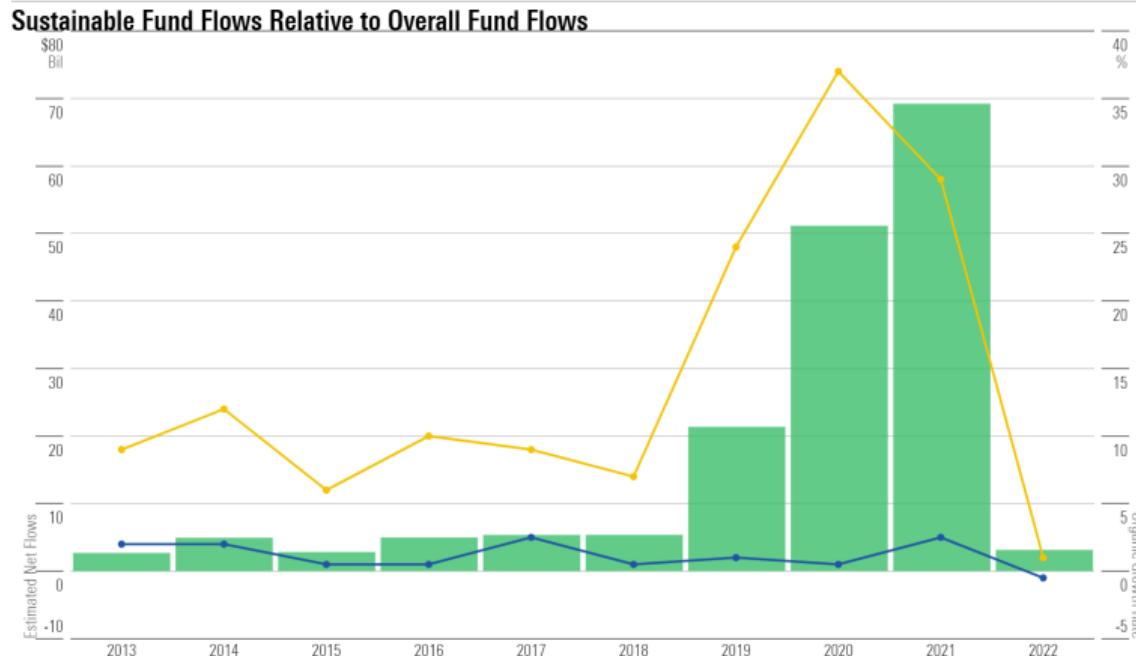
SOURCE: US SIF Foundation

NOTE: Assets under management in 2022 represent US SIF's new modified methodology.

Measuring ESG Investing

Sustainable Fund Flow and Assets, Morningstar: Sustainable Fund U.S. Landscape Report

According to Morningstar, \$286 billion as of 2022

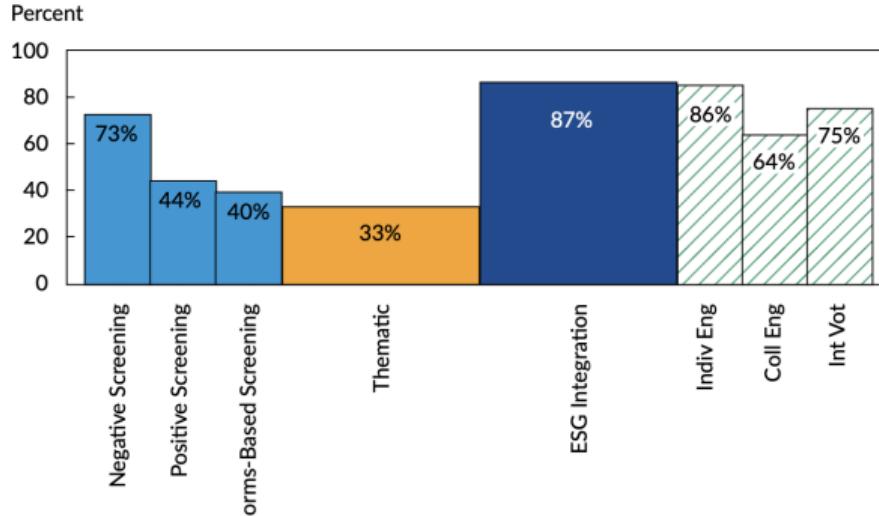


Source: Morningstar Direct. Data as of Dec. 31, 2022. Includes sustainable funds as defined in Sustainable Funds U.S. Landscape Report, February 2023.

Measuring ESG Investing

CFAI: *ESG and Responsible Institutional Investing Round the World*

Sustainable investing comes in many forms, which creates difficulties when measuring.



See: Matos (2023)

Paper Questions

How do we correctly capture the total amount of ESG investing?

The paper asks three related questions:

1. Can we correctly capture the total amount of ESG investing?
2. What are the time-series and cross-sectional patterns of this ESG-related investing?
3. How much do institutions' portfolio choices relate to their characteristics?

Green Tilts – What Does This Paper Do?

Big Picture of This Measure

How can we use institutional holdings data to infer their tilts in portfolios?

1. Compute the difference in conditional expectations for each security for each institution

→ $\Delta_{in} = E[w_{in}|G, C] - E [w_{in}|G_0, C]$.

→ $\Delta_{in} > 0$ suggests that the investor would be shorting the stock absent ESG considerations.

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2. Using Δ_{in} , can measure the Tilt of each institution

- Presents method that controls for both ESG and non-ESG characteristics
- Institutional level tilt → $T_i = \frac{1}{2} \sum_{n=1}^N |\Delta_{in}|$.
- Industry level tilt → $T = \frac{1}{\sum_i A_i} \sum_{n=1}^N A_i T_i$.

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3. Further separates the tilts into green/brown and intensive/extensive tilts

- Extensive measure (which stocks are held), and intensive measure (weights on stocks held).
- Design directional tilt measures that separate “green” investment behavior from “brown”
- Use directional tilts to measure the green minus brown (GMB) tilt for each institution

Summary of Key Results

1. Develop a novel approach to measure ESG-related portfolio tilts

- Extensive- and intensive-margin tilts
- Decomposition of green and brown tilts
- Provide an estimation approach to map methodology to data

2. The industry's ESG-related tilts

- ESG-related tilts have been relatively flat over the past decade
- Scaled by active share, see a large rise along the intensive margin

3. Study which institutes are greener

- Green tilts for E, S, G, and composite have grown, brown tilts have been flat
- Industry's green tilt occurs primarily via the intensive margin
- Non-13F institutions generally have had a negative tilt
- Larger institutions have had larger tilts
- PRI institutes tend to tilt greener after signatory

Perspective on the Paper

Why Does This Paper Matter?

Greenwashing Concerns:

- Academic Considerations
 - Gibson et al. (2022), Kim and Yoon (2023), Liang, Sun and Theo (2022), Dikolli et al. (2022), Li et al. (2023), Michaeley et al. (2023) Lowry et al. (2023), Dumitrescu Javier Gil-Bazo Zhou (2023) ...
- Regulatory Concerns
 - European Union legislation – Sustainable Finance Disclosure Regulation (SFDR)
 - SEC proposed a change to the Fund “Names Rules” – requiring funds using ESG-related names to invest at least 80%

Intuitive and Flexible Framework:

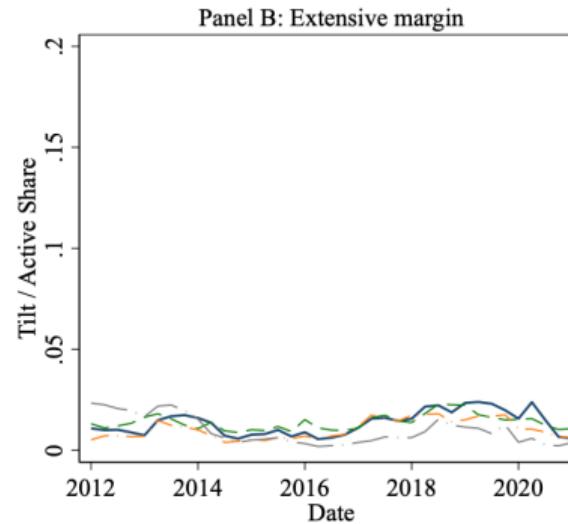
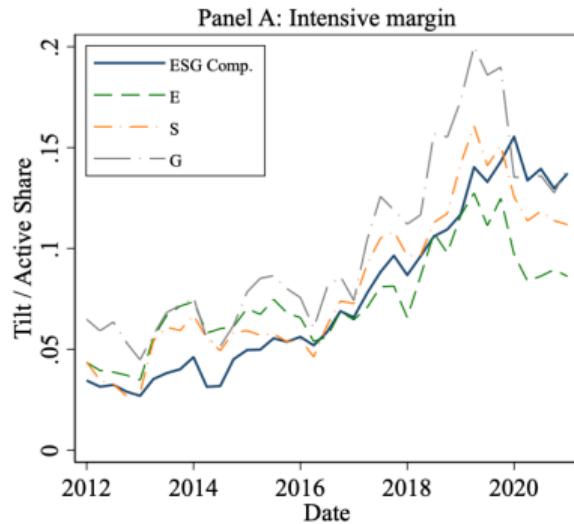
- Provides a novel and flexible decomposition of tilts
 - Doesn't rely on labels, but instead on holding data
 - Accounts for the fact that ESG and non-ESG characteristics can be correlated

>> ***Focus on the measurement of tilts, what it does tell us, and what it doesn't (yet)***

Comment 1 – Industry Versus Fund Level Analysis

Disentangling Intensive Versus Extensive Measure

>> ESG tilts are driven by the intensive margin and not the extensive margin



Comment 1 – Industry Versus Fund Level Analysis

Disentangling Intensive Versus Extensive Measure

What do the intensive and extensive tilt measures capture?

Let's consider two institutions:

- **Institution 1** – $T_i = 3\%$ $T_{int} = 1\%$, and $T_{ext} = 5\%$
- **Institution 2** – $T_i = 3\%$, $T_{int} = 5\%$, and $T_{ext} = 1\%$
- Remember $\rightarrow T_i \leq T_i^{int} + T_i^{ext}$

Q1: What do we conclude when observing the tilts for **Institution 1** and **Institution 2**?

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Let's now consider how institutions achieved these values:

- **Institution 1** – $T_i = 3\%$ $T_{int} = 1\%$, and $T_{ext} = 5\%$
 - **Fund A** – Excluded brown stocks, but didn't overweight green stocks
 - **Aggregate** → Would likely show that the extensive margin tilt increasing

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 - **Aggregate** → Would likely show that the extensive margin tilt increasing
- **Institution 2** – $T_i = 3\%$, $T_{int} = 5\%$, and $T_{ext} = 1\%$
 - **Fund B** – Excluded brown stocks, but didn't overweight green stocks
 - **Fund C** – No change, high weight of green assets, also holds brown stocks
 - **Aggregate** → Would likely show the intensive margin increases, but extensive not changing

Q2: What do we conclude when observing the tilts for **Institution 1** and **Institution 2**?

Comment 1 – Industry Versus Fund Level Analysis

Disentangling Intensive Versus Extensive Measure

Can the paper more cleanly separate the tilts by institutions?

Suggestion 1: Expand the analysis at the fund level

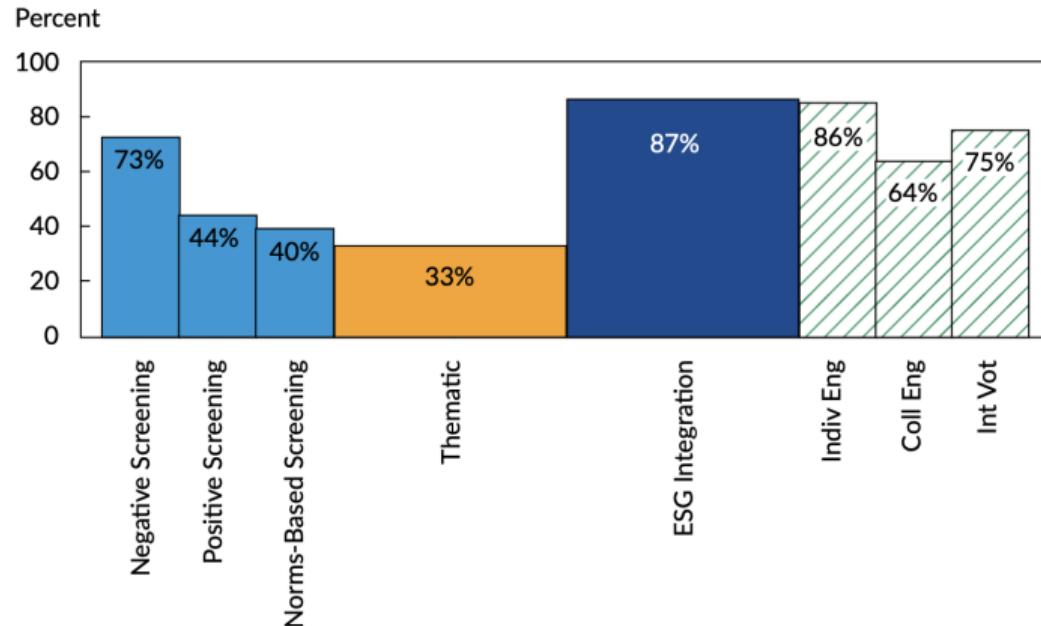
- Fund-level analysis would likely suggest that more firms are being excluded
- These results provide more insight into how 13F are investing capital

Suggestion 2: Subset the analysis to the ESG Funds to understand their contribution

- Likely ESG funds would produce very different measures of intensive/extensive tilts – *this is interesting!*
- It would be interesting to find the set of institutions and the subset of ESG funds that are similar

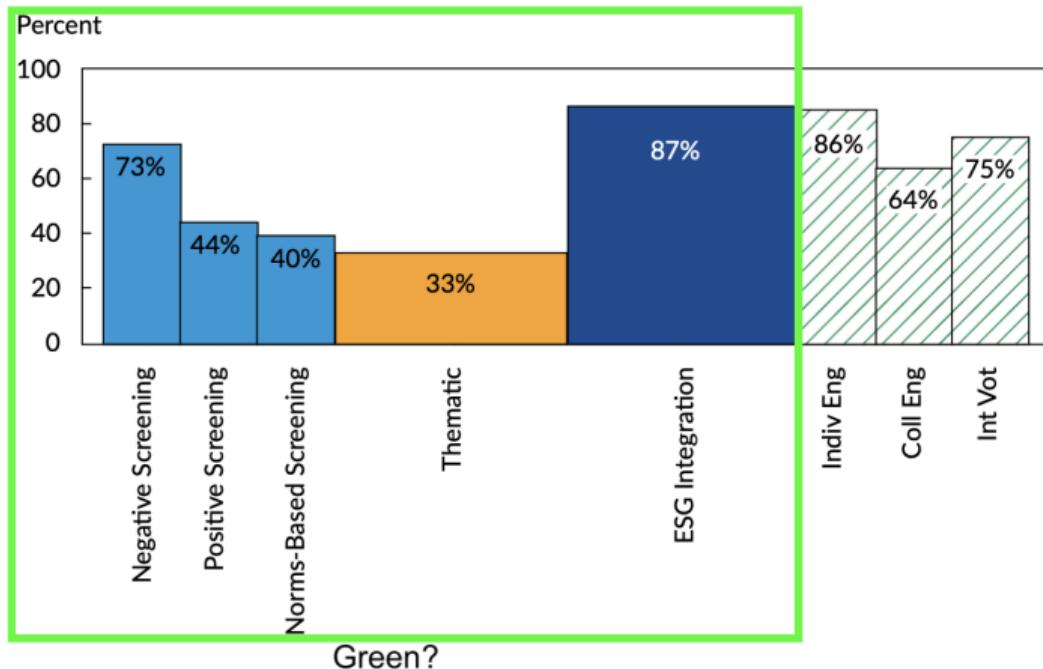
Comment 2 – What do Tilts Measure

Engagement and Voting



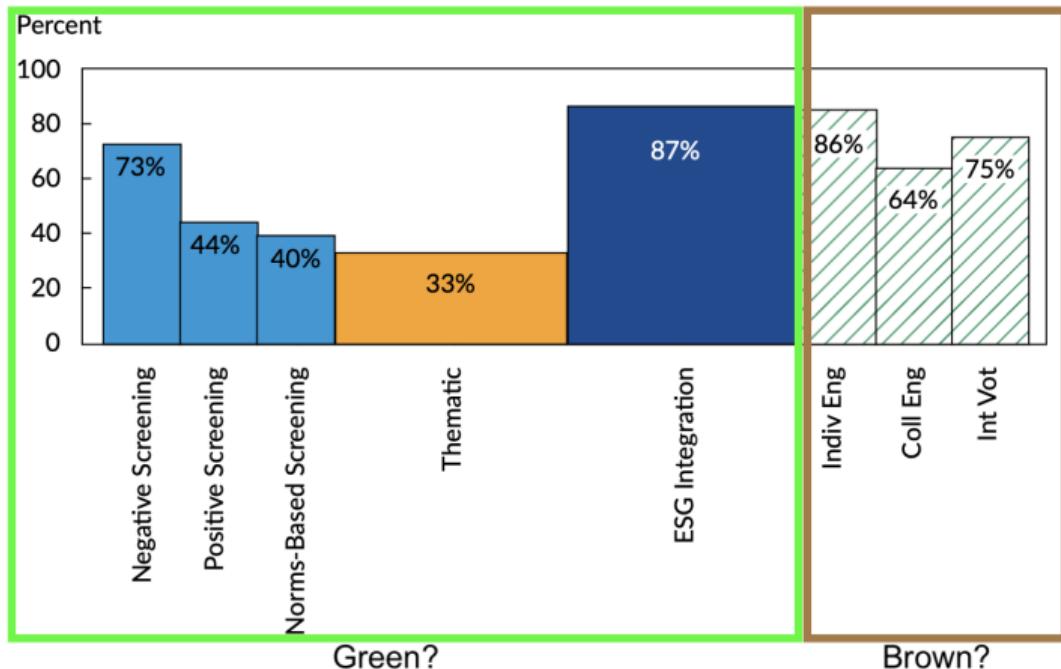
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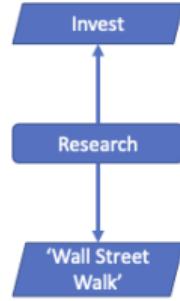
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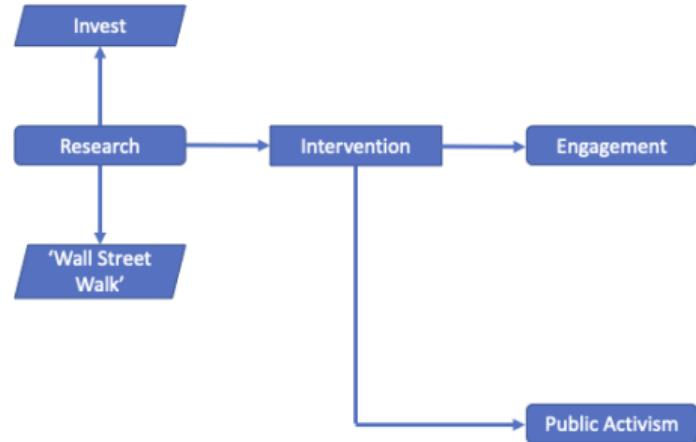
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See: Kirmse (2023)

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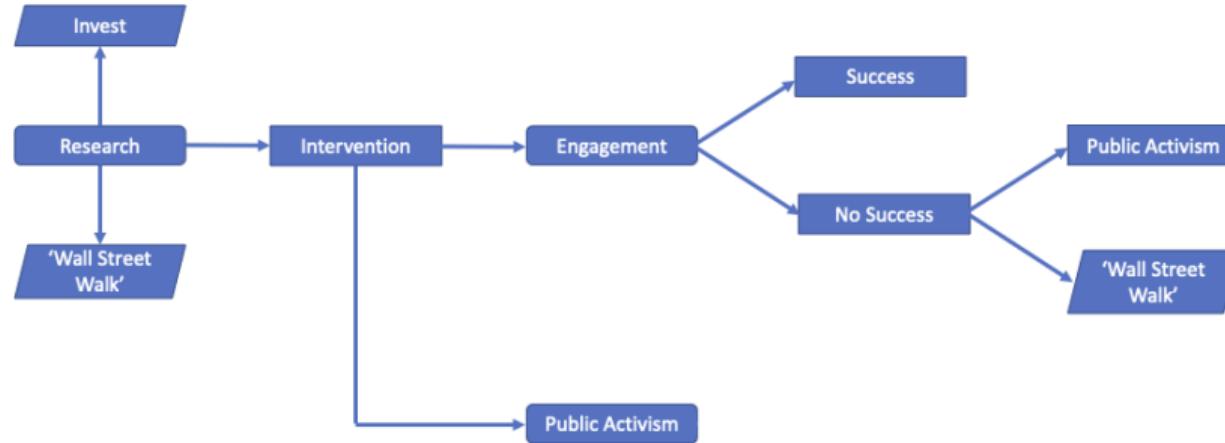
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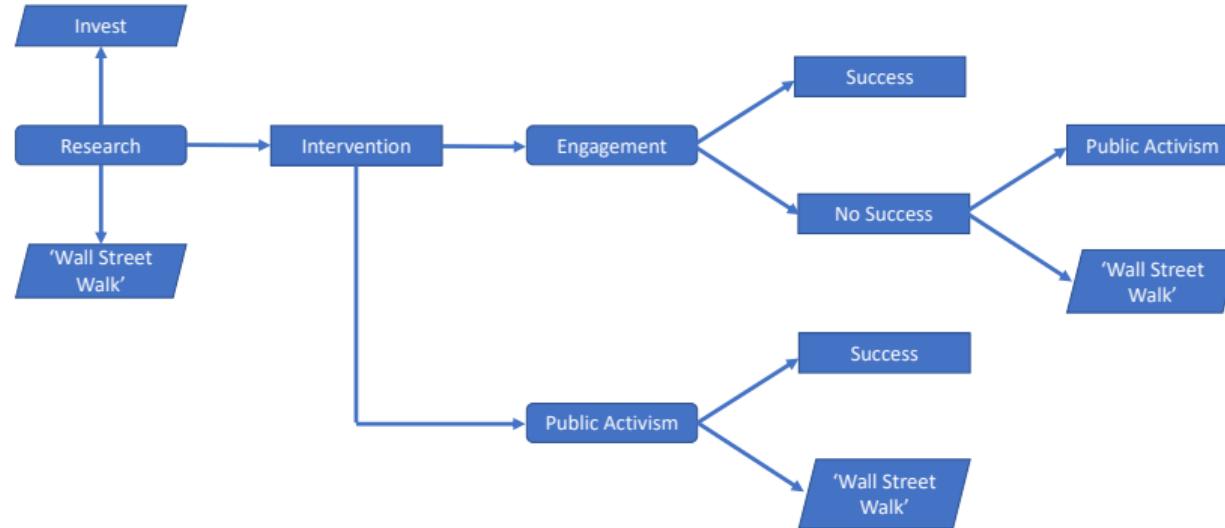
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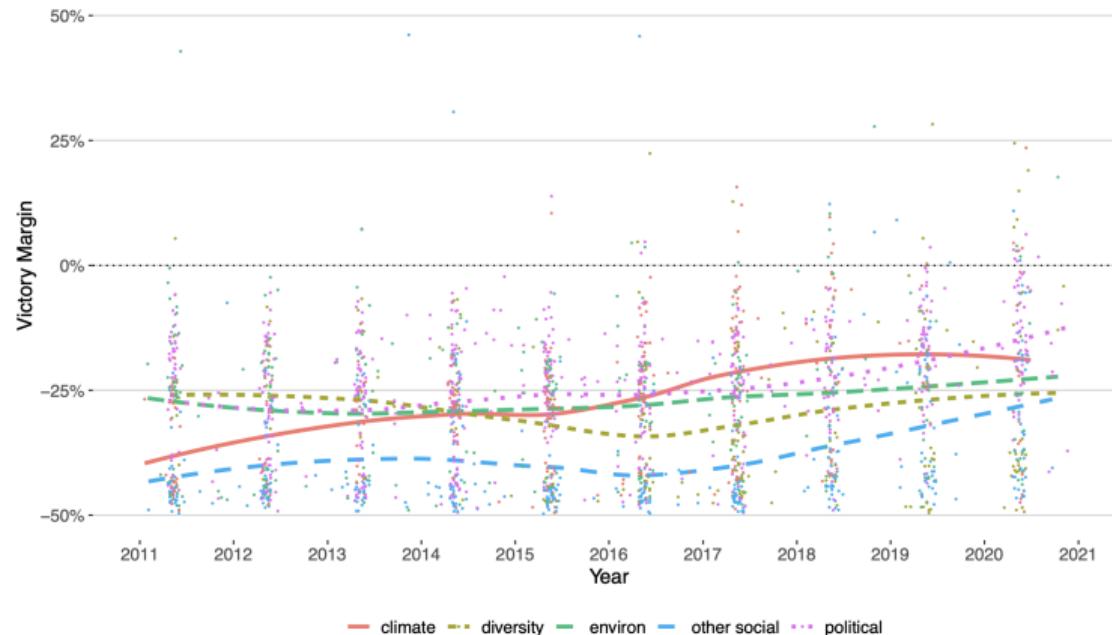


See: Kirmse (2023)

Comment 2 – What do Tilts Measure

Engagement and Voting

Most shareholder votes tend to fail, but there is increasing support



Comment 2 – What do Tilts Measure

Engagement and Voting

"BlackRock's approach to climate-related risk, and the opportunities presented by the energy transition, is based on our fundamental role as a fiduciary to our clients."



Our clients depend on BlackRock to help them achieve their investment goals. These clients include public and private pension plans, governments, insurance companies, endowments, universities, charities and ultimately individual investors, among others. Consistent with BlackRock's fiduciary approach as an asset manager, BlackRock Investment Stewardship's (BIS) purpose is to support companies in which we invest on behalf of our clients in creating long-term value and mitigating potential risks.

BIS serves as an important link between our clients and the companies they invest in – and the risks our clients place in us gives us a greater responsibility to advocate on their behalf. That is why we are interested in hearing from companies about their strategies for navigating the challenges and capturing the opportunities they face. As we are long-term investors on behalf of our clients, the business and governance decisions that companies make will have a direct impact on our clients' investments over time.

As an asset manager, BlackRock's approach to climate risk and opportunities and the global energy transition is based on our fundamental role as a fiduciary to our clients.

As the world works toward a transition to a low-carbon economy, we are interested in hearing from companies our clients are invested in how they are assessing and managing the risks and opportunities arising from the need to adapt their business models and long-term strategies to be less carbon dependent and more climate resilient.

In 2021, we focused our engagement on a climate universe of more than 1,000 carbon-intensive public companies that represent 90% of the global scope 1 and 2 greenhouse gas (GHG) emissions¹ of the companies in which we invest on behalf of our clients. This list is derived from public information and is intended to focus BIS' climate engagement efforts. Many of these companies are leaders in their sectors—they have detailed climate adaptation strategies, rigorous GHG emissions reduction targets, and are working to align their business models with the Paris Agreement's long-term goals. We are continuing to refine this list as we progress in this journey. We look to company leadership to disclose to investors how climate risks and opportunities might impact their business, and how these factors are addressed in the context of a company's business model and sector.

BIS Climate Engagement Focus

- In 2021, we focused our engagement on a climate universe of 1,000 carbon-intensive public companies that represent 90% of the global scope 1 and 2 GHG emissions¹ of the companies in which we invest on behalf of our clients.
- In 2022, we expanded our focus universe to more than 1,000 carbon-intensive public companies that represent 90% of the global scope 1 and 2 GHG emissions² of our clients' aggregate public equity holdings with BlackRock.³
- For 2022, our climate universe continues to encompass more than 1,000 carbon-intensive public companies that represent 90% of the global scope 1 and 2 GHG emissions⁴ of our clients' aggregate public equity holdings with BlackRock.⁵

¹ BlackRock invests in these companies or our clients' behalf.

² Based on MSCI data. This list includes companies that were on the 2020 BIS Climate Nasdaq, in addition to other companies that BlackRock held an equity position in on behalf of our clients as of the end of 2021.

³ The universe includes all public company disclosures and the data table that aggregates an estimate to CO2 equivalent GHG emissions (tCO2e). They include carbon dioxide (CO2) and also include methane (CH4), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

⁴ All companies that have disclosed to date have done so quarterly. For convenience, we convert all disclosure from a single figure into a single figure.

⁵ Securities L.



Source: BlackRock. As of April 2022.

In order to assess companies' strategies to navigate the energy transition, including appropriately managing climate-related risks and opportunities, BIS engages with companies and, where we have authority to do so, votes proxies in the economic interests of our clients.

In this context, we seek to understand companies' plans for how they intend to deliver long-term financial performance through the energy transition.

We look for companies to demonstrate that they have strategies in place that address and are resilient to a range of scenarios, including likely decarbonization pathways well below 2°C, as well as global ambitions to limit temperature rise to 1.5°C. We are better able to assess the long-term performance of our clients' investments when companies define short-, medium, and long-term climate-related targets, explain how these targets align with their business, where applicable for their sector, and disclose how these targets will affect the long-term economic interests of shareholders.

Clear disclosures allow investors to assess how companies are adapting their business models to respond to different transition scenarios. More detail on our view of climate-related risks and opportunities can be found in our commentary, Climate Risk and the Global Energy Transition.

As outlined in BIS' market-specific voting guidelines, when corporate disclosures do not sufficiently enable investors to assess the long-term financial performance of our clients' investments, or when there are significant gaps in disclosure to governance, strategy, and risk management—or companies have not provided scope 1 and 2 emissions disclosures and meaningful short-, medium-, and long-term targets, we are increasingly unlikely to support director(s) we consider responsible for climate risk oversight.

⁴ Based on IED/US SEC warren.buffett.org. The "Global Climate Engagement Standard (GES)"

⁵ BlackRock invests in these companies, medium- and long-term projects for a range of years, such as 0.5, 5, 10, and 20+ years. Our goal is not to set fixed timelines, but to understand how companies consider emissions reduction efforts as they transition toward zero. Consistent with guidance from TCFD, specifying exact timelines across sectors could hinder organizations' consideration of climate-related risks and opportunities specific to their business. We encourage companies to disclose how they define their own timelines and how they align these with long-term strategic goals.

Comment 2 – What do Tilts Measure

Engagement and Voting

Can the paper use or control voting to learn more about how institutes invest?

Suggestion 1: Exclude universal owners or the big three from the sample?

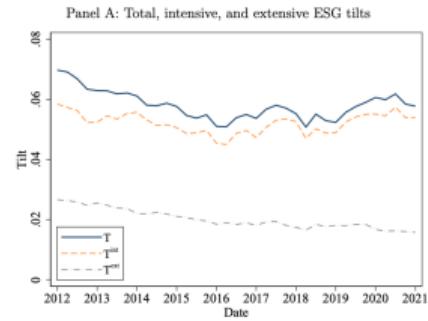
- The results are influenced by the asset managers, who have resources for engagement.
- To the extent they engage 'brown' firms, this would underestimate how 'green' they are.

Suggestion 2: Study if tilts relate to ESG stance on shareholder proposals

- There is significant heterogeneity in voting at the institutional level
- Interesting to see if we can infer preference by holdings in other assets

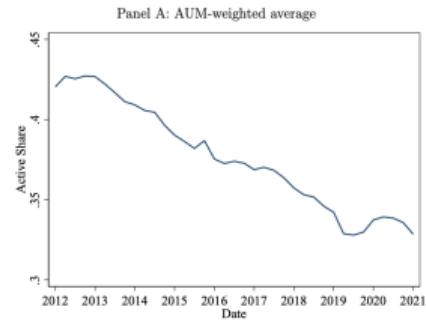
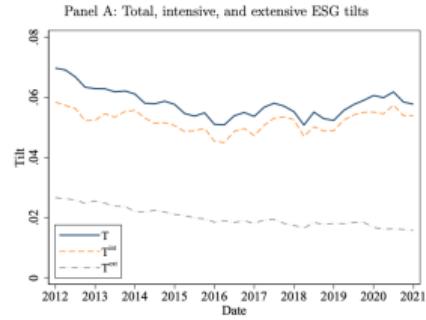
Comment 3 – What is Driving These Trends?

The Role of Active Share and Indexes



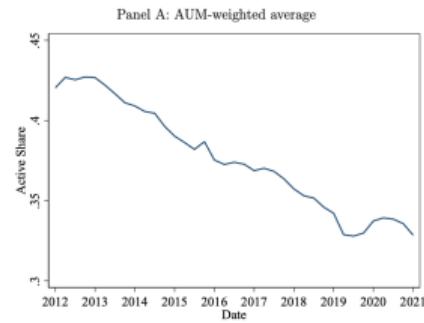
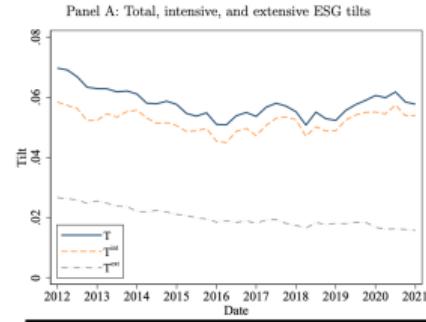
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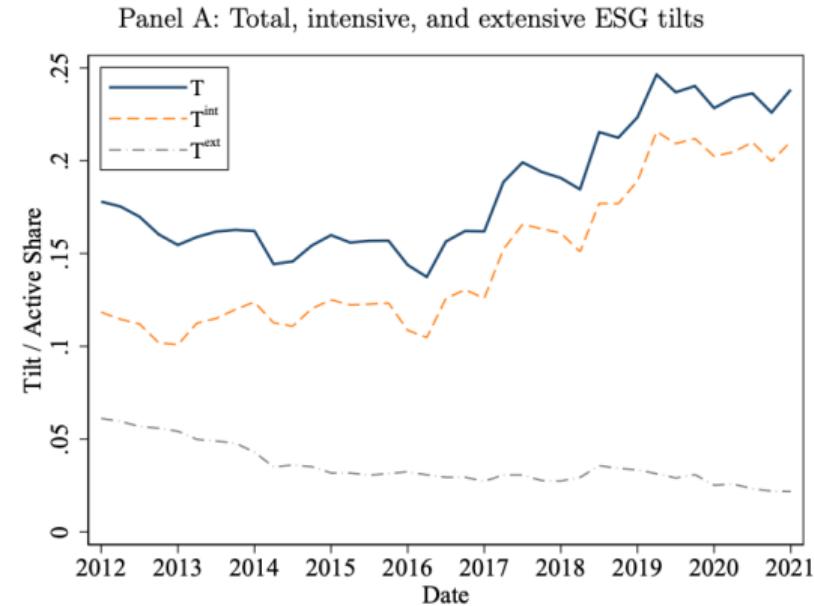
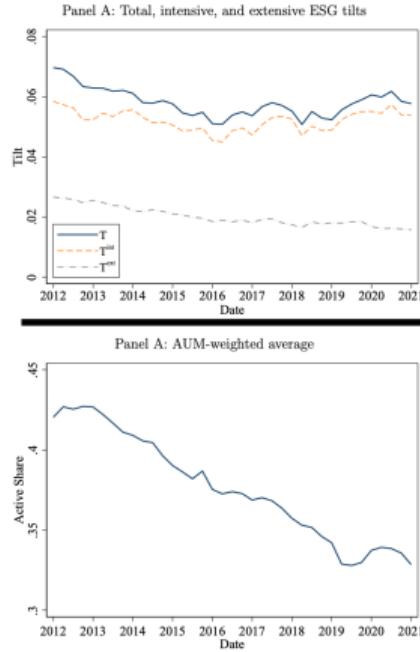
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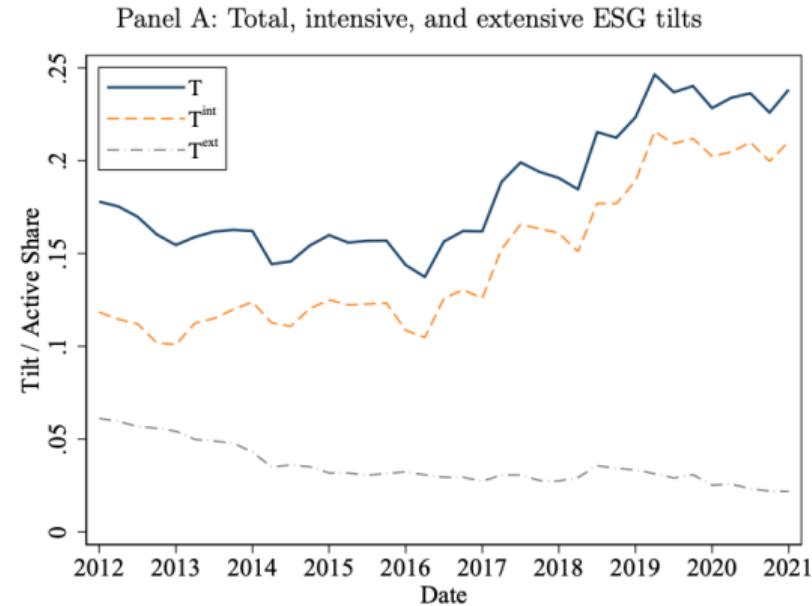
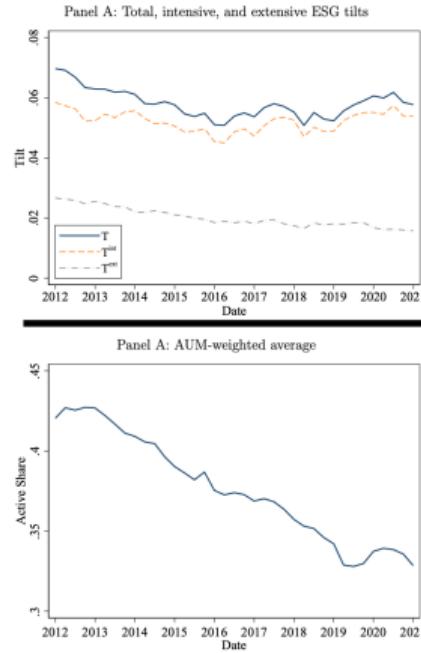
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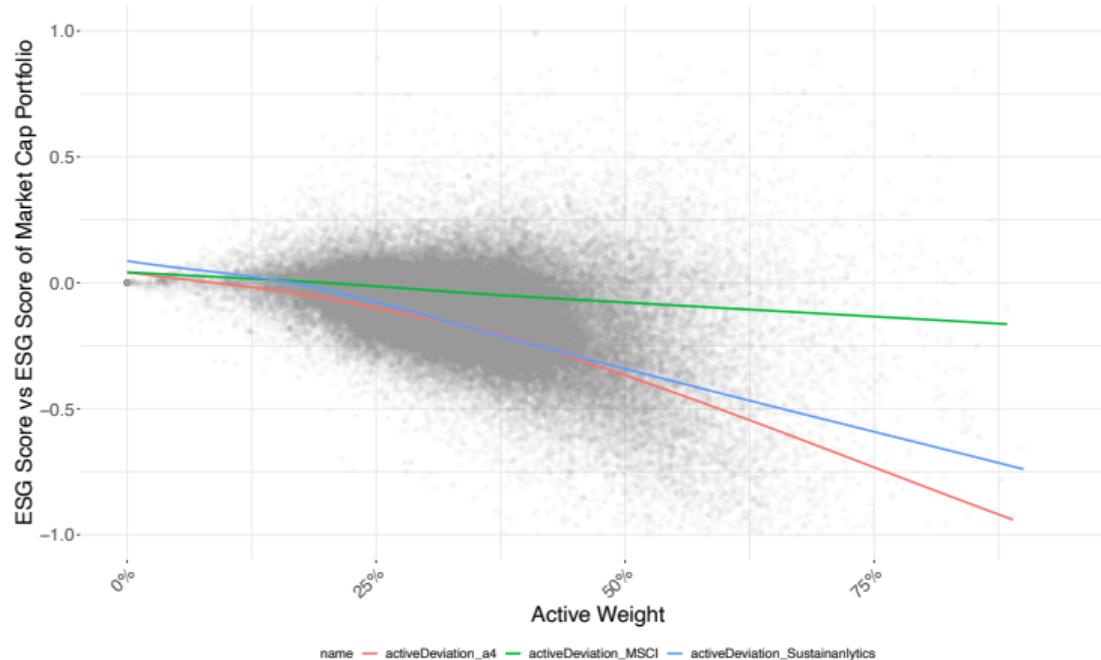


>> Why do ESG tilts represent a growing fraction of all portfolio tilts?

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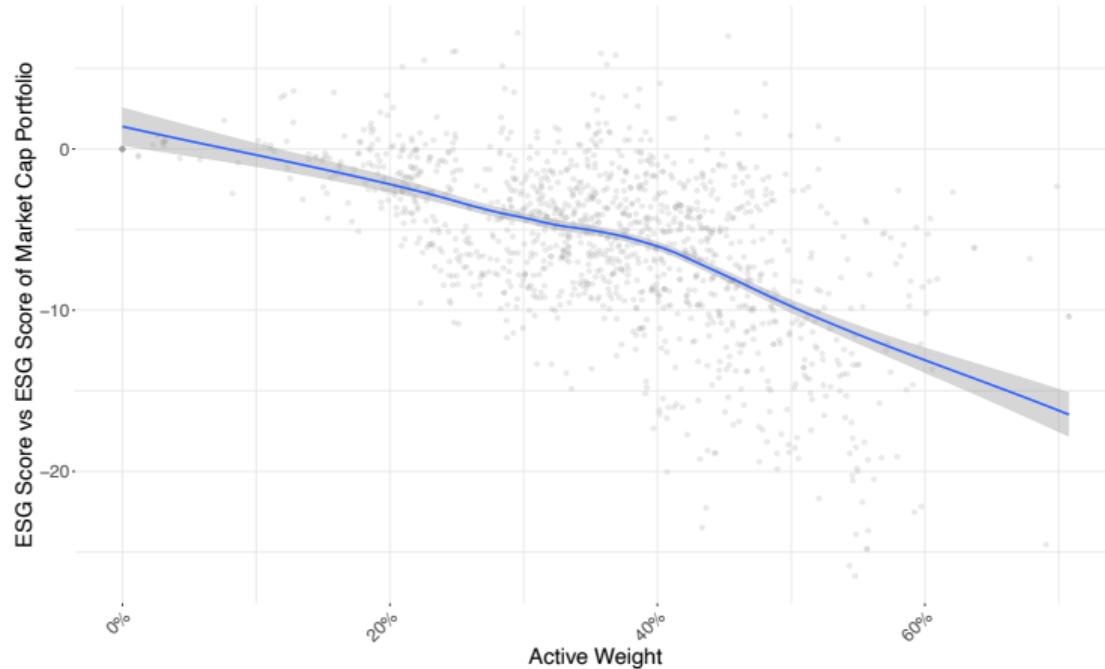
ESG Scores of All Mutual Funds Using Active Weight Measure (See Doshi et al. (2015))



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The Role of Active Share and Indexes

ESG Scores of ESG Mutual Funds Using Active Weight Measure (See Doshi et al. (2015))



Comment 3 – What is Driving These Trends?

The Role of Active Share and Indexes

Can the paper better disentangle why ESG tilts represent a growing fraction of all portfolio tilts?

Suggestion 1: Consider the index they are facing

- The paper uses the market portfolio as the benchmark for investing, which is very appealing, but unsure if it captures the true opportunity set each manager faces
- If an institution offers ESG products, they will likely be benchmarked to ESG indexes, not the market

Excited for this paper!

Important contribution studying how institutions allocate capital towards green/brown firms

- Paper is intuitive, interesting, important, carefully executed
- Provides an *easy-to-implement method* of measuring ESG exposure of institutions.
- Important, especially against the backdrop of climate-related risk, and investments in energy transition
- New line of research into understanding why certain institutions are greener