Skills and Sentiment in Sustainable Investing
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Motivation
- Sustainable investments have surged over the past decade
- Many investors claim that they are able to achieve high returns while investing sustainably
- Some investors have strict and some have flexible investment mandates

Abstract
We document a significant difference in the returns of sustainable investing across investor types. Investors with strict ESG mandates earn 3.1% less than flexible investors. The mechanism is that flexible investors are able to react on expected ESG improvements. They buy stocks that subsequently experience ESG score increases. After ESG improvements have realized, demand from strict mandate investors pushes up stock prices, resulting in positive returns for flexible investors. These returns are higher when accompanied by rising climate sentiment, as seen during the 2010s. Our channel accounts for 51% of the return difference between strict and flexible ESG investment mandates.

Theoretical Framework
Continuum of agents maximise
$$U[W, X] = -e^{-\alpha W} - \beta X,$$
(1)
where $b_i = s_i g_i$.

In equilibrium
$$r^F = \beta_M r_M^F + \mu g + \frac{\dot{g}}{T} + \ddot{s} + \epsilon,$$
(2)
where $\mu g \propto -\dot{s}$, and $\ddot{g}$ and $\dddot{s}$ are innovations in $g$ and $s$.

Results
- Flexible investors earn high returns when investing sustainability
- In comparison to strict investors, the returns earned by flexible investors are 3.1% higher

<table>
<thead>
<tr>
<th></th>
<th>ESG low</th>
<th>ESG high</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible investors</td>
<td>0.088</td>
<td>0.392</td>
<td>0.304</td>
</tr>
<tr>
<td>t-statistic</td>
<td>0.773</td>
<td>3.784</td>
<td>2.027</td>
</tr>
<tr>
<td>Strict investors</td>
<td>-0.049</td>
<td>0.130</td>
<td>0.179</td>
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<tr>
<td>t-statistic</td>
<td>-0.374</td>
<td>1.108</td>
<td>1.089</td>
</tr>
</tbody>
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Monthly difference 0.137 0.262 0.125
Yearly difference 1.644 3.144 1.500

Flexible investors predict ESG scores

Climate Sentiment
- We create our own sentiment measure through Google Search volumes on the term Climate Change
- We adjust for seasonality and autocorrelation to filter out shocks to climate change

Conclusion
1. Cost to strict investment mandate within sustainable investing of 3.1%
2. Socially unconstrained premium arises from skill in predicting ESG scores
3. Socially unconstrained premium increases with climate sentiment

$\rightarrow$ Results suggest more green projects to be financed, and ultimately a more sustainable future

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