

ESG Investing Can Cost Nothing (and Why)

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(based on work with L. Lindsey and C. Schiller (ASU), “The Cost of ESG Investing”

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3975077)

Results

Suppose a sophisticated systematic investor has an optimal portfolio strategy

- ▶ ... and they screen out “bad” ESG stocks to achieve a mandate

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1. The portfolio's **average return does not significantly fall**,
2. yet this **improves its ESG score**

This suggests something about ESG measures

3. We show that **ESG measures are not in conditional beta**

Not in beta? In something uncorrelated then?

4. We show that **ESG measures are not in alpha, either, ...**

How does this square with other papers saying the opposite?

5. ... and when one takes account of conditional beta, **those other alphas disappear**

What is conditional beta?

Aggregate risk exposure of the firm using what is true about that firm at that time

Impact

Current events

Asset managers claim they focus on financial returns, but they have joined with left-wing state pension funds to cram “environmental, social and governance” policies down the throats of American companies and employees whose retirement funds are under asset managers’ control... ESG simply isn’t a natural outgrowth of a focus on financial returns. And research reflects that some ESG funds have underperformed.

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Our results say: sophisticated investors need not underperform

Key innovation

Calculating beta from the state-of-the-art academic literature

$$\begin{aligned}\beta_{it} &= b(\text{characteristics}_{it}) \\ &= b(\text{size}_{it}, \text{value}_{it}, \text{leverage}_{it}, \text{investment}_{it}, \dots)\end{aligned}$$

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What idea does this embody?

Investors have a wealth of information available to them **and use it!**

Where does this come from?

Kelly, Pruitt, Su (2019 *Journal of Financial Economics*)

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3032013

What key assumption is it making?

Firms differ in their risk exposures due to differences in observable characteristics

Tangency portfolio

$$\{\beta_{1t}, \beta_{2t}, \dots, \beta_{Nt}\} \implies \text{optimal portfolio weights in month } t \\ \implies \{w_{1t}, w_{2t}, \dots, w_{Nt}\}$$

When we use $b(\text{non-ESG characteristics}_{it})$ these weights ignore ESG information
(only “focus on financial returns”)

Use non-ESG characteristic data from usual sources

This constructs our sophisticated systematic portfolio – call it the **tangency** portfolio

Implementing an ESG mandate

Consider an ESG measure for all firms: $\{esg_{1t}, esg_{2t}, \dots, esg_{Nt}\}$

Simple ESG mandate implementation: zero positions in “bad” ESG stocks

Like industry/sin screening – just wash your hands of them

1. Choose threshold \underline{esg} that defines “bad” (we use median)
2. If $esg_{it} < \underline{esg}$, set weight to zero (negative screening)

(we explore sensitivity to different \underline{esg} , positive screening, other specifications)

What ESG?

Perhaps obvious to this room, but...

- ▶ Many different ESG data providers
- ▶ Many different E/S/G or Total measures
- ▶ (Anecdotally) many different bespoke responsible-investing measures (from the same underlying data)

Our approach

Use several different data providers;
use several different indices (“pillars”)
use raw and best-in-class measures



BE COMPREHENSIVE

(present one set of results; many others support the conclusion)

ESG data

- ▶ Asset4: from Thompson Reuters; E, S, G, Total
- ▶ KLD: oldest provider; purchased by MSCI; now deprecated; E, S, G, Total
- ▶ MSCI: E, S, G, Total
- ▶ RepRisk: E, S, G, Total
- ▶ S&P Global: E, S, G, Total
- ▶ Sustainalytics: from Morningstar; E, S, G, Total
- ▶ Trucost: scope 1 emissions; E only

Present total industry-adjusted, except for Trucost which is E industry-adjusted

ESG costs nothing

Ann. mean returns of tangency and screened portfolios

ESG measure	Mean	95% CI	Placebo p_5	Avg N_t	Min N_t
Tangency	20.0	(14.5, 25.4)		1016	892
<i>Screened</i>					
Asset4	18.4	(12.9, 23.8)	18.9	632	547
KLD	17.7	(12.6, 22.7)	17.7	651	506
MSCI	20.3	(15.0, 25.4)	19.0	668	575
RepRisk	21.6	(15.8, 27.4)	19.9	633	551
S&P	20.4	(14.9, 25.9)	20.2	886	701
Sustainalytics	20.9	(15.4, 26.3)	20.1	737	631
Trucost	20.3	(14.8, 25.9)	18.7	592	497

(all have 10% ann. vol.)

- *Placebo test?* randomly assign ESG scores (higher power)
- *Mean above 20%?* Sampling error

ESG costs nothing

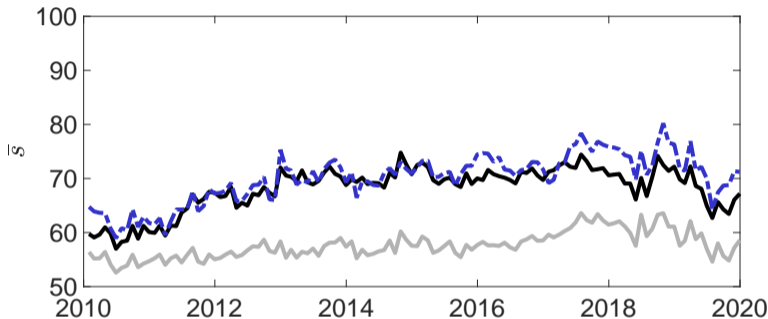
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Sharpe ratio unchanged by ESG mandate

The mandate enhanced ESG performance



Gray solid line is the tangency-portfolio ESG performance

Black solid line is screened-portfolio ESG performance (MSCI)

Blue solid dashed is another model we are not discussing

Mandate has improved ESG score by about 20 percent

Is ESG in beta?

If screening based on ESG doesn't affect the performance of the tangency weights ...

is it *unrelated* to the tangency weights?

We formally test this.

Null: ESG is not in $b(\cdot) = \beta_{it}$

Is ESG in beta?

p -values from bootstrapped test

Asset 4	26.2
KLD	11.6
MSCI	7.7
RepRisk	5.1
S&P	41.9
Sustainalytics	14.7
Trucost	24.2

We fail to reject



ESG *is not* part of beta

Is ESG in alpha?

Let's get on the same **alpha** page:

- ▶ An alpha portfolio is one that is uncorrelated with aggregate factors
- ▶ An alpha is the mean return of this portfolio
- ▶ When we run a regression of portfolio returns on factors, alpha is the value of the intercept of that regression...
- ▶ ... because if we ran the regression without an intercept, it would be the mean of the residuals

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Why do we like alpha?

- ▶ We get a return without being exposed to aggregate-factor risk

Is ESG in alpha?

Ann. mean return of alpha portfolios, and 95% confidence interval

Asset 4	0.24	(−4.59, 5.06)
KLD	6.12	(−0.13, 12.37)
MSCI	6.80	(−0.16, 13.77)
RepRisk	4.40	(−1.34, 10.15)
Sustainalytics	0.90	(−3.88, 5.68)
Trucost	5.48	(−0.17, 11.12)

No alpha portfolio has a significant average return

What about ESG alphas I've heard of?

They exist because of misspecified beta

For example, prominent work has found that a green alpha exists if one uses the MSCI E measure in a certain way (Pastor et al. 2022 JFE).

- ▶ We reproduce their results exactly
- ▶ Put this measure into our framework; have it confront a well-performing conditional beta

⇒ **no significant alpha**

We find this for other ESG alphas in the literature

Accounting for conditional beta (i.e. the non-ESG information investors already have in hand)
wipes away ESG alphas

How could this be?

- ▶ Investors care about ESG
- ▶ invest according to ESG
- ▶ price assets according to ESG
and there's no effect?!

How could this be?

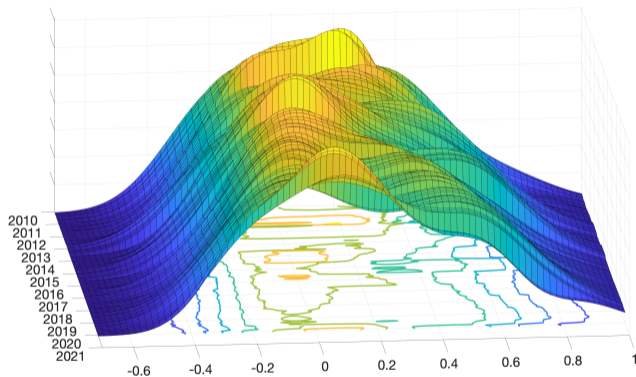


Figure: Densities of cross-sectional rank correlations

How exactly does one define responsible investing?

Conclusion

- 1-2 We can enhance the ESG score of a sophisticated portfolio and the average return does not significantly fall
- 3 ESG measures are not in beta
- 4-5 ESG measures are not in alpha, even those you've seen before

Thank you