Discussion

Pástor, Stambaugh, and Taylor (2021)
"Dissecting Green Returns"

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Overview

Pástor, Stambaugh, and Taylor (2021)

Due to investors' ESG preferences, green assets should earn lower expected returns than brown assets in equilibrium

From 2012/11 to 2020/12, green assets earn higher average returns

Abnormal returns due to unexpected ESG concerns, not high expected returns for green assets; unlikely to persist

The green factor explains the recent underperformance of value

Theme

My two cents on ESG investing

Green assets more intangible intensive, riskier, expected to grow faster, and should earn higher expected returns than brown assets

No deviation between average and expected returns

Rising intangibles as the common cause for:

- The recent underperformance of value;
- The expected growth factor; and
- The green factor?

What Does ESG Measure?

Table 1: ESG or intangibles? Cross- > within-industry variation

Rank	MSCI Industry	Average g
1	Asset Management & Custody Banks	0.870
2	Professional Services	0.850
3	Telecommunication Services	0.841
4	Consumer Finance	0.837
5	Health Care Equipment & Supplies	0.835
6	Health Care Providers & Services	0.825
7	Life & Health Insurance	0.761
8	Interactive Media & Services	0.736
9	Diversified Financials	0.732
10	Media & Entertainment	0.704
11	Diversified Consumer Services	0.614
12	Biotechnology	0.567
13	Pharmaceuticals	0.489
14	Multi-Line Insurance & Brokerage	0.405
15	Investment Banking & Brokerage	0.387
50	Utilities	-1.903
51	Integrated Oil & Gas	-2.008
52	Food Products	-2.019
53	Beverages	-2.044
54	Metals and Mining, Precious	-2.193
55	Oil & Gas Refining, Marketing	-2.522
56	Construction Materials	-2.556
57	Specialty Chemicals	-2.818
58	Marine Transport	-2.828
59	Paper & Forest Products	-2.930
60	Metals and Mining, Non-Precious	-2.947
61	Steel	-2.955
62	Oil & Gas Exploration & Production	-3.010
63	Diversified Chemicals	-3.212
64	Commodity Chemicals	-3.783

Explaining the Green Factor

2012/11–2020/12: Eg helps explain gfactor, corr(Eg, gfactor) = 0.51

	$\overline{R}$	CAPM	q	q^5
α	0.58	0.69	0.41	0.30
	(2.91)	(3.54)	(2.49)	(1.70)
MKT		−0.09	0.00	0.03
		(−1.09)	(0.00)	(0.42)
R_{ME}			−0.27	−0.23
			(−3.10)	(−2.78)
$R_{\text{I/A}}$			−0.49	−0.40
			(−4.29)	(−3.40)
R_{Roe}			0.16	0.04
			(1.40)	(0.29)
R_{Eg}				0.24
				(2.66)

Explaining Common Factors

2012/11–2020/12: The HML alpha drops from −0.71% to −0.15% by adding gfactor into the CAPM; the UMD alpha from 0.64% to −0.08%

	$R_{I/A}$	$R_{I/A}$	R_{Roe}	R_{Roe}	R_{Eg}	R_{Eg}
α	−0.21	0.03	0.46	0.21	0.83	0.47
	(−1.34)	(0.16)	(2.20)	(0.92)	(3.89)	(2.48)
MKT	−0.06	−0.09	−0.28	−0.25	−0.31	−0.26
	(−1.29)	(−1.73)	(−3.06)	(−2.73)	(−3.93)	(−4.11)
gfactor		−0.35		0.36		0.51
		(−5.15)		(2.91)		(6.06)

Evidence

Summary

Green assets more intangible intensive than brown assets

The q^5 model explains gfactor via the expected growth factor

The gfactor model cannot fully explain the expected growth factor

Causation?

The causal structure behind the q^5 model:

$$\begin{aligned} E[R_i - R_f] &= \beta^i_{\text{MKT}}\, E[\text{MKT}] + \beta^i_{\text{Me}}\, E[R_{\text{Me}}] \\ &\quad + \beta^i_{\text{I/A}}\, E[R_{\text{I/A}}] + \beta^i_{\text{Roe}}\, E[R_{\text{Roe}}] + \beta^i_{\text{Eg}}\, E[R_{\text{Eg}}] \end{aligned}$$

Investment as (tangible) asset growth, not including expensed investment (that forecasts returns with a positive slope)

Intangible investment in the q^5 model via the Eg factor, which uses cash flows (including R&D expenses) as a key predictor

Tangible investment causes value (Zhang 2005)

Intangible investment causes momentum (and expected growth)

Causation?

The gfactor

Pástor, Stambaugh, and Taylor (2021):

- ESG preferences cause lower expected returns for green assets
- Ex post higher average realized returns of green assets (due to unexpected shifts in preferences) unlikely to persist
- ESG preferences cause the underperformance of value

Lu:

- Causal asymmetry? Value and momentum had existed long before ESG became a thing
- Rising intangibles cause the underperformance of value
- Rising intangibles cause higher expected returns for green assets; likely to persist

Conclusion

A parable of scientific research: Open-systemic causation per Bharskar (1975, 1979)