

SUSTAINABILITY OR PERFORMANCE? RATINGS AND FUND MANAGERS' INCENTIVES

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Background

- Transparency about asset managers' portfolios is often advocated to increase the sustainability of the economy
 - But does higher transparency about the sustainability of mutual funds' portfolios affect capital allocation?
- Mixed results on the effects of ESG on performance
 - Socially responsible investors are generally believed to put sustainability before performance (Bauer, Ruof & Smeets, 2021; Barber, Morse & Yasuda, 2021) & have been shown to have a lower flow-performance sensitivity (Bollen, 2007; Pastor and Vorsatz, 2020)
 - Yet, several studies show that sustainability improves performance and limits downside risk (Edmans, 2011; Lins, Servaes & Tamayo, 2017; Albuquerque, Koskinen & Zhang, 2019)

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ESG outperformance narrative 'is flawed', new research shows

Metrics for 'quality' such as profitability and conservative investment explain most of sector's 'alpha', academics say



The research also suggests the value of ESG stocks has been artificially inflated by momentum © Bloomberg



Moral Money ESG investing ✓ Added

BlackRock slams 'micromanaging' climate proposals

Plus, the impact investment boom gathers pace



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BlackRock has set out its reasons for what it says will be a lower rate of support for climate-related resolutions than last year © Bloomberg

Simon Mundy, Antoine Gara and Patrick Temple-West MAY 11 2022

This paper

- Can greater transparency affect the capital allocation of mutual funds
...when the trade-off between sustainability and performance is salient?
- Introduction of Morningstar globe ratings to rank funds based on the sustainability of their portfolios
 - In the aftermath of the introduction, flows to the funds that received the highest sustainability ratings increased (Hartzmark and Sussman, 2019)
 - We show that in the longer-term the globe ratings led to a trade-off between sustainability and performance....
....and we explore how investors reacted

Morningstar Sustainability Ratings

- **Globe ratings** – introduced on March 1, 2016
 - Range from one (low) to five (high) globes
 - Weighted average of company-level ESG scores from Sustainalytics
 - Based on the percentile rank of a fund's portfolio sustainability score, relative to other funds in the same Morningstar category
- Existing literature
 - In the six months following the introduction of the Morningstar sustainability ratings, the funds with the highest globe ratings experienced higher inflows; the converse was true for the funds with the lowest ratings (Hartzmark and Sussman, 2019).

Morningstar Performance Ratings

- Star ratings

- A quantitative backward-looking measure of a fund's performance, ranging from one (low) to five (high) stars
- Based on a fund's percentile rank relative to peer funds in the same Morningstar category

- Existing literature

- Investor flows respond to external rankings of fund performance (Del Guercio and Tkac, 2008; Ben-David, Li, Rossi, and Song, 2019)
- Fund managers' pursuit of higher star ratings affects stock demand and prices (Han, Roussanov, and Ruan, 2021; Kim, 2021)

Preview of Results

- After the introduction of the sustainability ratings, funds changed their investment policies to **achieve higher globe ratings**
- This created buying (selling) pressure and **stocks with high (low) sustainability ratings** became **overvalued** (undervalued)
- Funds attempting to improve their star ratings purchased (sold) stocks that became undervalued (overvalued)
 - Behavior more pronounced for funds with stronger incentives to improve their star ratings, e.g., closer to the cutoff for a higher rating or competing with fewer peers

Preview of Results II

- Trade off between sustainability and performance emerges
 - Funds **improving their globe ratings** are more likely to experience a **star rating downgrade**
 - **Funds purchasing (selling) stocks with low (high) sustainability ratings**, which were sold (bought) by sustainability-driven funds, achieve **better performance** and improve their star ratings
- In the immediate aftermath of the introduction of the globe ratings, both high (low) globe and star ratings have positive (negative) effects on flows
 - The magnitude of the effect is larger for the star ratings
- The effect of the globe ratings on flows vanishes over time
 - Funds nearly stop trading in a way to improve their globe ratings
 - Trading pressure on high ESG stocks disappears

Data

- U.S. equity funds domiciled in the U.S.
 - March 2016 to September 2017
 - 1,953 unique US mutual funds
- Fund-level analysis
 - Aggregate TNA and flows across share classes
 - Mean expense ratio and return across share classes
 - Star rating and fund age of the oldest share class

How does the introduction of the globe ratings affect the stock demand of funds that aim to be sustainable?

An interquartile increase in the stock's effective ESG score is associated with 6.5x larger increase in the fund's position (relative to the average change)

Border Funds # Effective ESG Score	0.033**	0.047**	0.019	0.083***	0.012	0.049**	0.047
	(2.160)	(2.197)	(0.939)	(2.864)	(0.377)	(1.986)	(1.225)

ESG Ratings and Trading Pressure

Ex-post definition

- Abnormal trading of funds that end up improving their globe ratings (G)

$$Agg\ Abnormal\ ESG\ Trading(i, t) = \sum_{f=1}^F Abnormal\ Trading(f, i, t), \quad \text{if } f \in G$$

Where

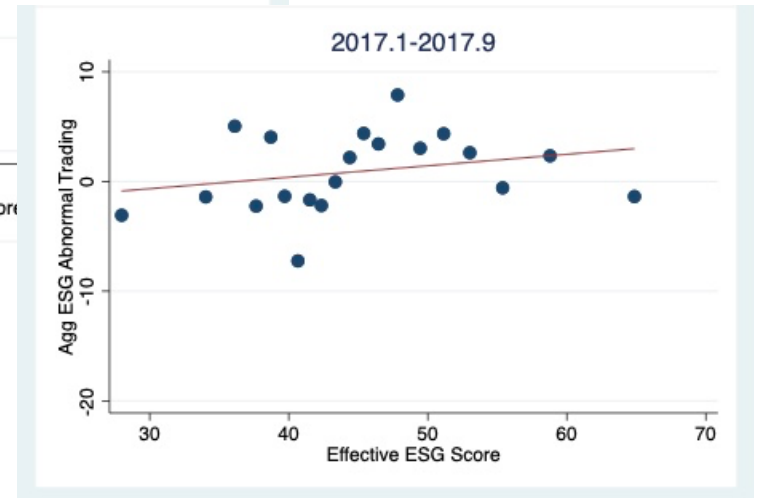
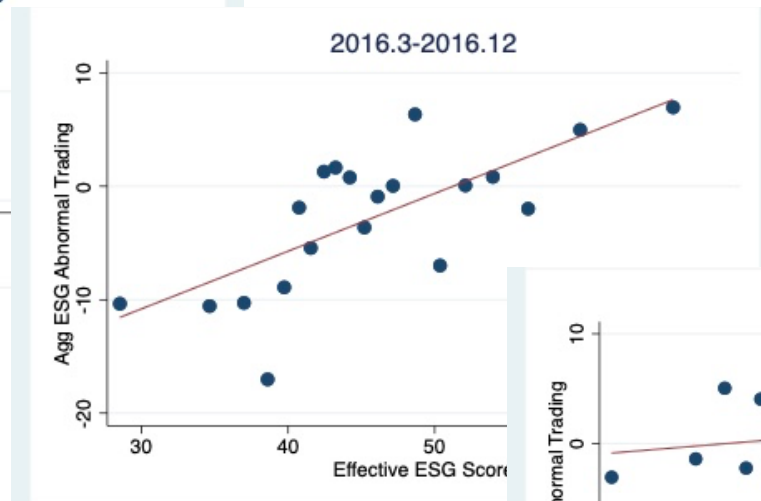
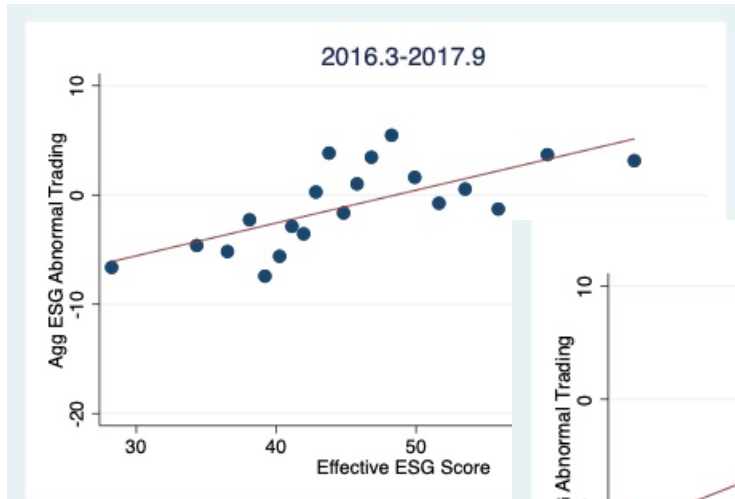
$$Trading(f, i, t) = \frac{NumShares(f, i, t) - NumShares(f, i, t - 1)}{Shares\ Outstanding(i, t - 1)}$$

$$Abnormal\ Trading(f, i, t) = Trading(f, i, t) - \overline{Trading(i, t)}$$

Ex-ante definition

- Aggregate buying and selling pressure of funds that are in a neighborhood of the globe rating cutoffs

Demand Pressure and Stock ESG Ratings



Stock-level Trading Pressure and Stock ESG Ratings

	(1)	(2)	(3)	(4)
	Abnormal ESG Trading			
	2016.3-2017.9	2016.3-2016.12	2017.1-2017.9	2016.3-2017.9
Effective ESG Score	0.249***	0.431***	0.055	0.047
	(4.257)	(4.478)	(0.745)	(0.632)
Effective ESG Score # First 9 months dummy				0.395***
				(3.090)
Ln Market Cap	0.178	0.146	0.093	0.148
	(0.417)	(0.212)	(0.231)	(0.348)
Book to Market	-2.250	-4.985*	1.923	-2.184
	(-1.164)	(-1.810)	(0.966)	(-1.133)
Leverage	-6.379	-8.609	-3.233	-6.225
	(-1.638)	(-1.415)	(-0.701)	(-1.603)
ROA	7.168	28.177	-8.988	7.537
	(0.264)	(0.688)	(-0.244)	(0.277)
Sales Growth Rate	-1.191	-3.154	1.359	-1.067
	(-0.494)	(-0.872)	(0.410)	(-0.441)
Ret (t-1)	-1.041	0.483	-2.598	-1.016
	(-0.292)	(0.091)	(-0.610)	(-0.286)
Constant	-12.054	-20.541	-2.066	-11.688
	(-1.466)	(-1.598)	(-0.243)	(-1.425)
Observations	5706	2901	2805	5706
Adjusted R-squared	0.009	0.011	0.006	0.010
Fixed effects	Ind*YQ	Ind*YQ	Ind*YQ	Ind*YQ

Sustainability-driven Trading Pressure and Stock Returns

- Why do the incentives to pursue a better sustainability rating vanish?
- Effects on stock returns
 - We consider a portfolio that is **long** in stocks with negative sustainability-driven trading pressure and **short** in stocks with positive sustainability-driven trading pressure

Long-Short Portfolio

Long stocks with Agg ESG<0 and short stocks with Agg ESG>0

	(1)	(2)	(3)	(4)
	2016.7-2016.12	2017.1-2017.9	2016.7-2016.12	2017.1-2017.9
	<i>Equal-weighted</i>		<i>Value-weighted</i>	
Alpha	0.043**	0.005	0.021*	-0.018
	(2.247)	(0.430)	(1.675)	(-1.591)
Mkt-RF	-0.159***	-0.062**	0.011	-0.050*
	(-12.580)	(-2.033)	(0.291)	(-1.721)
SMB	-0.132***	-0.054	-0.053	0.046
	(-6.883)	(-1.193)	(-1.532)	(0.953)
HML	-0.182***	-0.039*	-0.039	0.038**
	(-5.187)	(-1.785)	(-1.490)	(2.015)
Mom	-0.111***	0.044	-0.020	0.012
	(-3.544)	(1.386)	(-0.325)	(0.329)
Observations	127	188	127	188
R-squared	0.483	0.132	0.035	0.044

Annualized return of 10.8% (equal-weighted) and 5.3% (value-weighted) in the first half of the sample

Trading of funds pursuing star ratings & sustainability-driven trading pressure

	(1)	(2)	(3)	(4)	(5)	(6)
	Position Change (f,i,t)					
	<i>All funds</i>				<i>Index Funds</i>	<i>Active Funds</i>
	2016.3-2017.9	2016.3-2016.12	2017.1-2017.9	2016.3-2017.9	2016.3-2016.12	
Abnormal ESG Trading	-0.384***	-0.591***	-0.045	-0.045	-0.080	-0.860***
	(-5.388)	(-1.760)	(-0.483)	(-0.483)	(-0.950)	(-6.167)
First 9 months dummy # Abnormal ESG Trading				-0.546***		
				(-4.263)		
Constant	0.208***	-0.266***	0.739***	0.206***	2.056***	-1.479***
	(214.190)	(-119.100)	(2867.888)	(172.367)	(1096.955)	(-445.138)
Observations	1815668	962990	852678	1815668	330721	632218
Adjusted R-squared	0.287	0.286	0.289	0.287	0.567	0.224
Fixed effects	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ

Trading of funds pursuing star ratings & sustainability-driven trading pressure

	(1)	(2)	(3)	(4)	(5)	(6)
	Position Change (<i>f,i,t</i>)					
	2016.3-2016.12	2017.1-2017.9	2016.3-2016.12	2017.1-2017.9	2016.3-2016.12	2017.1-2017.9
	<i>Other</i>		<i>Within ± 5%</i>		<i>Within ± 2.5%</i>	
Abnormal ESG Trading	-0.244** (-2.139)	0.195* (1.760)	-0.678*** (-2.671)	-0.168 (-0.825)	-0.831*** (-4.609)	-0.223 (-1.216)
Constant	2.079*** (808.980)	3.036*** (9829.437)	0.213*** (33.308)	0.049*** (91.528)	-1.525*** (-358.215)	-0.191*** (-397.910)
Observations	176166	157295	178099	158058	317854	291598
Adjusted R-squared	0.535	0.683	0.315	0.201	0.194	0.207
Fixed effects	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ	Fund*YQ

Tradeoff Between Star and Globe Ratings

	(1)	(2)	(3)	(4)
	Δ Globe Rating	Δ Star Rating		
	2016.3 - 2017.9	2016.3 - 2017.9	2016.3-2016.12	2017.1 - 2017.9
ESG Pressure Trading	0.651*** (4.727)	-0.055 (-0.578)	-0.311** (-2.079)	0.118 (0.946)
Fund Turnover (% TNA)	-0.232*** (-4.633)	-0.015 (-0.444)	0.067 (1.238)	-0.065 (-1.560)
Constant	-0.010 (-0.223)	-0.354*** (-11.896)	-0.372*** (-8.258)	-0.336*** (-9.124)
Observations	21913	21893	7967	13926
Adjusted R-squared	0.057	0.051	0.064	0.043
Other controls	Yes	Yes	Yes	Yes
Fixed effects	Cat*YM	Cat*YM	Cat*YM	Cat*YM

Tradeoff Between Globe Ratings and Performance

	(1)	(2)	(3)
	Monthly abnormal returns		
	2016.3 - 2017.9	2016.3-2016.12	2017.1 - 2017.9
ESG Pressure Trading	-0.366 (-1.302)	-1.632*** (-3.372)	0.231 (0.707)
Fund Turnover (% TNA)	0.100 (1.038)	0.625*** (3.537)	-0.182* (-1.699)
Constant	-0.270** (-2.568)	-0.515*** (-2.952)	-0.245** (-2.090)
Observations	26628	10528	16100
Adjusted R-squared	0.172	0.176	0.174
Other controls	Yes	Yes	Yes
Fixed effects	Cat*YM	Cat*YM	Cat*YM

Effects of Ratings on Fund Flows

	(1)	(2)	(3)	(4)	(5)	(6)
	Flows (% TNA)					
	2016.3-2017.9	2016.3-2016.12	2017.1-2017.9	2016.3-2017.9	2016.3-2016.1	2017.1-2017.9
One Globe	-0.002* (-1.801)	-0.004** (-2.286)	-0.001 (-0.479)	-0.002** (-2.334)	-0.004*** (-2.668)	-0.001 (-0.807)
Two Globe	0.000 (0.199)	-0.000 (-0.506)	0.001 (0.679)			
Four Globe	0.001 (1.599)	0.002 (1.532)	0.001 (0.854)			
Five Globe	0.002* (1.655)	0.003** (2.112)	0.001 (0.389)	0.002 (1.442)	0.003** (2.053)	0.000 (0.121)
One Star	-0.011*** (-6.097)	-0.011*** (-5.070)	-0.012*** (-4.852)	-0.011*** (-6.092)	-0.011*** (-5.048)	-0.012*** (-4.850)
Two Star	-0.007*** (-7.364)	-0.006*** (-5.462)	-0.007*** (-5.899)	-0.007*** (-7.341)	-0.006*** (-5.416)	-0.007*** (-5.897)
Four Star	0.009*** (11.392)	0.009*** (9.246)	0.008*** (9.236)	0.009*** (11.369)	0.009*** (9.232)	0.008*** (9.194)
Five Star	0.022*** (11.793)	0.025*** (11.170)	0.020*** (9.617)	0.022*** (11.811)	0.025*** (11.251)	0.020*** (9.607)
Observations	23141	11548	11593	23141	11548	11593
Adjusted R-squared	0.093	0.105	0.080	0.093	0.104	0.080
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects	Cat*YM	Cat*YM	Cat*YM	Cat*YM	Cat*YM	Cat*YM

Alternative explanations

- New equilibrium with lower rating turnover
- Sustainability score vs. sustainability ratings
- Morningstar's new methodology

Alternative Ratings Turnover

	Globes		Star	
	<i>Upgrade</i>	<i>Downgrade</i>	<i>Upgrade</i>	<i>Downgrade</i>
Panel A: all changes				
2016.3 - 2016.12	11.95%	10.43%	6.65%	7.06%
2017.1 - 2017.9	9.81%	9.73%	6.00%	6.35%
Panel B: change to/from top/bottom rating				
2016.3 - 2016.12	2.55%	2.18%	1.49%	1.67%
2017.1 - 2017.9	2.82%	2.85%	1.33%	1.30%

Effects of Sustainability Score on Flows

	(1)	(2)	(3)
	Flows (% TNA)		
	2016.3-2017.9	2016.3-2016.12	2017.1-2017.9
Portfolio Sustainability Score	0.056** (2.197)	0.116*** (3.380)	-0.000 (-0.010)
Constant	-0.008 (-0.622)	-0.040** (-2.126)	0.019 (1.268)
Observations	19382	8914	10468
Adjusted R-squared	0.088	0.100	0.077
Controls	Yes	Yes	Yes
Fixed Effects	Cat*YM	Cat * YM	Cat * YM

Morningstar's Modified Methodology

	(1)	(2)	(3)
	Flows (% TNA)		
	2018.11 - 2019.9		
One Globe	-0.002 (-1.228)		
Two Globe	0.001 (1.211)		
Four Globe	0.001 (1.147)		
Five Globe	0.001 (0.410)		
Portfolio Sustainability Score		0.000 (1.091)	
Low Carbon Designation			-0.001 (-0.886)
One Star (t-1)	-0.006*** (-3.810)	-0.007*** (-3.989)	-0.007*** (-4.126)
Two Star (t-1)	-0.004*** (-3.456)	-0.004*** (-3.494)	-0.004*** (-3.675)
Four Star (t-1)	0.010*** (10.935)	0.010*** (11.000)	0.010*** (10.974)
Five Star (t-1)	0.025*** (12.999)	0.025*** (13.142)	0.025*** (13.170)
Observations	15931	16358	16699
Adjusted R-squared	0.107	0.109	0.109
Controls	Yes	Yes	Yes
Fixed effects	Cat*YM	Cat * YM	Cat * YM

Conclusion

- Ratings have feedback effects on the actions of market participants
- Rating financial intermediaries on the basis of the sustainability of their portfolios may appear to be an effective mechanism that allows investors to allocate their funds in accordance with their environmental and social preferences.
- If most investors care to an even larger extent about performance, a trade-off between portfolio sustainability and performance may arise
- Sustainability ratings may become irrelevant