

# Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows

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## Motivation: Market Phenomena and Research Challenges

- Firms invest more resources in sustainable and socially responsible endeavors
- How markwide investors view the increase in resources directed toward sustainability?
  - negative? such investments is costly and conflict with profit maximizing goal
  - positive? such investments as a sound way to maximize profits
  - neutral? unaware and not care
- Addressing this question directly is difficult
  - analysis sustainability products only reflects investors' preferences who holding those products
  - noisy: market outcome(prices) relate to firms attributes(sustainability)

## Motivation: New method to Overcome Challenges

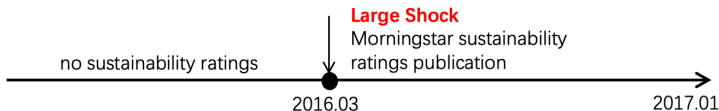
- Natural Experiment: Morningstar Sustainability Rating publication
  - sustainability clearly displayed
  - there was not an easy way for investors to judge the sustainability of most mutual funds before
  - cleanly identify the causal effect of the sustainability ratings on mutual fund flows
- Providing causal evidence that fund demand correlates with sustainability ratings.
- Demonstrate that mutual fund investors value sustainability

# Design

- Research question: Do Investors Value Sustainability? and why?

## 1. Sustainability Ratings Shock

Features: (1) over \$8 trillion funds assets experienced  
(2) did not effect fund fundamentals: cleanly response to ratings



## 2. Do investors value sustainability?

$$\text{Fund flows} = \alpha + \beta_1 \text{one globe} + \dots + \beta_5 \text{five globes} + FEs$$

**Yes**, strong flow effects from being in the two extreme globe categories

dummy  
variables

## 3. Why investors value sustainability?

- (1) No Institutional Constraints
- (2) No Rational Performance Expectations

### (3) Nonpecuniary Motives

- Run an experiment
- Study the impact of the globe rating on expected future performance

## Contribution

- Literature on how investors value nonfinancial aspects of stocks
  - Prior: how subsets of investors value characteristics of securities(Huberman , 2001)
  - This study: how all mutual fund investors collectively value characteristic of interest
- Literature on investment products with explicit social responsibility mandates
  - This study: examining the preferences for sustainability among the universe of U.S. mutual fund investors
- Literature on why firms invest in sustainability
  - Prior: agency issues, improving morale...(Cheng et al., 2013, Edmans , 2011)
  - This study: investment in sustainability is not due purely to agency issues
- highlights the potential role of emotion in guiding investment decisions
  - higher globe funds are linked to expectations of higher returns and lower risk

# Hypotheses

- 1. Do Investors Value Sustainability?
  - **H1.1:** sustainability ratings received attention when published
  - **H1.2:** sustainability ratings affect mutual fund flow
- 2. Why do Investors Value Sustainability?
  - **H2.1:** constraints imposed by their institution
  - **H2.2:** investors view sustainability as a signal of higher future returns
  - **H2.3:** investors have a preference for sustainability for nonpecuniary reasons

# Data

- Sample period: 11 month, 2016.03–2017.01
- Morningstar Sustainability Rating
  - classified more than 20,000 mutual funds
  - five globes: top 10%; one globe: bottom 10%
- Fund flows: normalized flow, size-weighted flow, size-weighted normalized flow

Panel C: Post-Publication Summary Stats By Globe

	Obs	Size	Flows	Normalized Flows	Visits	Return	Age	Rating
All	34,105	2,184.32	-0.41	50.33	209.45	1.62	195.35	3.01
One globe	3,170	1,039.96	-0.90	44.69	164.34	1.72	180.58	2.74
Two globes	7,207	2,438.41	-0.32	50.36	205.35	1.71	195.89	3.05
Three globes	12,183	2,298.06	-0.41	50.70	201.52	1.62	198.11	3.10
Four globes	7,816	2,197.10	-0.45	50.69	207.97	1.56	201.51	3.00
Five globes	3,730	2,267.72	-0.10	53.13	284.43	1.53	184.94	2.83

## H1.1 Sustainability ratings received attention

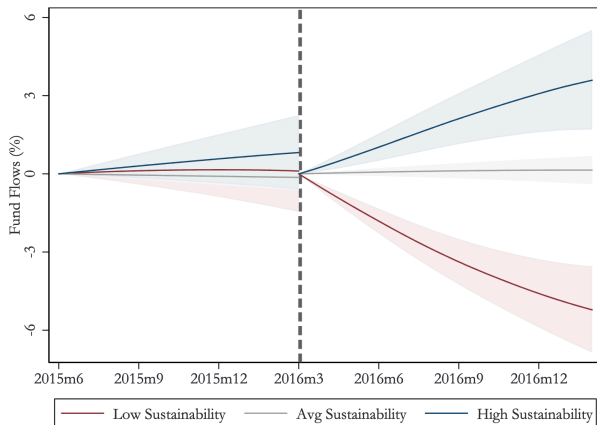
- Google searches show the globe rating system attracted attention at launch, not before





## H1.2 sustainability ratings affect mutual fund flow

- more money to funds ranked five globes and less money to funds ranked one globe



## H1.2 sustainability ratings affect mutual fund flow

- Five-globe funds experienced 0.30% greater inflows per month, One-globe funds experienced  $-0.44\%$  greater outflows per month

Panel A: Baseline Flow Regressions			
	(1)	(2)	(3)
Sustainability score	0.0744 (0.94)		
Category percent rank	0.000983 (0.23)		
One globe		-0.441** (-2.80)	-0.457*** (-3.21)
Two globes		0.0964 (0.92)	
Four globes		-0.0353 (-0.40)	
Five globes		0.297 (1.81)	0.281* (1.87)
Diff: five globes – one globe		0.737	0.738
<i>p</i> -value: five globes = one globe		0.00384	0.00382
Cat by YM FE	Yes	Yes	Yes
Other controls	No	No	No
$R^2$	0.0503	0.0511	0.0510
Observations	34,046	34,046	34,046

## H2.1: Institutional Constraints

- Both institutional and non-institutional investors have reacted to sustainability ratings, and this reaction is similar
- the impact of sustainability ratings is not limited to specific types of investors

	Flow			
	(1) NonInst	(2) Inst	(3) All	(4) All
One globe	-0.271** (-2.31)	-0.176 (-0.71)	-0.219* (-1.85)	
Two globes	0.0224 (0.27)	0.0255 (0.19)	0.0279 (0.34)	
Four globes	0.0527 (0.54)	-0.00696 (-0.05)	0.0594 (0.63)	
Five globes	0.327* (2.14)	0.551* (2.19)	0.347** (2.28)	
One globe*Institutional			-0.0579 (-0.23)	0.0257 (0.09)
Two globes*Institutional			0.0111 (0.07)	-0.0403 (-0.23)
Four globes*Institutional			-0.0924 (-0.57)	-0.180 (-1.04)
Five globes*Institutional			0.0970 (0.36)	0.0596 (0.22)
Diff: five globes – one globe	0.598	0.727	0.565	
p-value: five globes = one globe	0.00781	0.0581	0.0104	

## H2.2: Rational Performance Expectations

- Observed Performance
- The evidence does not support higher performance of five-globe funds relative to one-globe funds

Panel A: Value Weighted				
	Excess Return (1)	Morningstar Benchmark (2)	Vanguard Benchmark (3)	Four-Factor Benchmark (4)
One globe	0.311** (2.01)	0.0514 (0.44)	0.209** (2.43)	0.159 (1.24)
Five globes	-0.252** (-2.57)	-0.158* (-1.87)	-0.0995 (-0.69)	-0.193 (-1.35)
Diff: five globes – one globe	-0.563	-0.209	-0.309	-0.351
<i>p</i> -value: five globes = one globe	0.0247	0.236	0.131	0.165
$R^2$	0.00144	0.00224	0.000798	0.00149
Observations	34,083	34,083	33,307	33,307

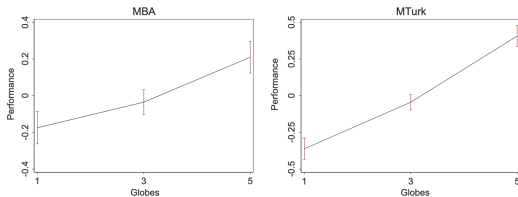
## H2.2: Rational Performance Expectations

- Potential Explanations of Return Predictability
  - the scale of funds with decreasing returns to scale
  - funds buying assets with high Sustainability ratings in order to achieve better fund ratings
  - the characteristics of the underlying assets, not fund behavior

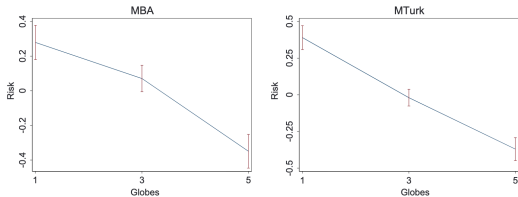
## H2.3: Nonpecuniary Motives

- higher globe ratings would result in higher performance at lower risk
- people rely on affect and emotion—rather than reasoned analysis

Panel A : Expectation of Performance



Panel B : Expectation of Risk



## H2.3: Nonpecuniary Motives

- globe dummy variables capturing nonpecuniary motives to lose their explanatory power for no ESG consideration investors

Panel A: MBA Students					
	All			No ESG Consideration	ESG Consideration
	(1)	(2)	(3)	(4)	(5)
Performance	75.14 <sup>***</sup> (5.44)		71.32 <sup>***</sup> (5.22)	92.04 <sup>***</sup> (3.81)	53.92 <sup>***</sup> (3.44)
Risk	−54.83 <sup>***</sup> (−4.60)		−49.73 <sup>***</sup> (−3.99)	−32.67 (−1.52)	−59.70 <sup>***</sup> (−4.20)
One globe		−50.56 <sup>**</sup> (−2.24)	−27.99 (−1.32)	−13.89 (−0.43)	−30.82 (−1.13)
Five globes		57.36 <sup>***</sup> (2.78)	20.11 (1.00)	−8.080 (−0.27)	48.51 <sup>*</sup> (1.75)
Diff: five globes – one globe		107.9	48.10	5.809	79.33
p-value: five globes = one globe		0.0000329	0.0485	0.876	0.0140
Acct FE	Yes	Yes	Yes	Yes	Yes
R <sup>2</sup>	0.767	0.718	0.770	0.770	0.773
Observations	807	807	807	354	450

## Ideas

- 扩展样本时间，随着可持续评级热度下降，现金流效应是否还会存在？(Gantchev et al., 2024)
- Morningstar 2018 年公布新的指标 Portfolio Carbon Risk Score，又一外生冲击 (Ceccarelli et al., 2023)
- 文章通过一个对基金投资者可持续投资偏好有影响的外生冲击研究问题，是否可以找到其他类似的外生冲击：
  - 基金签署 PRI，研究中国市场投资者是否关注可持续性
  - 碳排放权交易市场，绿盾 2018 自然保护区，研究企业碳排放行为、环保投资
  - 绿色信贷...
- 基金现金流入和流出反过来会如何影响企业可持续投资？