

# An Overview of the Evidence on Corporate Short-Termism – with a Focus on Climate Change

**Short-Termism in European Corporate Governance Conference**

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# This Talk

- Mostly an overview talk
  - “Generic” finance evidence
  - “Specific” **climate** finance evidence -> blame Tom Vos ;-)
- Mostly informed by research findings, complemented with some speculation (where evidence is not out yet)
- Heavily biased by my own work
  - Short-termism
  - Climate finance

# What is Short-termism?

**Actions that focus on short-term gains *at the expense of* long-term value**

## Corporate/Financial Elements

- Actions (investment, payouts, ...)
- Long-term value destruction
- Focus on short-term stock price
- Market inefficiency (?)

**-> often (rational) response to  
incentive structures**



# Generic finance evidence

## Short-Termism Humor



# Areas of Evidence (-> My Previous ECGI Talk)

- Executive compensation (-> ALSO THIS CONFERENCE)
  - Short-term incentives and long-term investment
  - Short-term incentives and long-term firm value
- Financial reporting (-> ALSO THIS CONFERENCE)
  - Frequency of reporting and long-term investment
  - Analyst earnings forecasts and long-term investment
- Ownership (-> ALSO THIS CONFERENCE)
  - Private versus public
  - Long-term versus short-term
  - Activist versus non-activist

# Summary of Evidence

- Executive compensation
  - Short-term incentives and long-term investment
  - Short-term incentives and long-term firm value
- Financial reporting
  - Frequency of reporting and long-term investment
  - Analyst earnings forecasts and long-term investment
- Ownership
  - Private versus public
  - Long-term versus short-term
  - Activist versus non-activist

Short-termism?

Some evidence

Mixed evidence

No evidence

# Attempt to Offer a Broad Conclusion

- Financial system *as whole* is not broken because of short-termism
  - But that does not mean that there are *parts* of the system, where short-termism is a problem
    - > Most of the evidence identifies a “local (average) treatment effect”
      - ~ Under *certain* circumstances, there is a short-termism issue
  - Certain players are *incorrectly* blamed for causing short-termism (e.g., activists)
- > Need to be careful when thinking about a therapy

# Edmans, Fang, and Lewellen (RFS 2017)

Causal effect: vested equity largely driven by grants made years ago

Results: Vested equity induces CEOs to reduce investment

Also: Positive effect on short-term earnings, analysts forecast revisions, earnings guidance

1 STD increase in *VESTING*  
 -> 0.2% decline in *RDNETINV* (11% mean investment-to-assets ratio)  
 (NETINV=change in PPE)

**Table 2**  
**Vesting equity and change in investment**

	(1)	(2)	(3)	(4)	(5)
Dependent variables	$\Delta RD_q$	$\Delta CAPEX_q$	$\Delta NETINV_q$	$\Delta RDCAPEX_q$	$\Delta RDNETINV_q$
<i>VESTING</i> <sub>q</sub>	-0.060*** (0.021)	-0.089*** (0.025)	-0.149** (0.067)	-0.159*** (0.039)	-0.224*** (0.079)
<i>UNVESTED</i> <sub>q-1</sub>	-0.003 (0.009)	0.004 (0.013)	0.051 (0.036)	0.002 (0.018)	0.054 (0.040)
<i>VESTED</i> <sub>q-1</sub>	-0.001* (0.001)	0.002 (0.001)	-0.006 (0.004)	0.001 (0.002)	-0.008* (0.004)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Quarter fixed effects	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	26,724	26,724	26,724	26,724	26,724
Adjusted <i>R</i> <sup>2</sup>	0.093	0.066	0.053	0.099	0.058

OLS regression results on the relationship between the CEO's vesting equity and the change in investment. Variable definitions are in Appendix A. *VESTING*, *UNVESTED*, *VESTED*, *SALARY*, and *BONUS* are in billions. *CEOAGE*, *CEOTENURE*, and *FIRMAGE* are in hundreds. Robust standard errors are in parentheses. \*\*\*, \*\*, and \* indicate significance at the 1% 5%, and 10% two-tailed levels, respectively.

Controls not reported



# Ladika and Sautner (RF 2020)

1 STD increase in the fraction of options accelerated -> Investment rate down by 0.052 (24% of STD)

Causal effect: accelerated option vesting varies across firms based on FYE

Results: Accelerated vesting induces CEOs to reduce investment

Also: Positive effect on short-term earnings, stock prices

Dependent variable	Total investment	Total investment	Total investment	R&D	Capex	Total investment	R&D	Capex
Model	OLS	OLS	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
Sample	All firms	Thomson firms	All firms	All firms	All firms	Thomson firms	Thomson firms	Thomson firms
Window of analysis	2005–06	2005–06	2005–06	2005–06	2005–06	2005–06	2005–06	2005–06
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Frac. options accelerated	-0.003 (-0.16)		-0.516*** (-3.70)	-0.275*** (-3.55)	-0.248*** (-2.58)			
Log accelerated options delta		-0.000 (-0.20)				-0.017*** (-3.31)	-0.010*** (-3.11)	-0.009** (-2.25)
Year-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First-stage diagnostics								
Coeff. (FAS 123-R takes effect)	N/A	N/A	0.028***	0.028***	0.028***	0.724***	0.723***	0.724***
<i>t</i> -stat. (FAS 123-R takes effect)	N/A	N/A	(6.17)	(6.17)	(6.17)	(6.96)	(6.98)	(6.96)
KP <i>F</i> -stat. (FAS 123-R takes effect)	N/A	N/A	38.08	38.08	38.08	48.49	48.76	48.49
Observations	4,111	3,741	4,111	4,111	4,111	3,741	3,750	3,741
Adjusted <i>R</i> <sup>2</sup>	0.307	0.309						

Controls not reported

# Kraft, Vashishtha, and Venkatachalam (TAR 2018)

Causal effect: transition of US firms from annual to semi-annual to quarterly reporting (1950–1970)

Results: Increased reporting frequency is associated with less investment

Also: Stronger effects in industries where investments take long to generate earnings

	<i>CAPEX</i>	<i>CHPPE</i>
	(1)	(2)
<i>TREAT</i>	0.014* (1.934)	0.012* (1.747)
<i>AFTER</i>	0.006* (1.873)	0.006 (1.512)
<i>TREAT*AFTER</i>	-0.016*** (-2.895)	-0.012** (-2.028)
<i>TREAT+TREAT*AFTER</i>	-0.002 (-0.258)	-0.000 (-0.049)
Firm random effects	YES	YES
State*Year fixed effects	YES	YES
Observations	5,791	6,902
R-squared	0.275	0.300

TREAT is an indicator for treatment firms, which are firms that experience an increase in reporting frequency. AFTER is an indicator for firm-year observations after the treatment year.

Controls not reported

# Long-term versus Short-term Investors

Presence of short-term investors is associated with ...

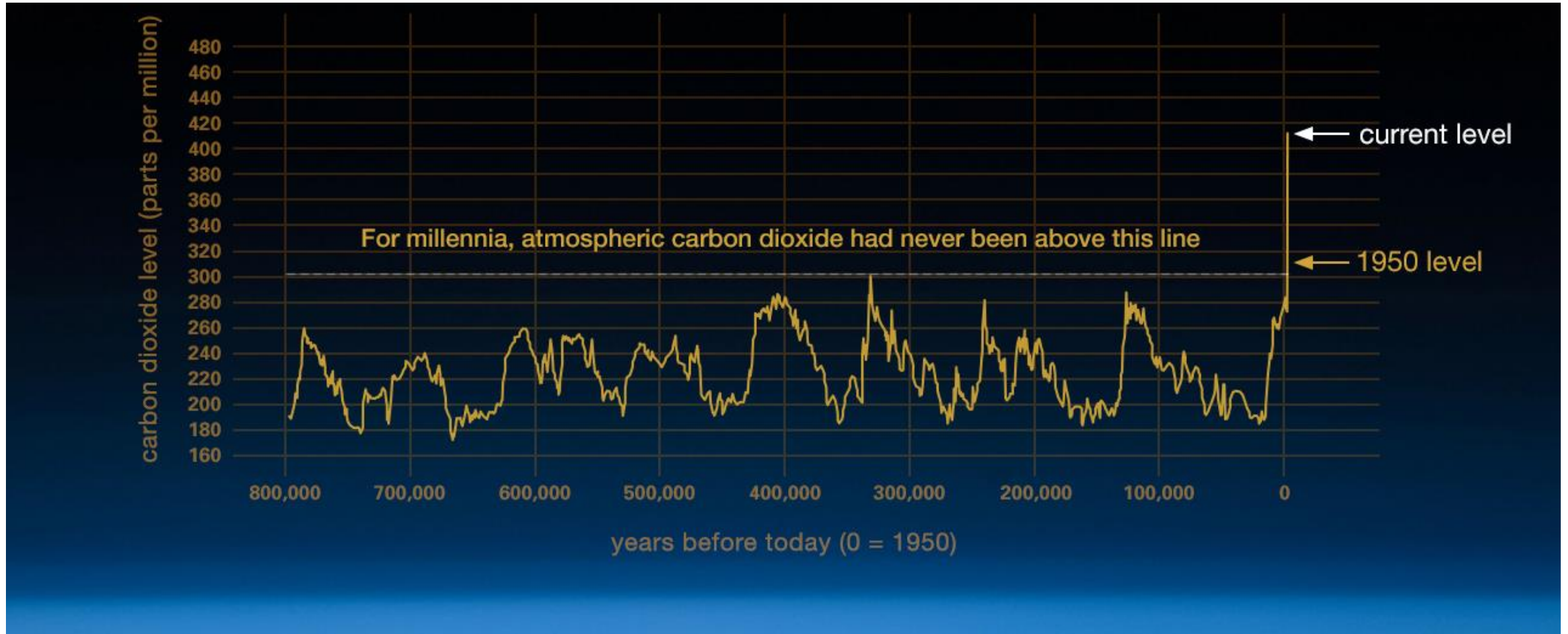
- ... less investment
  - Bushee (TAR 1998); Derrien et al. (JFQA 2013); Cremers et al. (MS 2020):
- ... more fraud, more empire building
  - Harford et al. (JCF 2018)
- ... worse M&A decisions
  - Gaspar et al. (JFE 2005), Chen et al. (JFE 2007)

**-> Much harder here to establish causality**

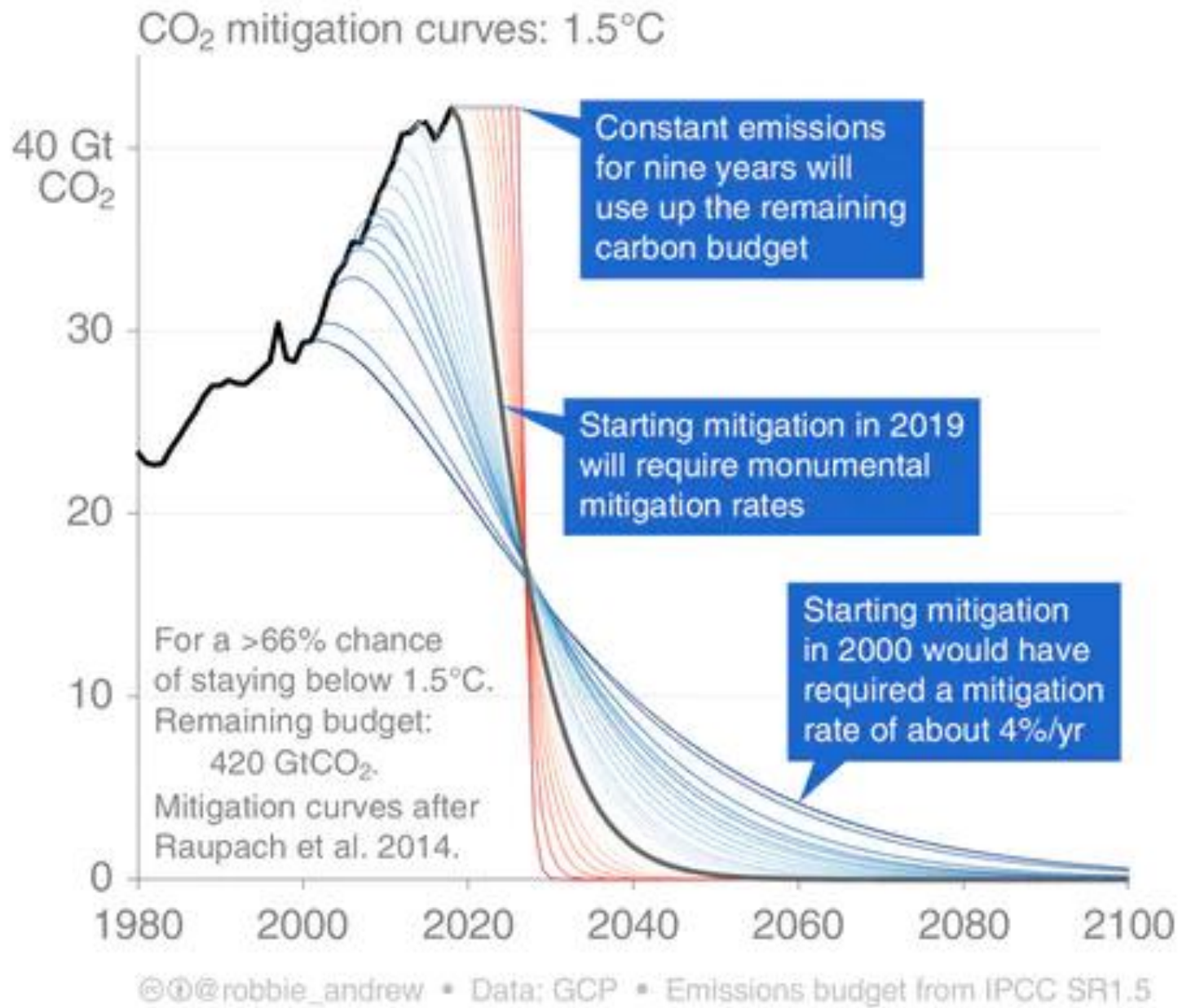
# Specific climate finance evidence



# The Epicenter of Human Short-Termism?







CO<sub>2</sub>  
Mitigation  
Curves to  
reach 1.5°C  
Target

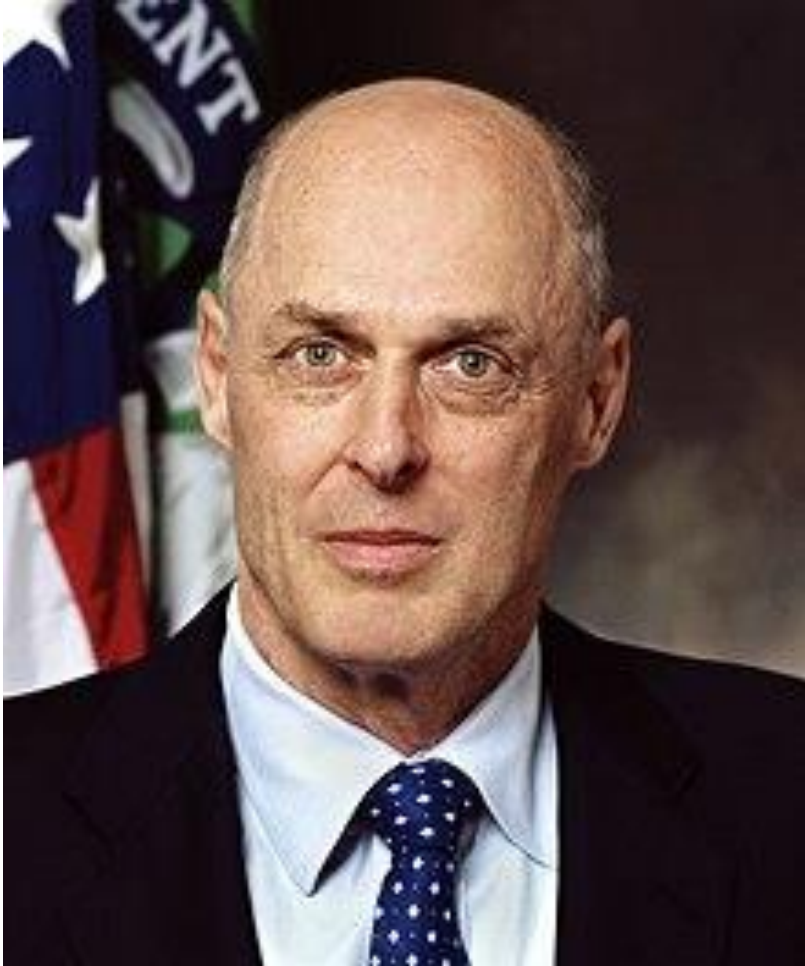
# Quizz: Who said this?

“It’s fitting to gather views on the long term for a business audience, given the pervasive **short-term pressures** CEOs are under to demonstrate performance. [...]

**Climate change is where short-term thinking and long-term consequences collide for businesses and governments alike. [...]**

Meeting the challenge of climate change calls on both to **assess the risks and act** before the economic and environmental consequences of failure are irreversible.”

# Henry M. (Henk) Paulson Jr.



“Short-termism and the threat from climate change” (for McKinsey)

Former United States treasury secretary (George W. Bush Administration) and chairman and CEO of Goldman Sachs.



“Today, we’re making the same mistakes when it comes to climate change that we made in the lead-up to the financial crisis.”

1) Building up excesses

Debt in 2008 -> heat-trapping greenhouse-gas emissions now

2) Government policies are flawed

Providing incentives for borrowing too much to finance homes then ->  
providing incentives for the use of fossil fuels now

The climate crisis, however, won’t suddenly manifest itself with a burst, like that of a financial bubble

**-> Climate change is more subtle and cruel**

# Incentives!

# Areas of Evidence on Short-Termism

-> Role of finance / investors?

Tackling climate change

Exploiting climate change concerns

# Areas of Evidence on Short-Termism

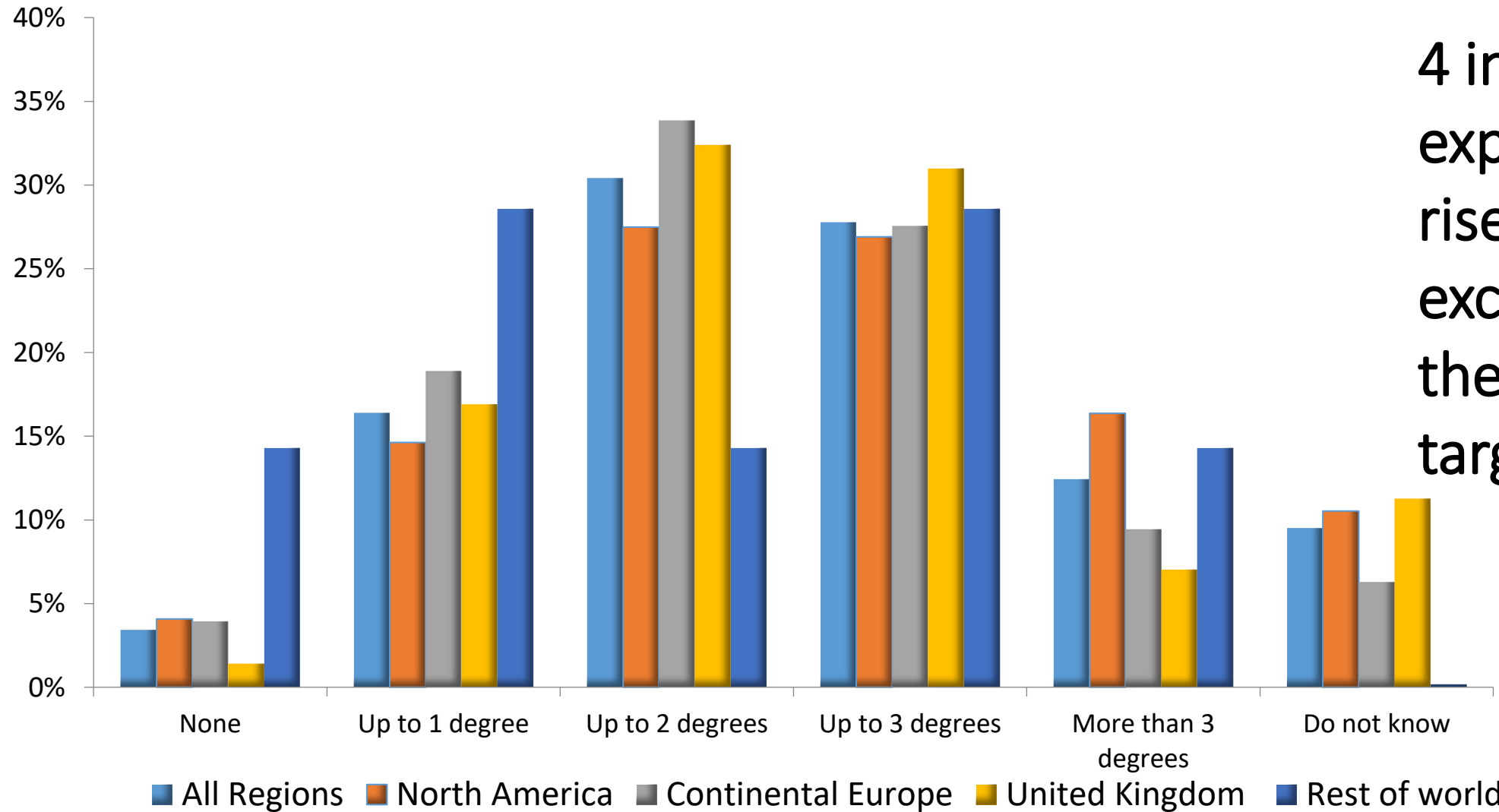
**Tackling climate change**

Exploiting climate change concerns

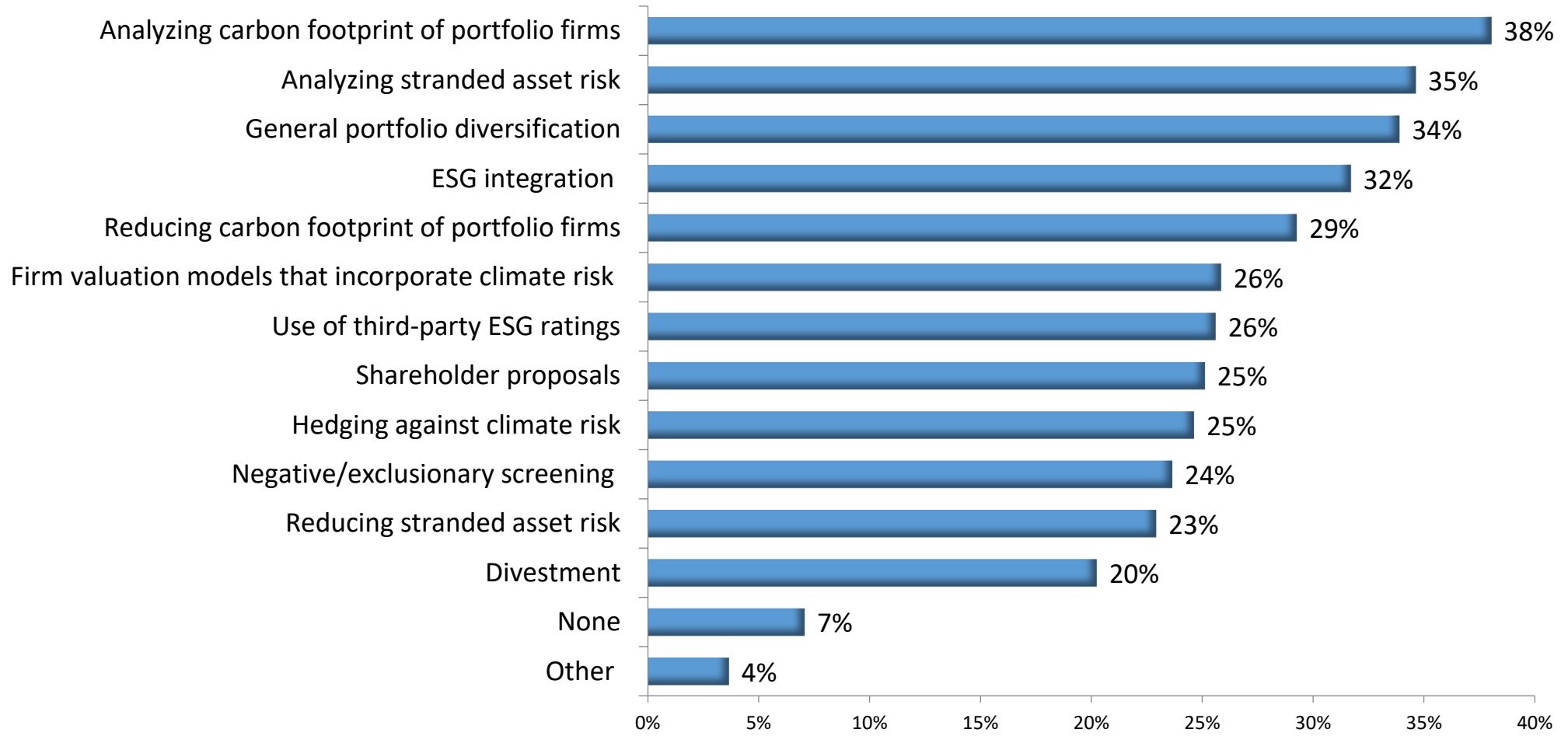
# Climate Risks & Institutional Investors

# Temperature Expectations of Institutional Investors

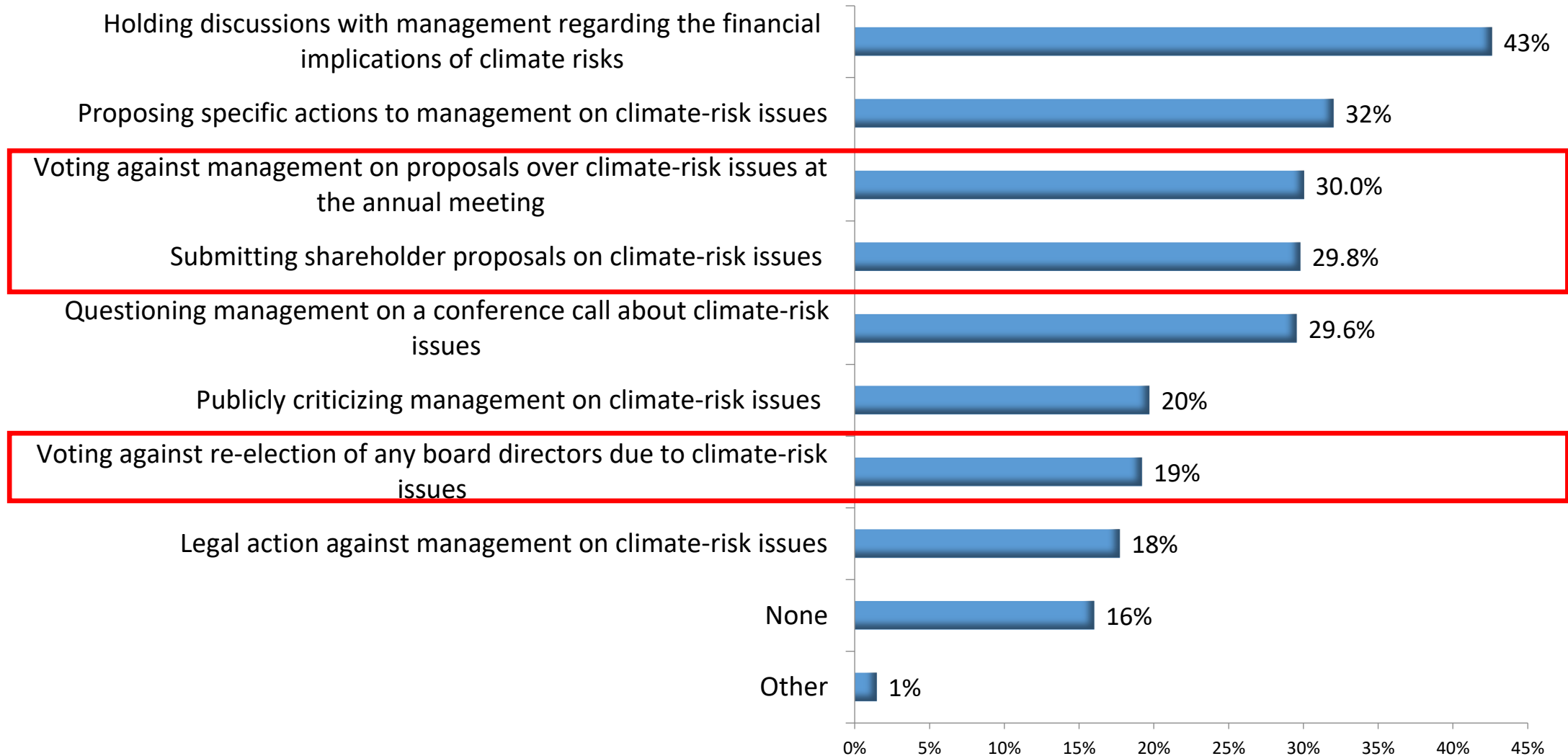
4 in 10  
expect a  
rise that  
exceeds  
the Paris  
target



# Addressing Climate Risks (1)



# Addressing Climate Risks (2)





# Investor Horizon & Similar

(I am aware of the problems of the measure)

# Climate Risk Disclosure and Investor Horizon

Shareholder activism:  
# of environmental shareholder proposals in a year

Dependent variable:	Disclosure of climate change risks <sub>t</sub>	
	(1)	(2)
Environmental shareholder activism by...		
... non-institutional shareholders <sub>t-1</sub>	0.062 (0.075)	0.063 (0.075)
... institutional shareholders <sub>t-1</sub>	0.118 (0.047)	
... institutional shareholders with long-term horizon <sub>t-1</sub>		0.151 (0.065)
... institutional shareholders with short-term horizon <sub>t-1</sub>		-0.011 (0.129)
... institutional shareholders with unknown temporal horizon <sub>t-1</sub>		0.286 (0.189)
Size <sub>t-1</sub>	-0.201 (0.282)	-0.198 (0.283)
ROA <sub>t-1</sub>	0.502 (1.626)	0.590 (1.662)
Market-to-book <sub>t-1</sub>	0.024 (0.021)	0.024 (0.022)
Leverage <sub>t-1</sub>	1.011 (0.559)	1.046 (0.560)
Cash <sub>t-1</sub>	1.450 (0.999)	1.435 (0.975)
Firm fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Adjusted R-squared	0.67	0.67
# Observations (firm-years)	1,110	1,110
# Firms	265	265

# Climate Risk Disclosure and “Climate-Conscious IO”

1 STD increase  
in *Stewardship  
code IO*  
→ 3pp  
increase in the  
propensity to  
disclose  
emissions  
(12% of mean)

	Scope 1 disclosure			Climate risk disclosure			Log(Climate disclosure score)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Stewardship code IO</i>	0.17** (0.08)			0.64** (0.28)			1.17** (0.51)		
<i>High-norms IO</i>		0.30** (0.13)			0.63** (0.29)			1.00** (0.45)	
<i>Universal owner IO</i>			0.41*** (0.08)			0.67*** (0.20)			1.28*** (0.26)
<i>Non-stewardship code IO</i>	0.04 (0.08)			-0.21 (0.30)			-0.38 (0.44)		
<i>Low-norms IO</i>		0.01 (0.11)			-0.10 (0.35)			-0.18 (0.51)	
<i>Non-universal owner IO</i>			-0.15 (0.10)			-0.27 (0.31)			-0.62 (0.50)
Sample Years	All Firms 2010-2019			All Firms 2011-2016			All Firms 2010-2015		
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry x Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	35350	35350	31059	21312	21312	20716	21168	21168	20584
Adj. R-sq.	0.291	0.291	0.290	0.252	0.251	0.249	0.304	0.303	0.301

# Climate Risk Management and Investor Horizon

	Climate-risk management				
	(1)	(2)	(3)	(4)	(5)
Climate-risk materiality	0.51*** (8.17)				0.47*** (7.41)
Climate-risk horizon		-0.05 (-0.26)			0.01 (0.05)
Medium horizon			0.86*** (3.37)		0.59* (2.02)
Long horizon			1.21*** (3.01)		0.77* (1.98)
Assets under management				0.23** (2.36)	0.17 (1.68)
ESG share (x100)	1.84*** (4.48)	2.05*** (4.71)	2.06*** (4.29)	1.95*** (3.88)	1.71*** (3.92)
Passive share (x100)	-0.04 (-0.07)	0.01 (0.03)	-0.12 (-0.23)	0.09 (0.14)	-0.04 (-0.07)
Climate-risk history	0.10*** (4.07)	0.10*** (4.24)	0.09*** (3.01)	0.10*** (3.81)	0.09*** (3.59)
Controls (Origin, Type)	Yes	Yes	Yes	Yes	Yes
N	364	363	363	364	362
Adj. R-sq.	0.175	0.143	0.148	0.155	0.182

# But Too Little Action!!!

**69%** of focus companies have now committed to achieve net zero emissions by 2050 across all or some of their emissions

**An absence of medium-term emissions reductions targets aligned with 1.5°C.**

Only 17% of focus companies have set medium-term targets which are aligned with the IEA's 1.5°C scenario and cover all material emissions.

**Continued absence of Scope 3 emissions.**

Just 42% of focus companies have comprehensive net zero by 2050 or sooner commitments that cover all material GHG emissions, including material Scope 3 emissions.

**Alignment of capex strategies with net zero transition goals remains almost non-existent.**

Only 5% of focus companies explicitly commit to align their capex plans with their long-term GHG reduction targets.

**Companies are setting emissions reduction targets but don't have the strategies to deliver them.**

Only 17% of focus companies have robust quantified decarbonisation strategies in place to reduce their GHG emissions.

# Areas of Evidence on Short-Termism

Tackling climate change

**Exploiting climate change concerns**

## MARKETS

# SEC Fines BNY Mellon Over ESG Claims

Regulator is boosting its scrutiny of funds as market grows



THE WALL STREET JOURNAL.

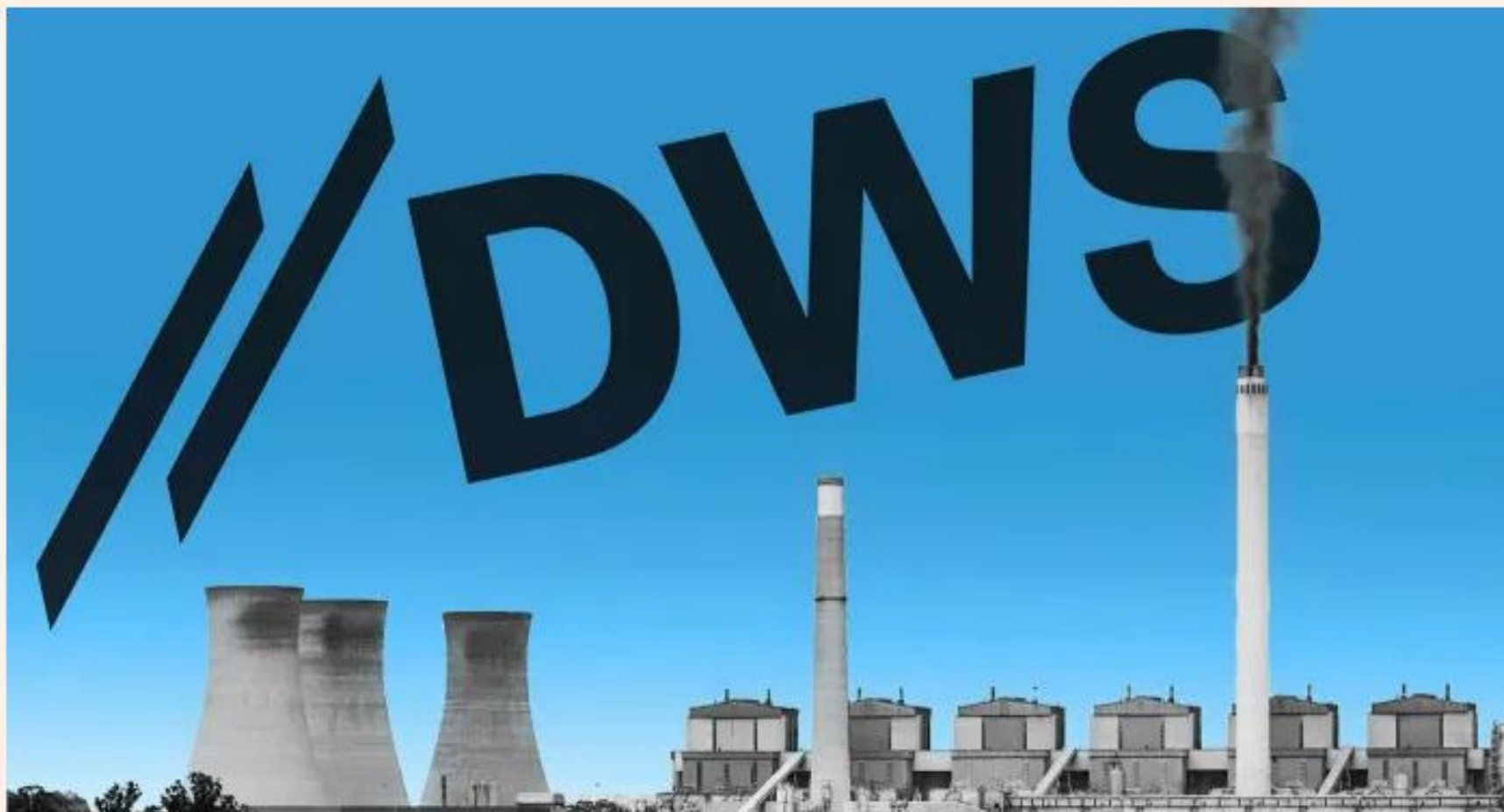
Inform  
your company's  
tech strategy  
with trusted  
facts.

CIO Journal Newsletter



# ESG's legal showdown: 'There's nothing to suggest DWS is a one off'

The boom in ESG investing is drawing regulatory scrutiny on both sides of the Atlantic



“The amount of “ESG assets” reported in its latest annual report, released in March, were 75 per cent below the €459bn it had said were “ESG integrated” a year earlier.”

“former BlackRock sustainability executive Tariq Fancy said ESG investing was little more than “marketing hype””



# Quiz: Which one is the ESG Fund?

Fund 1 - Top 10 Holdings		Fund 2 - Top 10 Holdings	
<i>AAPL</i>	<i>Apple, Inc</i>	<i>AAPL</i>	<i>Apple, Inc.</i>
<i>AXP</i>	<i>American Express</i>	<i>AMZN</i>	<i>Amazon.com</i>
<i>BLK</i>	<i>Blackrock</i>	<i>BRK.B</i>	<i>Berkshire Hathaway</i>
<i>FB</i>	<i>Facebook</i>	<i>FB</i>	<i>Facebook</i>
<i>GOOG</i>	<i>Alphabet, Inc.</i>	<i>GOOG</i>	<i>Alphabet, Inc.</i>
<i>HD</i>	<i>Home Depot</i>	<i>JNJ</i>	<i>Johnson &amp; Johnson</i>
<i>MMM</i>	<i>3M</i>	<i>JPM</i>	<i>JP Morgan</i>
<i>MSFT</i>	<i>Microsoft Corp.</i>	<i>MSFT</i>	<i>Microsoft Corp.</i>
<i>NVDA</i>	<i>Nvidia, Inc.</i>	<i>NVDA</i>	<i>Nvidia, Inc.</i>
<i>TSLA</i>	<i>Tesla, Inc.</i>	<i>TSLA</i>	<i>Tesla, Inc.</i>

**SUSA - Blackrock Ishares USA ESG Select**

**SPY - SPDR S&P 500 ETF Trust**

## ESG Fund

## Standard Fund

### Fund 1 - Top 10 Holdings

<b>AAPL</b>	<b><i>Apple, Inc</i></b>
<b>AXP</b>	<b><i>American Express</i></b>
<b>BLK</b>	<b><i>Blackrock</i></b>
<b>FB</b>	<b><i>Facebook</i></b>
<b>GOOG</b>	<b><i>Alphabet, Inc.</i></b>
<b>HD</b>	<b><i>Home Depot</i></b>
<b>MMM</b>	<b><i>3M</i></b>
<b>MSFT</b>	<b><i>Microsoft Corp.</i></b>
<b>NVDA</b>	<b><i>Nvidia, Inc.</i></b>
<b>TSLA</b>	<b><i>Tesla, Inc.</i></b>

### Fund 2 - Top 10 Holdings

<b>AAPL</b>	<b><i>Apple, Inc.</i></b>
<b>AMZN</b>	<b><i>Amazon.com</i></b>
<b>BRK.B</b>	<b><i>Berkshire Hathaway</i></b>
<b>FB</b>	<b><i>Facebook</i></b>
<b>GOOG</b>	<b><i>Alphabet, Inc.</i></b>
<b>JNJ</b>	<b><i>Johnson &amp; Johnson</i></b>
<b>JPM</b>	<b><i>JP Morgan</i></b>
<b>MSFT</b>	<b><i>Microsoft Corp.</i></b>
<b>NVDA</b>	<b><i>Nvidia, Inc.</i></b>
<b>TSLA</b>	<b><i>Tesla, Inc.</i></b>

**SUSA - Blackrock Ishares USA ESG Select**  
**Expense Ratio: 0.25%**

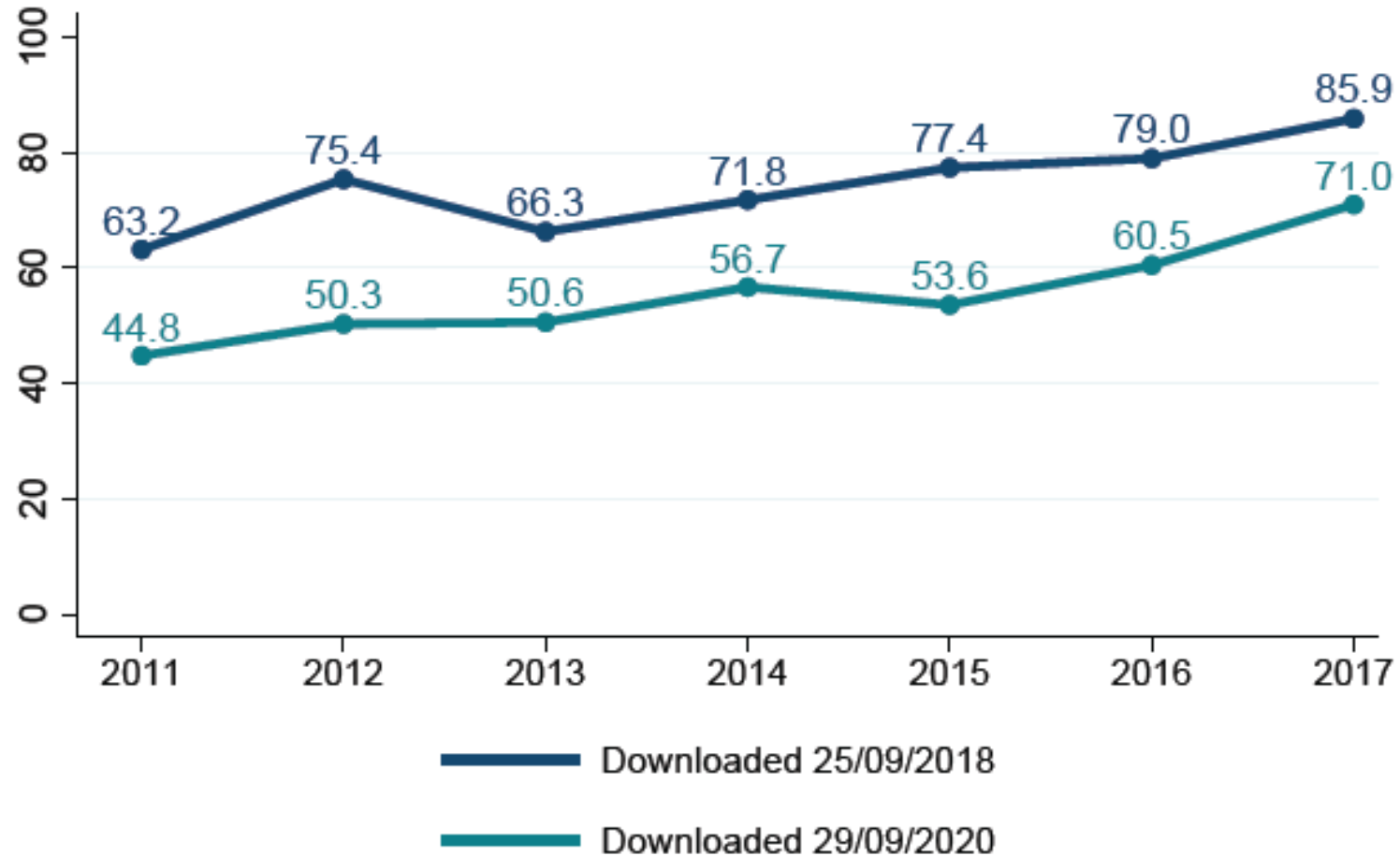
**SPY - SPDR S&P 500 ETF Trust**  
**Expense Ratio: 0.09%**

Fund 1 - Top 10 Holdings		Fund 2 - Top 10 Holdings	
<i>AAPL</i>	<i>Apple, Inc</i>	<i>AAPL</i>	<i>Apple, Inc.</i>
<i>AXP</i>	<i>American Express</i>	<i>AMZN</i>	<i>Amazon.com</i>
<i>BLK</i>	<i>Blackrock</i>	<i>BRK.B</i>	<i>Berkshire Hathaway</i>
<i>FB</i>	<i>Facebook</i>	<i>FB</i>	<i>Facebook</i>
<i>GOOG</i>	<i>Alphabet, Inc.</i>	<i>GOOG</i>	<i>Alphabet, Inc.</i>
<i>HD</i>	<i>Home Depot</i>	<i>JNJ</i>	<i>Johnson &amp; Johnson</i>
<i>MMM</i>	<i>3M</i>	<i>JPM</i>	<i>JP Morgan</i>
<i>MSFT</i>	<i>Microsoft Corp.</i>	<i>MSFT</i>	<i>Microsoft Corp.</i>
<i>NVDA</i>	<i>Nvidia, Inc.</i>	<i>NVDA</i>	<i>Nvidia, Inc.</i>
<i>TSLA</i>	<i>Tesla, Inc.</i>	<i>TSLA</i>	<i>Tesla, Inc.</i>

**ESG Fund**

**Standard Fund**

# ESG Ratings – Data Rewriting by Refinitiv

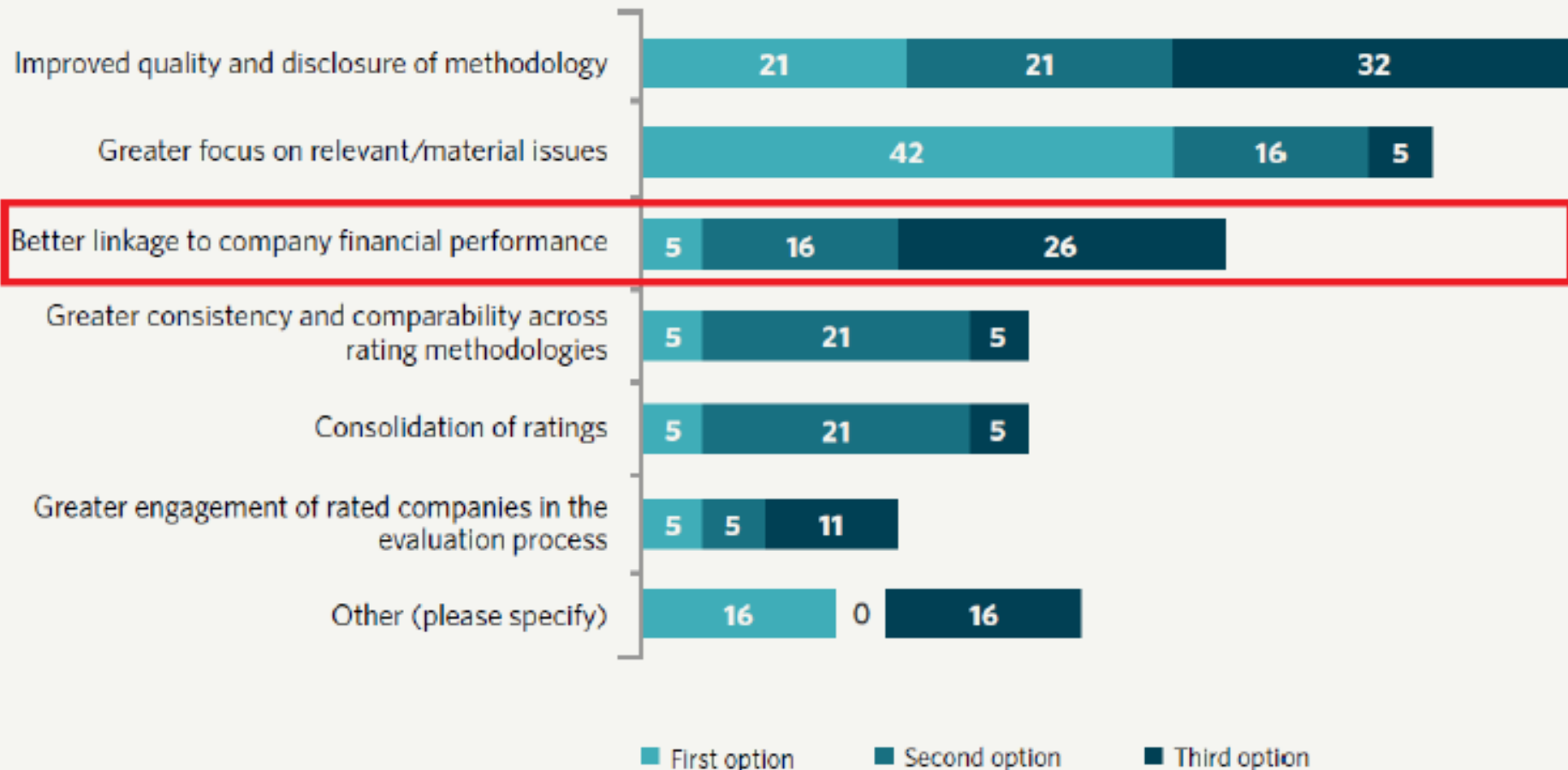


# ESG Ratings - Rewriting and Stock Returns

Data version	09/2018	09/2020	03/2021	09/2018	09/2020	03/2021
Dependent variable	<i>Future Ret.</i>	<i>Future Ret.</i>	<i>Future Ret.</i>	<i>Future Ret.</i>	<i>Future Ret.</i>	<i>Future Ret.</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>E&amp;S Score</i>	0.001 (0.06)	<b>0.031**</b> <b>(2.43)</b>	<b>0.030**</b> <b>(2.31)</b>			
<i>E&amp;S Score Top 25%</i>				0.892 (1.56)	<b>1.170**</b> <b>(2.09)</b>	<b>1.332**</b> <b>(2.33)</b>
Observations	20,874	20,874	20,874	20,874	20,874	20,874
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.12	0.12	0.12	0.12	0.12	0.12

# ESG Data Providers - Incentives

## Preferred changes and solutions in next five years



# What's the problem?

Manifestations of short-termism (-> incentives)

May undermine trust in the financial system (again)

Distrust in ESG products may lead to large ESG fund outflows, which can have large real effects on green firms

=> Capital reallocation required for the green transition will be impeded

Thank you and...

... sorry for touching upon so many diverse issues  
in 30 minutes