

**Online Appendix for “Do Investors Care about Carbon Risk?”
by Patrick Bolton and Marcin Kacperczyk**

Table A.1: Carbon Emissions: Sample Selection

Providing carbon data?	No	Yes
RET	1.221	1.149
SIZE	2648.10	12826.89
B/M	0.598	0.497
LEVERAGE	0.202	0.252
MOM	0.198	0.148
INVEST/A	0.041	0.046
LOGPPE	4.125	6.200
BETA	0.958	1.101
VOLAT	0.131	0.096
SALESGR	0.043	0.022
EPSGR	0.036	0.018

Table A.2: Carbon Emissions and Stock Returns (Reduced Controls)

The sample period is 2005-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects. Panel A (D) reports the results for the natural logarithm of firm-level total emissions; Panel B (E) reports the results for the percentage change in carbon emissions; Panel C (F) reports the results for the emission intensity. In Panels D-F, we additionally include industry-fixed effects. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions						
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	-0.009	0.022				
	(0.020)	(0.043)				
LOG (SCOPE 2 TOT)			0.002	0.079		
			(0.018)	(0.071)		
LOG (SCOPE 3 TOT)					0.017	0.116
					(0.023)	(0.078)
LOGSIZE		-0.142		-0.195		-0.228
		(0.125)		(0.156)		(0.159)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No
Observations	189,187	189,187	189,115	189,115	189,283	189,283
R-squared	0.200	0.200	0.200	0.201	0.200	0.201
Panel B: Growth rate in total emissions						
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.725***	0.724***				
	(0.229)	(0.231)				
ΔSCOPE 2			0.439**	0.439**		
			(0.190)	(0.187)		
ΔSCOPE 3					1.275**	1.283**
					(0.526)	(0.508)
LOGSIZE		-0.042		-0.044		-0.050
		(0.109)		(0.111)		(0.109)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No
Observations	156,506	156,506	156,410	156,410	156,578	156,578
R-squared	0.215	0.215	0.215	0.215	0.215	0.215

Panel C: Emission intensity

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	-0.010	-0.009				
	(0.009)	(0.010)				
SCOPE 2 INT			0.054	0.077		
			(0.169)	(0.188)		
SCOPE 3 INT					0.042	0.046
					(0.040)	(0.043)
LOGSIZE		-0.122		-0.125		-0.125
		(0.094)		(0.097)		(0.094)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No
Observations	189,283	189,283	189,283	189,283	189,283	189,283
R-squared	0.200	0.200	0.200	0.200	0.200	0.200

Panel D: Total emissions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	-0.002	0.202**				
	(0.033)	(0.079)				
LOG (SCOPE 2 TOT)			-0.016	0.211**		
			(0.033)	(0.097)		
LOG (SCOPE 3 TOT)					-0.011	0.339**
					(0.043)	(0.127)
LOGSIZE		-0.344**		-0.375*		-0.475**
		(0.154)		(0.177)		(0.199)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	189,187	189,187	189,115	189,115	189,283	189,283
R-squared	0.203	0.203	0.203	0.204	0.203	0.204

Panel E: Growth rate in total emissions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.686***	0.681***				
	(0.199)	(0.203)				
ΔSCOPE 2			0.397**	0.394**		
			(0.171)	(0.169)		
ΔSCOPE 3					1.150**	1.164**
					(0.505)	(0.488)
LOGSIZE		-0.111		-0.112		-0.118
		(0.122)		(0.124)		(0.122)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	156,506	156,506	156,410	156,410	156,578	156,578
R-squared	0.218	0.218	0.218	0.218	0.218	0.219

Panel F: Emission intensity

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	0.005	0.007				
	(0.006)	(0.005)				
SCOPE 2 INT			0.019	0.116		
			(0.049)	(0.100)		
SCOPE 3 INT					0.066	0.086
					(0.071)	(0.068)
LOGSIZE		-0.183*		-0.186*		-0.184*
		(0.099)		(0.101)		(0.099)
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	189,283	189,283	189,283	189,283	189,283	189,283
R-squared	0.203	0.203	0.203	0.203	0.203	0.203

Table A.3: Lagged Carbon Emissions and Stock Returns

The sample period is 2005-2017. The dependent variable is *RET*. The emission variables are lagged between 0 (*LAG0*) and 12 months (*LAG12*). All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects. In columns (7)-(12), we additionally include industry-fixed effects. Panels A1-A3 report the results for the natural logarithm of total firm-level emissions; Panels B1-B3 report the results for the percentage change in carbon total emissions; Panels C1-C3 report the results for carbon emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A1: Total emissions (LOG SCOPE 1 TOT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.043**						0.164***					
	(0.023)						(0.036)					
LAG1		0.034						0.125***				
		(0.023)						(0.030)				
LAG3			0.022						0.125***			
			(0.027)						(0.037)			
LAG6				0.016						0.091**		
				(0.029)						(0.037)		
LAG9					0.005						0.062	
					(0.031)						(0.043)	
LAG12						0.025						0.032
						(0.025)						(0.035)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,288	181,582	176,150	167,941	159,610	151,187	184,288	181,582	176,150	167,941	159,610	151,187
R-squared	0.203	0.199	0.203	0.210	0.217	0.218	0.206	0.202	0.206	0.213	0.220	0.221

Panel A2: Total emissions (LOG SCOPE 2 TOT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.098** (0.042)						0.167*** (0.048)					
LAG1		0.077** (0.040)						0.120** (0.039)				
LAG3			0.055 (0.041)						0.119** (0.043)			
LAG6				0.048 (0.046)						0.078 (0.046)		
LAG9					0.044 (0.047)						0.053 (0.056)	
LAG12						0.057 (0.048)						0.038 (0.048)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,216	181,508	176,072	167,857	159,520	151,091	184,216	181,508	176,072	167,857	159,520	151,091
R-squared	0.204	0.199	0.204	0.211	0.217	0.218	0.206	0.202	0.206	0.214	0.220	0.221

Panel A3: Total emissions (LOG SCOPE 3 TOT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.135** (0.046)						0.312*** (0.071)					
LAG1		0.108** (0.043)						0.232*** (0.060)				
LAG3			0.085* (0.045)						0.219*** (0.069)			
LAG6				0.072 (0.048)						0.142* (0.073)		
LAG9					0.074 (0.046)						0.120 (0.087)	
LAG12						0.078 (0.045)						0.077 (0.062)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,384	181,676	176,240	168,025	159,688	151,259	184,384	181,676	176,240	168,025	159,688	151,259
R-squared	0.204	0.199	0.203	0.211	0.217	0.218	0.206	0.202	0.206	0.214	0.220	0.221

Panel B1: Growth in total emissions (Δ SCOPE 1)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.641*** (0.153)						0.627*** (0.144)					
LAG1		0.583*** (0.125)						0.578*** (0.117)				
LAG3			0.485*** (0.145)						0.480*** (0.138)			
LAG6				0.428** (0.186)						0.422** (0.178)		
LAG9					0.122 (0.197)						0.102 (0.183)	
LAG12						0.017 (0.188)						-0.020 (0.182)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	153,051	150,360	144,956	136,779	128,458	119,975	153,051	150,360	144,956	136,779	128,458	119,975
R-squared	0.218	0.220	0.227	0.237	0.246	0.258	0.221	0.224	0.231	0.240	0.249	0.261

Panel B2: Growth in total emissions (Δ SCOPE 2)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.345** (0.125)						0.321** (0.120)					
LAG1		0.278** (0.112)						0.257** (0.109)				
LAG3			0.250** (0.125)						0.232* (0.125)			
LAG6				0.256* (0.148)						0.240 (0.152)		
LAG9					0.032 (0.134)						0.007 (0.136)	
LAG12						-0.061 (0.160)						-0.108 (0.160)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	152,955	150,264	144,860	136,683	128,362	119,879	152,955	150,264	144,860	136,683	128,362	119,879
R-squared	0.218	0.220	0.227	0.237	0.246	0.258	0.221	0.224	0.231	0.240	0.250	0.261

Panel B3: Growth in total emissions (Δ SCOPE 3)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	1.203*** (0.318)						1.186*** (0.314)					
LAG1		1.063*** (0.334)						1.055*** (0.336)				
LAG3			0.801* (0.397)						0.785* (0.400)			
LAG6				0.767 (0.521)						0.749 (0.521)		
LAG9					0.195 (0.465)						0.142 (0.462)	
LAG12						-0.059 (0.471)						-0.174 (0.468)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	153,123	150,431	145,025	136,845	128,521	120,035	153,123	150,431	145,025	136,845	128,521	120,035
R-squared	0.218	0.220	0.227	0.237	0.246	0.258	0.222	0.224	0.231	0.240	0.249	0.261

Panel C1: Emission intensity (SCOPE 1 INT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	-0.010 (0.012)						0.005 (0.006)					
LAG1		-0.008 (0.011)						0.007 (0.006)				
LAG3			-0.006 (0.011)						0.011* (0.006)			
LAG6				-0.005 (0.012)						0.016** (0.007)		
LAG9					-0.009 (0.013)						0.009 (0.007)	
LAG12						-0.005 (0.012)						0.006 (0.008)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,384	181,676	176,240	168,025	159,688	151,259	184,384	181,676	176,240	168,025	159,688	151,259
R-squared	0.203	0.199	0.203	0.211	0.217	0.218	0.206	0.202	0.206	0.213	0.220	0.221

Panel C2: Emission intensity (SCOPE 2 INT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.145 (0.121)						0.081 (0.074)					
LAG1		0.147 (0.123)						0.086 (0.075)				
LAG3			0.107 (0.105)						0.105 (0.078)			
LAG6				0.109 (0.101)						0.110 (0.082)		
LAG9					0.079 (0.104)						0.053 (0.083)	
LAG12						0.122 (0.120)						0.079 (0.103)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,384	181,676	176,240	168,025	159,688	151,259	184,384	181,676	176,240	168,025	159,688	151,259
R-squared	0.203	0.199	0.203	0.211	0.217	0.218	0.206	0.202	0.206	0.213	0.220	0.221

Panel C3: Emission intensity (SCOPE 3 INT)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
LAG0	0.055 (0.033)						0.048 (0.075)					
LAG1		0.052 (0.037)						0.024 (0.091)				
LAG3			0.041 (0.035)						0.034 (0.086)			
LAG6				0.049 (0.035)						0.087 (0.085)		
LAG9					0.046 (0.039)						0.081 (0.102)	
LAG12						0.070* (0.036)						0.155* (0.076)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/mo. F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,384	181,676	176,240	168,025	159,688	151,259	184,384	181,676	176,240	168,025	159,688	151,259
R-squared	0.203	0.199	0.203	0.211	0.217	0.218	0.206	0.202	0.206	0.213	0.220	0.221

Table A.4: Carbon Emissions and Institutional Ownership

The sample period is 2005-2017. The dependent variable in Panel A is *IO*. The dependent variables in Panel B and Panel C are *IO_BANK*, *IO_INSURANCE*, *IO_INVESTCOS*, *IO_ADVISERS*, *IO_PENSIONS*, and *IO_HFS*. Panel B presents the results for *SCOPE 3*, and Panel C presents the results for *SCOPE 12*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the industry level. All regressions include year-month fixed effects. In columns (2) and (4), we additionally include state-fixed effects. ***1% significance; **5% significance; *10% significance.

Panel A: Aggregate ownership (Total emissions)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.580 (0.488)	0.627 (0.522)				
LOG (SCOPE 2 TOT)			1.621** (0.564)	1.805*** (0.567)		
LOG (SCOPE 3 TOT)					1.532** (0.639)	1.564** (0.678)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	170,481	160,322	170,409	160,250	170,553	160,394
R-squared	0.123	0.167	0.137	0.184	0.131	0.174

Panel B: Disaggregate ownership (SCOPE 1)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 1 TOT)	0.003** (0.001)	-0.052 (0.043)	0.146* (0.067)	0.290 (0.382)	0.050** (0.022)	0.191* (0.106)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,322	160,322	160,322	160,322	160,322	160,322
R-squared	0.166	0.026	0.212	0.147	0.233	0.179

Panel C: Disaggregate ownership (SCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 2 TOT)	0.004*** (0.001)	-0.081 (0.060)	0.102 (0.114)	1.291*** (0.349)	0.125*** (0.023)	0.363** (0.151)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,250	160,250	160,250	160,250	160,250	160,250
R-squared	0.166	0.026	0.210	0.166	0.239	0.180

Panel D: Disaggregate ownership (SCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 3 TOT)	0.006** (0.002)	-0.054 (0.063)	0.116 (0.112)	1.178** (0.458)	0.137*** (0.029)	0.181 (0.188)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,394	160,394	160,394	160,394	160,394	160,394
R-squared	0.166	0.025	0.210	0.158	0.238	0.177

Panel A.2: Aggregate ownership (Growth rate in total emissions)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	-0.669 (0.594)	-0.356 (0.612)				
ΔSCOPE 2			-1.375** (0.605)	-1.270* (0.601)		
ΔSCOPE 3					-1.238 (1.669)	-0.866 (1.789)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	141,599	133,219	141,503	133,123	141,647	133,267
R-squared	0.090	0.139	0.090	0.139	0.089	0.139

Panel B.2: Disaggregate ownership (ΔSCOPE 1)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
ΔSCOPE 1	0.000 (0.003)	-0.073 (0.051)	0.241 (0.301)	-0.974* (0.535)	-0.171 (0.102)	0.621** (0.263)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	133,219	133,219	133,219	133,219	133,219	133,219
R-squared	0.190	0.026	0.180	0.122	0.192	0.174

Panel C.2: Disaggregate ownership (ΔSCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
ΔSCOPE 2	-0.006 (0.004)	-0.053 (0.035)	-0.011 (0.261)	-1.383** (0.448)	-0.223** (0.072)	0.407* (0.225)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	133,123	133,123	133,123	133,123	133,123	133,123
R-squared	0.191	0.026	0.180	0.124	0.193	0.173

Panel D2: Disaggregate ownership (ΔSCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
ΔSCOPE 3	-0.006 (0.008)	-0.088 (0.064)	0.440 (0.556)	-1.733 (1.297)	-0.455*** (0.143)	0.977** (0.402)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	133,267	133,267	133,267	133,267	133,267	133,267
R-squared	0.190	0.026	0.180	0.122	0.193	0.174

Table A.5: Carbon Emissions and Institutional Ownership: Excluding Salient Industries

The sample excludes companies in the oil & gas (*gic*=2), utilities (*gic*=65-69), and motor (*gic*=18, 19, 23) industries. The sample period is 2005-2017. Panel A presents the results for aggregate ownership for total carbon emissions, Panel B for disaggregated ownership for Scope 1, Panel C for disaggregated ownership for Scope 2, Panel D for disaggregated ownership for Scope 3. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the industry and year level. All regressions include year-month fixed effects. In columns (2), (4), and (6), we include state-fixed effects. ***1%; **5%; *10% significance.

Panel A: Aggregate ownership (Total emissions)						
Variables	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	1.299** (0.496)	1.416** (0.515)				
LOG (SCOPE 2 TOT)			1.759** (0.659)	2.006*** (0.646)		
LOG (SCOPE 3 TOT)					1.922** (0.633)	2.029*** (0.661)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	152,591	143,253	152,663	143,325	152,663	143,325
R-squared	0.145	0.190	0.147	0.195	0.146	0.190

Panel B: Disaggregate ownership (SCOPE 1)						
VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 1 TOT)	0.004** (0.002)	-0.046 (0.054)	0.138 (0.088)	0.974** (0.342)	0.099*** (0.023)	0.248* (0.137)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	143,253	143,253	143,253	143,253	143,253	143,253
R-squared	0.156	0.028	0.213	0.174	0.239	0.167

Panel C: Disaggregate ownership (SCOPE 2)						
VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 2 TOT)	0.004*** (0.001)	-0.099 (0.073)	0.134 (0.124)	1.375*** (0.412)	0.143*** (0.024)	0.449** (0.162)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	143,325	143,325	143,325	143,325	143,325	143,325
R-squared	0.156	0.029	0.212	0.179	0.241	0.170

Panel D: Disaggregate ownership (SCOPE 3)						
VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 3 TOT)	0.006** (0.002)	-0.058 (0.065)	0.159 (0.108)	1.554*** (0.421)	0.155*** (0.029)	0.214 (0.209)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	143,325	143,325	143,325	143,325	143,325	143,325
R-squared	0.156	0.027	0.212	0.179	0.240	0.165

Panel A.2: Aggregate ownership (Growth rate in total emissions)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Δ SCOPE 1	-0.927 (0.768)	-0.679 (0.734)				
Δ SCOPE 2			-1.176 (0.742)	-1.032 (0.664)		
Δ SCOPE 3					-1.498 (2.028)	-1.212 (2.006)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	125,888	118,117	125,936	118,165	125,936	118,165
R-squared	0.094	0.140	0.095	0.140	0.094	0.140

Panel B.2: Disaggregate ownership (SCOPE 1)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
Δ SCOPE 1	0.001 (0.003)	-0.066 (0.058)	0.162 (0.339)	-0.994 (0.557)	-0.177 (0.102)	0.395** (0.174)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	118,117	118,117	118,117	118,117	118,117	118,117
R-squared	0.179	0.029	0.180	0.128	0.195	0.160

Panel C.2: Disaggregate ownership (SCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
Δ SCOPE 2	-0.009* (0.005)	-0.032 (0.036)	-0.031 (0.304)	-1.106** (0.478)	-0.248*** (0.079)	0.394* (0.201)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	118,165	118,165	118,165	118,165	118,165	118,165
R-squared	0.179	0.029	0.180	0.128	0.196	0.160

Panel D.2: Disaggregate ownership (SCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
Δ SCOPE 3	-0.009 (0.010)	-0.079 (0.071)	0.547 (0.659)	-1.678 (1.272)	-0.442** (0.155)	0.449 (0.489)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	118,165	118,165	118,165	118,165	118,165	118,165
R-squared	0.179	0.029	0.180	0.128	0.196	0.160

Table A.6: Carbon Emissions and Legacy Stock Returns: Sub-Periods

The sample is restricted to firms that show up in the data prior to 2016. The sample periods are 2005-2015 and 2016-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year-month level. All regressions include year-month fixed effects and industry-fixed effects. Panel A reports the results for the natural logarithm of total emissions; Panel B reports the results for the percentage change in carbon emissions; Panel C reports the results for carbon emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.127*** (0.037)			-0.003 (0.060)		
LOG (SCOPE 2 TOT)		0.127*** (0.042)			-0.019 (0.048)	
LOG (SCOPE 3 TOT)			0.265*** (0.086)			-0.071 (0.104)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	121,694	121,622	121,778	25,753	25,753	25,765
R-squared	0.268	0.269	0.269	0.135	0.135	0.135
Panel B: Growth rate in total emissions						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.610*** (0.161)			0.199 (0.258)		
ΔSCOPE 2		0.265*** (0.097)			-0.011 (0.190)	
ΔSCOPE 3			1.259*** (0.355)			0.272 (0.623)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	108,888	108,804	108,948	25,753	25,741	25,765
R-squared	0.278	0.279	0.279	0.135	0.135	0.135
Panel C: Emission intensity						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	0.005 (0.007)			0.017 (0.020)		
SCOPE 2 INT		0.091 (0.094)			0.106 (0.099)	
SCOPE 3 INT			0.030 (0.091)			-0.113 (0.103)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	121,778	121,778	121,778	25,765	25,765	25,765
R-squared	0.268	0.268	0.268	0.135	0.135	0.135

Table A.7: Difference-in-Differences: Balance Test

The sample is the treatment and control firms that enter the difference-in-differences test in Table 15 (Panel A). The table reports the average characteristics in the pre-period for the treatment defined based on 75th percentile of scope 1 total emissions. The control sample is constructed using nearest neighbor approach. Difference is the sample difference between the average values of characteristics for the treatment and control group. All controls are defined in Table 1. ***1% significance; **5% significance; *10% significance.

Average in Pre-Period	Treatment	Control	Difference
SIZE	9.963	9.344	0.619*
B/M	0.789	0.572	0.217**
LEVERAGE	0.340	0.316	0.024
MOM	-0.040	-0.040	0.000
INVEST/A	0.067	0.071	-0.005
ROE	4.513	13.190	-8.678**
HHI	0.661	0.712	-0.051
LOGPPE	9.516	8.518	0.999*
BETA	0.933	0.947	-0.014
VOLAT	0.098	0.079	0.020
SALESGR	-0.058	-0.131	0.073
EPSGR	-0.100	-0.099	-0.002

Table A.8: Carbon Emissions and Stock Returns (Excluding Financial Crisis)

The sample period is 2005-2017 excluding the financial crisis of Aug 2007-July 2009. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects. In columns (4) through (6), we additionally include industry-fixed effects. Panel A reports the results for the natural logarithm of total firm-level emissions; Panel B reports the results for the percentage change in carbon total emissions; Panel C reports the results for carbon emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions						
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.025 (0.022)			0.164*** (0.038)		
LOG (SCOPE 2 TOT)		0.088*** (0.027)			0.178*** (0.046)	
LOG (SCOPE 3 TOT)			0.127** (0.042)			0.324*** (0.068)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	Yes	Yes	Yes
Observations	162,937	162,884	163,016	162,937	162,884	163,016
R-squared	0.162	0.162	0.162	0.165	0.165	0.166

Panel B: Growth rate in total emissions						
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.583*** (0.161)			0.589*** (0.149)		
ΔSCOPE 2		0.340** (0.138)			0.323** (0.136)	
ΔSCOPE 3			1.148*** (0.298)			1.172*** (0.289)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	Yes	Yes	Yes
Observations	132,042	131,963	132,095	132,042	131,963	132,095
R-squared	0.168	0.168	0.168	0.172	0.172	0.172

Panel C: Emission intensity

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	-0.013 (0.011)			0.007 (0.008)		
SCOPE 2 INT		0.105 (0.126)			0.048 (0.066)	
SCOPE 3 INT			0.048 (0.036)			0.066 (0.071)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	Yes	No	Yes	Yes	Yes
Observations	163,016	163,016	163,016	163,016	163,016	163,016
R-squared	0.162	0.162	0.162	0.165	0.165	0.165

Table A.9: Carbon Emissions and Stock Returns (Alternative Industry Specification)

The sample period is 2005-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects and industry-fixed effects at the GIC 6 level. ***1% significance; **5% significance; *10% significance.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
LOG (SCOPE 1 TOT)	0.070** (0.026)								
LOG (SCOPE 2 TOT)		0.106** (0.049)							
LOG (SCOPE 3 TOT)			0.221*** (0.060)						
ΔSCOPE 1				0.629*** (0.140)					
ΔSCOPE 2					0.341** (0.126)				
ΔSCOPE 3						1.212*** (0.335)			
SCOPE 1 INT							-0.006 (0.006)		
SCOPE 2 INT								0.046 (0.087)	
SCOPE 3 INT									0.021 (0.039)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GIC Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	184,288	184,216	184,384	153,051	152,955	153,123	184,384	184,384	184,384
R-squared	0.205	0.205	0.205	0.220	0.220	0.220	0.205	0.205	0.205

Table A.10: Carbon Emissions and Stock Returns: Sub-Periods (Excluding Salient Industries)

The sample excludes companies in the oil & gas (*gic*=2), utilities (*gic*=65-69), and motor (*gic*=18, 19, 23) industries. The sample periods are 2005-2015 and 2016-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year-month level. All regressions include year-month fixed effects and industry-fixed effects. Panel A reports the results for the natural logarithm of total emissions; Panel B reports the results for the percentage growth of total emissions; Panel C reports the results for emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.134*** (0.046)			0.220** (0.087)		
LOG (SCOPE 2 TOT)		0.193*** (0.058)			0.277** (0.101)	
LOG (SCOPE 3 TOT)			0.265*** (0.097)			0.359*** (0.111)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	106,676	106,748	106,760	57,418	57,418	57,430
R-squared	0.283	0.283	0.283	0.118	0.118	0.119
Panel B: Growth rate in total emissions						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.605*** (0.170)			0.583*** (0.200)		
ΔSCOPE 2		0.390*** (0.125)			0.541*** (0.159)	
ΔSCOPE 3			1.610*** (0.419)			1.135*** (0.336)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	95,557	95,617	95,617	39,965	39,953	39,977
R-squared	0.294	0.294	0.294	0.092	0.092	0.092
Panel C: Emission intensity						
VARIABLES	2005-2015			2016-2017		
	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	0.005 (0.023)			-0.041 (0.052)		
SCOPE 2 INT		0.252* (0.147)			-0.066 (0.252)	
SCOPE 3 INT			0.175 (0.112)			0.041 (0.141)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	106,760	106,760	106,760	57,430	57,430	57,430
R-squared	0.283	0.283	0.283	0.118	0.118	0.118

Table A.11: Carbon Emissions and Stock Returns: Disclosed versus Estimated Emissions

Imputed includes all firms for which Trucost estimates the levels of emissions. Direct includes all firms for which data is directly available. The sample period is 2005-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects and industry-fixed effects. Panel A reports the results for the natural logarithm of total emissions; Panel B reports the results for the percentage growth of total emissions; Panel C reports the results for emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions						
VARIABLES	Disclosed			Estimated		
	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.092*			0.153***		
	(0.045)			(0.045)		
LOG (SCOPE 2 TOT)		-0.010			0.161**	
		(0.049)			(0.057)	
LOG (SCOPE 3 TOT)			0.305**			0.219**
			(0.138)			(0.084)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,388	28,316	28,436	122,775	122,787	122,823
R-squared	0.268	0.269	0.268	0.219	0.219	0.219
Panel B: Growth rate in total emissions						
VARIABLES	Disclosed			Estimated		
	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.005			0.775***		
	(0.234)			(0.116)		
ΔSCOPE 2		-0.073			0.451***	
		(0.141)			(0.142)	
ΔSCOPE 3			0.860**			1.368***
			(0.376)			(0.282)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,376	28,304	28,436	122,811	122,787	122,823
R-squared	0.268	0.269	0.268	0.219	0.219	0.219
Panel C: Emission intensity						
VARIABLES	Disclosed			Estimated		
	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	-0.001			0.011		
	(0.005)			(0.007)		
SCOPE 2 INT		-0.151			0.144	
		(0.122)			(0.138)	
SCOPE 3 INT			-0.129			0.110
			(0.106)			(0.098)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,436	28,436	28,436	122,823	122,823	122,823
R-squared	0.268	0.268	0.268	0.219	0.219	0.219

Table A.12: Carbon Emissions and Stock Returns: All Scopes

The sample period is 2005-2017. The dependent variable is *RET. SCOPE TOT* is a sum of *SCOPE 1 TOT*, *SCOPE 2 TOT*, and *SCOPE 3 TOT*. *TOT SCOPE INT* is a sum of *SCOPE 1 INT*, *SCOPE 2 INT*, and *SCOPE 3 INT*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the firm and year level. All regressions include year-month fixed effects and industry-fixed effects. ***1% significance; **5% significance; *10% significance.

VARIABLES	(1)	(2)	(3)	(4)
LOG (SCOPE TOT)	0.107** (0.036)	0.288*** (0.062)		
TOT SCOPE INT			-0.004 (0.010)	0.005 (0.006)
Controls	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes
Industry F.E.	No	Yes	No	Yes
Observations	184,384	184,384	184,384	184,384
R-squared	0.204	0.206	0.203	0.206

Table A.13: Carbon Emissions and Institutional Ownership: Salient Industries

The sample excludes companies in the oil & gas (*gic*=2), utilities (*gic*=65-69), and motor (*gic*=18, 19, 23) industries. The sample period is 2005-2017. Panel A presents the results for aggregate ownership for total carbon emissions, Panel B for disaggregated ownership for Scope 1, Panel C for disaggregated ownership for Scope 2, Panel D for disaggregated ownership for Scope 3. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the industry and year level. All regressions include year-month fixed effects. In columns (2), (4), and (6), we include state-fixed effects. ***1%; **5%; *10% significance.

Panel A: Aggregate ownership (Total emissions)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.340 (1.286)	0.014 (0.948)				
LOG (SCOPE 2 TOT)			-0.231 (0.432)	-0.686 (0.387)		
LOG (SCOPE 3 TOT)					-1.690 (1.722)	-2.173** (0.723)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	17,892	17,070	17,748	16,926	17,892	17,070
R-squared	0.137	0.340	0.137	0.341	0.146	0.354

Panel B: Disaggregate ownership (SCOPE 1)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Banks	Insurance	Invest. Cos.	Advisers	Pensions	Hedge Funds
LOG (SCOPE 1 TOT)	0.003 (0.003)	-0.013* (0.007)	0.336 (0.371)	-0.895* (0.482)	0.021 (0.036)	0.563 (0.427)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,070	17,070	17,070	17,070	17,070	17,070
R-squared	0.377	0.215	0.318	0.316	0.414	0.351

Panel C: Disaggregate ownership (SCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 2 TOT)	0.006** (0.002)	0.013 (0.008)	-0.171 (0.194)	-0.043 (0.319)	0.048 (0.042)	-0.540 (0.352)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	16,926	16,926	16,926	16,926	16,926	16,926
R-squared	0.381	0.215	0.316	0.303	0.415	0.350

Panel D: Disaggregate ownership (SCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
LOG (SCOPE 3 TOT)	-0.002 (0.004)	-0.003 (0.004)	-0.695** (0.313)	-1.476*** (0.415)	-0.006 (0.068)	0.009 (0.515)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17,070	17,070	17,070	17,070	17,070	17,070
R-squared	0.377	0.211	0.322	0.320	0.413	0.345

Panel A.2: Aggregate ownership (Growth rate in total emissions)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	2.386 (1.515)	2.280 (1.442)				
ΔSCOPE 2			-0.191 (1.162)	0.572 (1.068)		
ΔSCOPE 3					2.435 (2.318)	3.055 (2.100)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	15,713	15,103	15,569	14,959	15,713	15,103
R-squared	0.136	0.369	0.134	0.362	0.134	0.368

Panel B.2: Disaggregate ownership (SCOPE 1)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
ΔSCOPE 1	0.000 (0.006)	-0.019 (0.019)	0.519 (0.553)	-0.054 (1.050)	0.078 (0.119)	1.756 (1.006)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,103	15,103	15,103	15,103	15,103	15,103
R-squared	0.414	0.212	0.316	0.315	0.389	0.355

Panel C.2: Disaggregate ownership (SCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
Δ SCOPE 2	0.004 (0.006)	-0.019** (0.008)	0.203 (0.524)	-0.265 (0.646)	0.000 (0.039)	0.650 (0.467)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,959	14,959	14,959	14,959	14,959	14,959
R-squared	0.413	0.212	0.315	0.310	0.388	0.350

Panel D.2: Disaggregate ownership (SCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
Δ SCOPE 3	0.011 (0.010)	-0.056** (0.021)	0.067 (1.516)	-0.191 (1.697)	-0.176* (0.091)	3.400*** (0.807)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,103	15,103	15,103	15,103	15,103	15,103
R-squared	0.414	0.213	0.315	0.315	0.389	0.358

Table A.14: Carbon Emissions and Institutional Ownership (Logs)

The sample period is 2005-2017. The dependent variable in Panel A is IO. The dependent variables in Panel B, Panel C, and Panel D are IO_BANK , $IO_INSURANCE$, $IO_INVESTCOS$, $IO_ADVISERS$, $IO_PENSIONS$, and IO_HFS . All ownership variables are rescaled using the natural logarithm transformation. Panels A-D present the result for emission intensity. Panel B presents the results for *SCOPE 1*, Panel C presents the results for *SCOPE 2*, and Panel D presents the results for *SCOPE 3*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the industry and year level. All regressions include year-month fixed effects. In Panel A, columns (2), (4), and (6) additionally include state-fixed effects. All regressions in Panels B-D include state fixed effects. ***1% significance; **5% significance; *10% significance.

Panel A: Aggregate ownership (Emission intensity)

Variables	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	-0.002* (0.001)	-0.003** (0.001)				
SCOPE 2 INT			-0.028 (0.042)	-0.033 (0.044)		
SCOPE 3 INT					0.006 (0.009)	0.001 (0.010)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	No	Yes	No	Yes	No	Yes
Observations	170,665	160,493	170,665	160,493	170,665	160,493
R-squared	0.161	0.171	0.160	0.171	0.160	0.170

Panel B: Disaggregate ownership (SCOPE 1)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
SCOPE 1 INT	0.001** (0.000)	-0.001** (0.001)	0.002* (0.001)	-0.006*** (0.001)	-0.001 (0.001)	-0.001 (0.002)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,493	160,493	160,493	160,493	160,493	160,493
R-squared	0.283	0.079	0.263	0.198	0.423	0.184

Panel C: Disaggregate ownership (SCOPE 2)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
SCOPE 2 INT	0.008*	-0.023*	-0.018	-0.022	0.010	0.004
	(0.004)	(0.012)	(0.035)	(0.039)	(0.025)	(0.043)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,493	160,493	160,493	160,493	160,493	160,493
R-squared	0.283	0.080	0.263	0.193	0.423	0.184

Panel D: Disaggregate ownership (SCOPE 3)

VARIABLES	(1) Banks	(2) Insurance	(3) Invest. Cos.	(4) Advisers	(5) Pensions	(6) Hedge Funds
SCOPE 3 INT	0.003*	0.004	0.009	0.005	0.012	-0.016
	(0.001)	(0.006)	(0.007)	(0.011)	(0.007)	(0.013)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
State fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	160,493	160,493	160,493	160,493	160,493	160,493
R-squared	0.284	0.079	0.263	0.193	0.424	0.185

Table A.15: Carbon Emissions and Legacy Stock Returns

The sample is restricted to firms that show up in the data prior to 2016. The sample period is 2005-2017. The dependent variable is *RET*. All variables are defined in Table 1. We report the results of the pooled regression with standard errors clustered at the industry level. All regressions include year-month fixed effects. In columns (4)-(6), we additionally include industry-fixed effects. Panel A reports the results for the natural logarithm of total emissions; Panel B reports the results for the percentage change in carbon emissions; Panel C reports the results for carbon emission intensity. ***1% significance; **5% significance; *10% significance.

Panel A: Total emissions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
LOG (SCOPE 1 TOT)	0.038			0.109**		
	(0.026)			(0.038)		
LOG (SCOPE 2 TOT)		0.079			0.109*	
		(0.054)			(0.051)	
LOG (SCOPE 3 TOT)			0.083			0.219*
			(0.054)			(0.101)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	Yes	Yes	Yes
Observations	147,447	147,375	147,543	147,447	147,375	147,543
R-squared	0.242	0.242	0.242	0.245	0.245	0.245

Panel B: Growth rate in total emissions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
ΔSCOPE 1	0.526*** (0.138)			0.519*** (0.126)		
ΔSCOPE 2		0.229** (0.089)			0.206** (0.075)	
ΔSCOPE 3			1.040** (0.353)			1.019** (0.335)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	Yes	Yes	Yes
Observations	134,641	134,545	134,713	134,641	134,545	134,713
R-squared	0.248	0.248	0.248	0.252	0.252	0.252

Panel C: Emission intensity

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
SCOPE 1 INT	-0.004 (0.010)			0.009 (0.006)		
SCOPE 2 INT		0.133 (0.114)			0.084 (0.082)	
SCOPE 3 INT			0.035 (0.030)			0.043 (0.078)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/month F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	No	No	No	Yes	Yes	Yes
Observations	147,543	147,543	147,543	147,543	147,543	147,543
R-squared	0.242	0.242	0.242	0.245	0.245	0.245