

16th June 2021

**The role of ESG Identity in
corporate resilience during
Covid-19, ESG news and
disclosures**



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A Global View of Corporate Resilience and Response During COVID-19

Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. *Forthcoming in the Journal of Applied Corporate Finance.*

Definition and Hypothesis

Definition of Resilience

- Capacity to recover quickly from difficulties; or the ability to withstand negative effects from a negative shock.
- We measure resilience using stock returns during the crisis period from February 20th to March 23rd

Our Hypothesis

Firms with more positive public sentiment for the way they respond to the COVID-19 crisis and their effects on employees, suppliers, and customers will outperform during market collapse.

Corporate Responses and Stakeholder Theory

Firms

Theoretical background and related literatures

- Stakeholder theories, legitimacy & credibility theory, and signaling theory
- Redeployment of strategic resources following changes in the external environment
- Organizational adaptability and dynamic capabilities

Firm's stakeholders

Suppliers

Employees

Customers

Firm's actions

Supply Chain
management

Human capital and
labor practices

Products &
Services

Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. *Working paper available on SSRN.*

Corporate Response to COVID-19

More negative than positive coverage

Associated Press

United Airlines reduces U.S. flights, asks workers to take unpaid leave amid coronavirus outbreak

Published: March 4, 2020 at 5:48 p.m. ET

BUSINESS NEWS FEBRUARY 27, 2020

5 Tyson employees have died of COVID-19, as hundreds of slaughterhouse workers fall ill. Tyson still does not offer paid sick leave.

ECONOMY

To Avoid Charges of Price Gouging, eBay Bans Sale of Coronavirus Supplies

Attempts to impose low prices on emergency supplies often do far more harm than good.

Mylan warns of possible drug shortages, financial hit due to coronavirus

Guards: GEO stiffs employees infected with COVID-19

Crew are stuck on Miami cruise ships with COVID-19 spreading. Some aren't being paid.

Source: JUST Capital, Delaware Times, Miami Herald, Reuters, Associated Press, Reason.com.

Corporate Responses to COVID-19

But also positive

Human capital

Starbucks

- **Catastrophe pay:** In addition to existing benefits such as sick pay and personal time off, pay all partners until May 3rd, even if they choose to stay home. Beginning May 4, Catastrophe Pay extended through May 31 for partners diagnosed or exposed to COVID-19. Continue Catastrophe Pay available for partners whose stores closed during May.
- Starbucks Service Pay: **additional \$3 per hour for shifts** worked as scheduled March 21-May 31.
- **Hardship grants, childcare, mental health.**

Supply chain

Walmart

- **Waiving rent** for all property partners for the month of April, as well as for the hundreds of eye doctors who operate at Sam's Clubs.
- More than two-thirds of 18,000 suppliers SMEs. Changes to Supply Chain financing program, which **allows qualified suppliers get payments from Walmart faster**. Speeding up on-boarding process, eliminating eligibility requirement.

Products & Services

United Health

- **Telehealth access expanded** and in-network cost-sharing waived.
- **Waived cost-sharing for COVID-19 testing**, testing-related visit and treatment for Medicare Advantage, Medicaid, Individual and Group Market fully insured health plan members until May 31.
- **Accelerate** nearly \$2 billion in payments and other financial support **to care providers**.
- **Introducing a coronavirus test that patients can self-administer**, which could reduce the risk to health-care workers. The test calls for patients to swab their noses, drop the swab into test tubes, and hand the tubes back to the health-care workers.

Source: UNC.com, Starbucks.com, Walmart.com

Key Measures

Company-level:

Crisis Response

Human Capital (HC)

Company's actions on layoffs, WFH, paid sick leave, etc.

Supply Chain (SC)

Company's actions on SME suppliers, stoppages, supply of goods, etc.

Products & Services (PS)

Company's actions to produce crisis-driven in-demand products or services.

News Coverage

News Salience

Natural logarithm of one plus the number of COVID-19-specific documents tagged to a company relative to the company's market capitalization.

Industry-level:

- Routine tasks, large spikes in unemployment, and business type

Country-level:

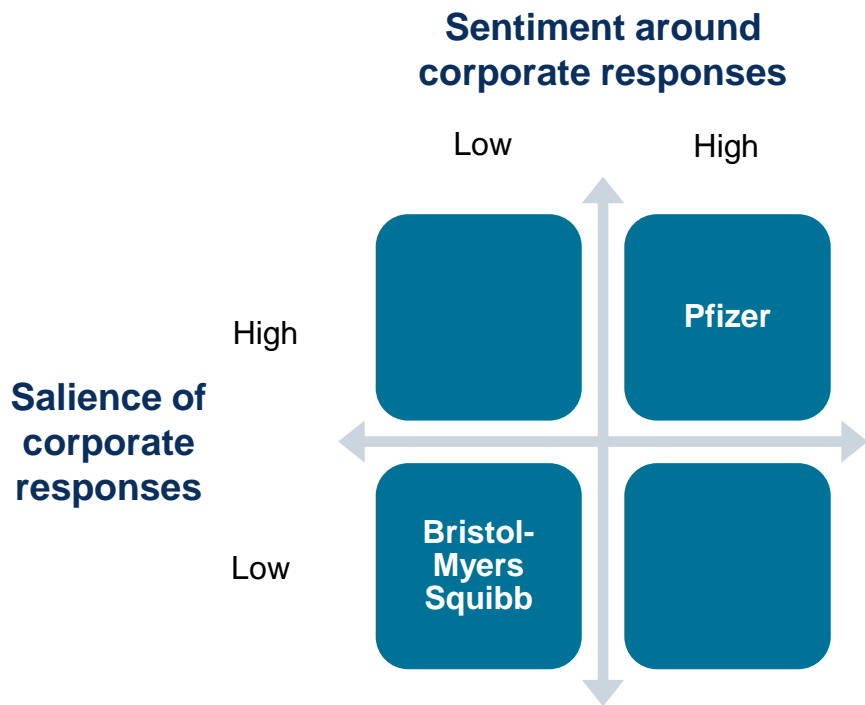
- Customer satisfaction and talent development

Note: All metrics describe the period of February 12th and March 24th, 2020. Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. Working paper available on SSRN.

Crisis Response

Example

Industry
adjusted
returns



Pfizer

- Repurposing manufacturing capabilities to scale any vaccine deployment
- Early mover within industry requiring workers to WFH.
- Committed to working with small biotech firms and on Mar. 17 partnered with BioNTech on a vaccine.

7.3%

Bristol-Myers Squibb

- The company manufactures three key drugs (including ozanimod) in Europe and the FDA was discussing postponing “most foreign inspections through April.” After a major acquisition of Celgene, the company did not discuss reorganizing operations.

-0.7%

Difference in returns

8%

Note: We present the industry adjusted returns for our sample period of Feb. 20th through March 23rd, 2020. The actual returns Pfizer (-21.4%) and Bristol-Myers Squibb (-29.4%) have the same 8% difference in performance. Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. *Working paper available on SSRN*. Source data and news: Truvalue Labs, MSCI market data, State Street Global Markets, AP, Investors Business Daily.

Research Design

Sample:

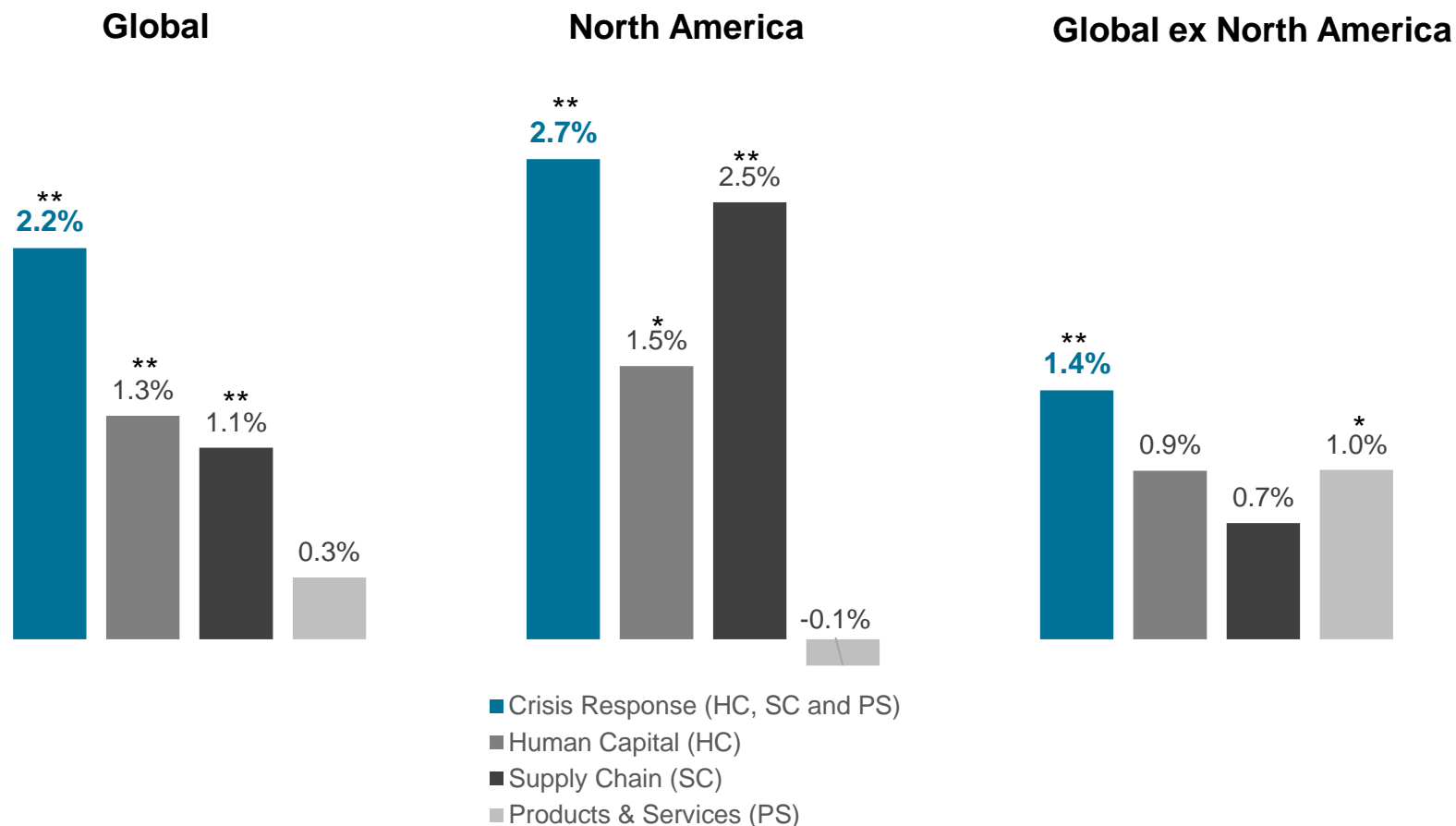
- 3,078 global listed equities representing \$58.7 trillion in market value across 47 countries as of February 19th

$$\begin{aligned} \text{Crisis Return}_i = & \alpha + \beta_1 \text{Crisis Response}(\text{HC} + \text{SC} + \text{PS})_i + \beta_2 \text{Lagged flow}_i + \\ & \beta_3 \text{Lagged return}_i + \beta_4 \text{Lagged holding}_i + \beta_5 \text{ROE}_i + \beta_6 \text{E/P}_i + \beta_7 \text{BTM}_i + \beta_8 \text{Momentum}_i + \\ & \beta_9 \text{Dividend yield}_i + \beta_{10} \text{Market Cap}_i + \beta_{11} \text{Leverage}_i + \beta_{12} \text{EPS Forecast revision}_i + \\ & \beta_{13} \text{Liquidity}_i + (\beta_{14} \text{Economy}_i) + \text{Country, Industry or Subindustry Fixed Effects} + \varepsilon_i \end{aligned}$$

Note: Where ESG characteristics are Human Capital “HC”, Supply Chain “SC” and Operational Crisis Management “OP.” Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. *Working paper available on SSRN.*

Crisis Return Premium on Corporate Responses

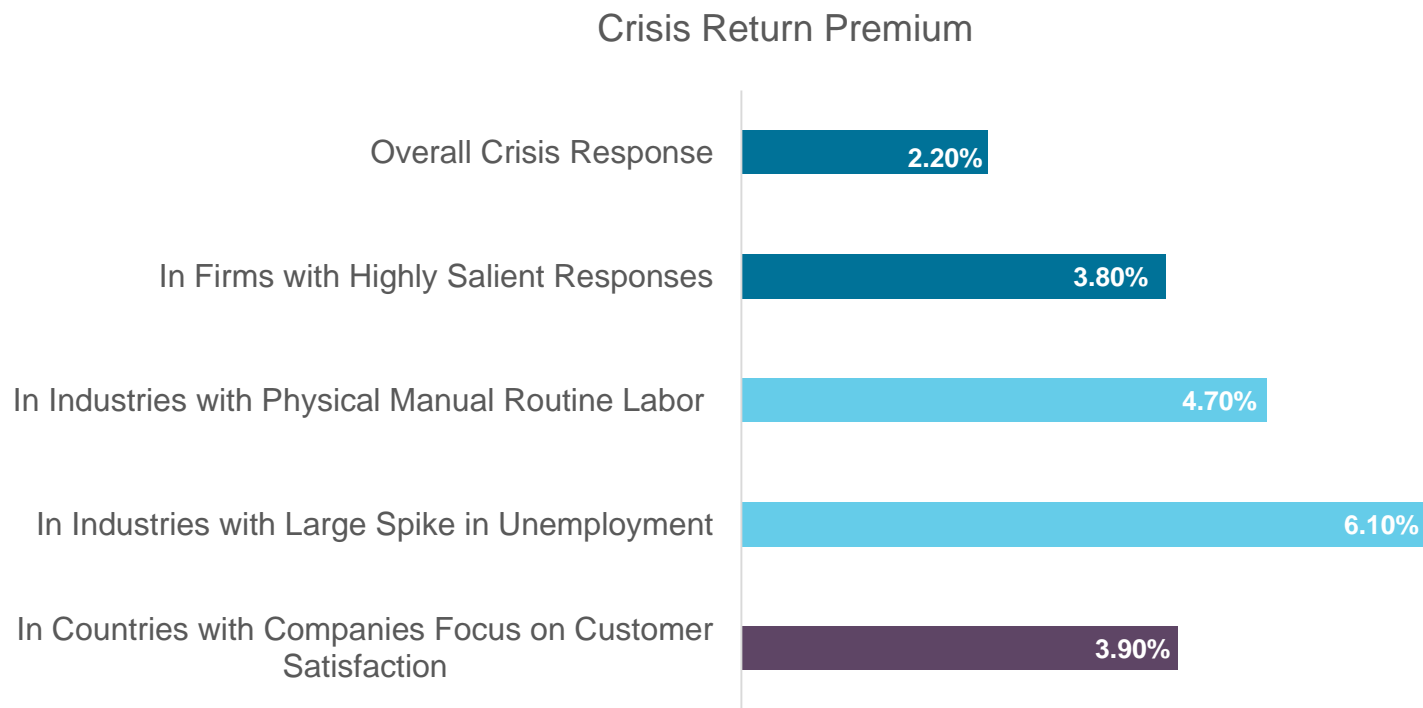
From February 20th to March 23rd



Note: We present the industry adjusted returns for our sample period of Feb. 20th through March 23rd, 2020. ** indicate level of significance at 5% level. * indicate level of significance at 10% level. Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. Working paper available on SSRN. Source Data: Truvalue Labs, MSCI market data, State Street Global Markets

Amplifiers of Corporate Responses During the Crisis

Global Sample



Source: Alexander Cheema-Fox, Bridget R. LaPerla, George Serafeim and Hui Wang. 2020. Corporate Resilience and Response During COVID-19. *Working paper available on SSRN*. Source Data: IMD World Competitiveness Yearbook 2019, US Bureau of Labor Statistics, Truvalue Labs, MSCI market data, State Street Global Markets

Which ESG News Does the Market React to?

Serafeim, George, and Aaron Yoon. “Which Corporate ESG News Does the Market React To?”
Harvard Business School Working Paper, No. 21-079, January 2020.

Sample by Sector and ESG Theme

Sectors	All Obs.	Material Obs.	Social Capital	Human Capital	Natural Capital	Sustainability Leadership & Governance	Business Model & Social Innovation
Energy	6,557	3,679	195	931	1,403	506	200
Materials	6,329	2,393	437	288	329	214	432
Industrials	11,099	2,749	450	588	474	380	443
Consumer Discretionary	18,008	6,730	4,589	1,494	1,517	1,008	1,805
Consumer Staples	10,820	4,841	1,959	546	366	441	301
Healthcare	19,102	12,076	4,159	319	105	747	65
Financials	7,567	1,869	561	589	134	986	180
Information Technology	18,771	6,785	2,798	694	524	1,063	2,082
Communication Services	8,493	3,649	1,965	636	229	1,838	395
Utilities	3,678	1,559	36	151	526	105	258
Real Estate	596	100	27	7	16	4	10
Total	111,020	46,430	17,176	6,243	5,623	7,292	6,171

Source: Serafeim, George, and Aaron Yoon. "Which Corporate ESG News Does the Market React To?" Harvard Business School Working Paper, No. 21-079, January 2020.

Market Reaction

All Observations

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	-0.000293 [-0.188]	-0.000594 [-0.611]	0.000500 [0.372]	0.000153 [0.197]	0.002327* [1.696]
Positive News	0.000421 [0.768]	0.000733** [2.076]	0.003198*** [4.799]	0.000116 [0.370]	0.000225 [0.393]

Observations on Material Issues

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	0.002897 [1.296]	-0.000343 [-0.236]	-0.001087 [-0.544]	0.000249 [0.218]	0.002810 [1.429]
Positive News	0.001646 [1.609]	0.001473** [2.157]	0.006036*** [4.497]	-0.000062 [-0.107]	0.000756 [0.810]

Observations on Immaterial Issues

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	-0.002079 [-1.271]	0.000513 [0.502]	0.000561 [0.415]	0.000406 [0.498]	0.001557 [0.858]
Positive News	-0.000170 [-0.289]	0.000647** [1.981]	0.000766 [1.616]	0.000216 [0.645]	0.000062 [0.096]

Note: The news data are from TruValue Labs, where the volume of articles is at least three. An issue is classified as material for this industry by the Sustainability Accounting Standards Board (SASB). The dependent variable is the market-adjusted return over the days relative to the date of the news (i.e., -5, -2 is cumulative firm returns between five and two days before the news minus cumulative value-weighted market returns). Positive (negative) news takes the value of one for a firm–date if the news score by TVL is 75 or more (25 or less). All models include industry and date fixed effects. Standard errors are robust to heteroscedasticity and clustered at the firm level. ***, **, * are statistically significant at the 1, 2, and 5% levels, respectively. Source: Serafeim, George, and Aaron Yoon. “Which Corporate ESG News Does the Market React To?” Harvard Business School Working Paper, No. 21-079, January 2020.

Market Adjusted Results by Theme

Social Capital

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	-0.005369** [-2.057]	-0.002321 [-1.472]	-0.010715** [-2.558]	0.000048 [0.047]	0.001873 [1.087]
Positive News	-0.000501 [-0.269]	0.003242** [1.987]	0.018651*** [4.118]	0.002148* [1.807]	0.000594 [0.379]
Intercept	-0.000799 [-1.483]	-0.000414 [-1.448]	0.001898* [1.848]	-0.000480 [-1.525]	0.000088 [0.174]

Human Capital

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	-0.001267 [-0.619]	0.000001 [0.001]	-0.002164 [-1.503]	-0.000536 [-0.416]	-0.001298 [-0.550]
Positive News	-0.001208 [-0.456]	0.002524** [2.196]	-0.000468 [-0.187]	0.002349* [1.931]	0.001233 [0.477]
Intercept	-0.000979 [-1.372]	-0.000944*** [-2.741]	-0.000662 [-1.352]	-0.000248 [-0.766]	-0.000900 [-1.317]

Natural Capital

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	0.000570 [0.207]	-0.000385 [-0.364]	-0.005495*** [-2.715]	0.000928 [0.811]	-0.004394 [-1.557]
Positive News	0.001885 [1.422]	0.001866** [2.087]	-0.001607* [-1.664]	-0.000237 [-0.293]	0.000896 [0.611]
Intercept	-0.001753** [-2.251]	-0.000320 [-0.947]	0.000784 [1.597]	0.000053 [0.150]	0.000618 [0.901]

Note: The news data are from TruValue Labs, where the volume of articles is at least two. The dependent variable is the market-adjusted return over the days relative to the date of the news (i.e., -5, -2 is cumulative firm returns between five and two days before the news minus cumulative value-weighted market returns). Positive (negative) news takes the value of one for a firm-date if the news score by TVL is 75 or more (25 or less). All models include industry and date fixed effects. Standard errors are robust to heteroscedasticity and clustered at the firm level. ***, **, * are statistically significant at the 1, 2, and 5% levels, respectively. Source: Serafeim, George, and Aaron Yoon. "Which Corporate ESG News Does the Market React To?" Harvard Business School Working Paper, No. 21-079, January 2020.

Market Adjusted Results by Theme

Sustainability Leadership & Governance

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	0.002114 [1.105]	0.000039 [0.027]	-0.000557 [-0.383]	-0.000747 [-0.809]	0.000523 [0.299]
Positive News	0.002017 [0.695]	0.002531 [1.352]	0.003185 [1.091]	0.006077 [1.253]	0.002300 [0.876]
Intercept	-0.001304** [-2.065]	-0.000725** [-1.990]	0.000143 [0.271]	-0.000216 [-0.631]	-0.000263 [-0.568]

Business Model & Social Innovation

	MA Return -5, -2	MA Return -1	MA Return 0	MA Return +1	MA Return +2, +5
Negative News	-0.001911 [-0.249]	-0.021119 [-1.601]	-0.001681 [-0.474]	0.001369 [0.338]	-0.001422 [-0.145]
Positive News	-0.002212 [-1.205]	-0.000314 [-0.271]	0.003510*** [3.179]	0.000690 [1.098]	-0.001190 [-0.822]
Intercept	0.000965 [1.163]	0.000592* [1.778]	-0.000493 [-1.483]	-0.000314 [-1.292]	0.001458** [2.315]

Note: The news data are from TruValue Labs, where the volume of articles is at least two. The dependent variable is the market-adjusted return over the days relative to the date of the news (i.e., -5, -2 is cumulative firm returns between five and two days before the news minus cumulative value-weighted market returns). Positive (negative) news takes the value of one for a firm-date if the news score by TVL is 75 or more (25 or less). All models include industry and date fixed effects. Standard errors are robust to heteroscedasticity and clustered at the firm level. ***, **, * are statistically significant at the 1, 2, and 5% levels, respectively. Source: Serafeim, George, and Aaron Yoon. "Which Corporate ESG News Does the Market React To?" Harvard Business School Working Paper, No. 21-079, January 2020.

What to Expect with Increasing ESG Disclosure?

Christensen, Dane, George Serafeim, and Anywhere Sikochi. "Why Is Corporate Virtue in the Eye of the Beholder? The Case of ESG Ratings." 2021. *Accounting Review* (forthcoming).

Over Time

Time Trend Analyses

Panel A: ESG rating disagreement over time

Dependent Variable:	ESG_Disagreement	
	Coef.	t-stat.
<i>Time</i>	0.121	(5.98) ***
Intercept	11.283	(65.12) ***
Firm F.E.	Yes	
Adj. R ²	0.486	
N	30,700	

Panel B: ESG disclosure over time

Dependent Variable:	ESG_Disclosure	
	Coef.	t-stat.
<i>Time</i>	1.388	(51.89) ***
Intercept	16.609	(72.45) ***
Firm F.E.	Yes	
Adj. R ²	0.870	
N	30,700	

Note: Time is the difference between the fiscal-year for a particular firm-year observation and 2004, which is the first year in the sample. All t-statistics are based on two-tailed tests and are calculated based on standard errors that are clustered by firm. All continuous variables have been winsorized at the 1st and 99th percentiles. *, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively. Source: Christensen, Dane, George Serafeim, and Anywhere Sikochi. "Why Is Corporate Virtue in the Eye of the Beholder? The Case of ESG Ratings." 2021. Accounting Review (forthcoming).

Portfolio Analyses

Panel A: Mean ESG Disagreement

		<i>ESG Avg</i>			
		Low	Medium	High	Diff
<i>ESG Disclosure</i>	Low	12.91	8.93	11.46	-1.45
	Medium	14.27	9.84	12.74	-1.53
	High	17.91	12.09	13.70	-4.21
	Diff	5.00	3.16	2.24	

Panel B: Median ESG Disagreement

		<i>ESG Avg</i>			
		Low	Medium	High	Diff
<i>ESG Disclosure</i>	Low	12.31	7.87	10.53	-1.78
	Medium	13.32	8.76	12.73	-0.59
	High	17.88	10.91	13.55	-4.33
	Diff	5.57	3.04	3.02	

Note: Each year, each firm is allocated into terciles of ESG disclosure and terciles of the average ESG score across the rating agencies. Panel A (B) shows the mean (median) disagreement across ratings for each of the nine portfolio of companies. Difference is calculated as High minus Low. Source: Christensen, Dane, George Serafeim, and Anywhere Sikochi. "Why Is Corporate Virtue in the Eye of the Beholder? The Case of ESG Ratings." 2021. Accounting Review (forthcoming).

E vs S vs G

Dependent Variable:	<i>ESG_Disagreement</i>				<i>E_Disagreement</i>				<i>S_Disagreement</i>				<i>G_Disagreement</i>			
	OLS		OLS w/ Firm F.E.		OLS		OLS w/ Firm F.E.		OLS		OLS w/ Firm F.E.		OLS		OLS w/ Firm F.E.	
<i>E_Disclosure</i>	0.075 *** (10.14)	0.047 *** (5.95)	0.008 (1.14)	0.026 *** (2.90)					0.08 *** (13.01)	0.058 *** (7.22)			0.036 *** (3.25)	-0.013 (-1.06)		
<i>S_Disclosure</i>	0.018 *** (2.83)	0.036 *** (5.20)														
<i>G_Disclosure</i>	0.039 *** (3.77)	-0.003 (-0.34)														

Note: This table reports the effects of disclosure on disagreement for each respective ESG pillar: Environment (E), Social (S), or Governance (G). For each pillar, there are two specifications: (1) ordinary least squares (OLS) without firm fixed effects, and (2) OLS with firm fixed effects. *, **, *** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively. Source: Christensen, Dane, George Serafeim, and Anywhere Sikochi. "Why Is Corporate Virtue in the Eye of the Beholder? The Case of ESG Ratings." 2021. Accounting Review (forthcoming).

Conclusion

First Evidence

Company-level characteristics

- Corporate responses on stakeholder issues are important
- Also measurable: outside-in view: big data and natural language processing
- Salience of responses: role of media, information intermediation and disclosure

Prices increasingly incorporate ESG information

- Not all ESG news are price relevant
- Product related impacts are key
- Disclosure will likely fuel heterogeneous ESG evaluations by market participants

**Thank you.
Grazie!**

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