



Corporate Governance, Executive Compensation, and ESG Goals

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The World is Changing

A focus on ESG

- Employees, consumers, and investors pay more attention to social and environmental issues
- The sustainability wage gap: **workers** earn about 10% lower wages in firms that operate in more sustainable sectors (Krueger, Metzger and Wu, 2021)
- Ethical and sustainability issues are a key driver for almost a third of UK **consumers**, who claim to have stopped purchasing certain brands due to related concerns (Deloitte Consumer Survey 2021)
- The size of the market for **ESG investing** is estimated in the tens of trillions of US dollars in assets under management (Matos, 2020)

The World is changing...

A focus on ESG

- Regulators and policy makers are also devoting more attention to social and environmental issues
- UK government to set in law world's most ambitious climate change target, cutting emissions by 78% by 2035 compared to 1990 levels
- A hundred and thirty six countries agreed to enforce a corporate tax rate of at least 15% and a fairer system of taxing profits where they are earned.

And so are firms

A new focus on ESG

No country for white men as State Street push diversity



An all-white male office celebrating the launch of State Street Global Advisors in 1978

Sunday November 07 2021, 12.01am,
The Sunday Times

Staff at one of the world's biggest investment companies have to get special approval to hire a white man, rather than a woman or an ethnic-minority candidate.

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What is ESG

Environmental, Social and Governance

ENVIRONMENTAL

- Climate change and carbon emissions
- Natural resource use and energy and water management
- Pollution and waste
- Ecodesign and innovation



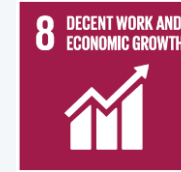
SOCCIAL

- Workforce health and safety, diversity, and training
- Customer and product responsibility
- Community relations and charitable activities



GOVERNANCE

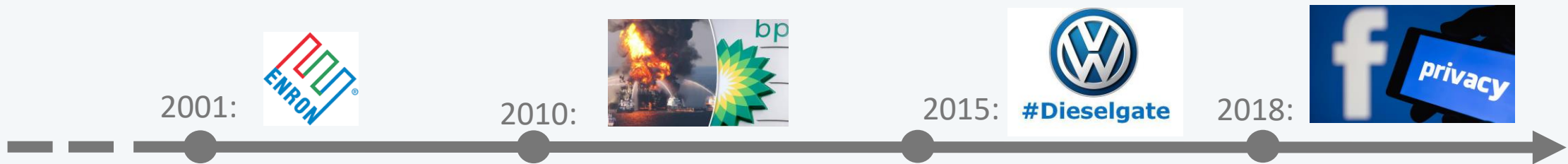
- Shareholder rights
- Composition of boards of directors (independence and diversity)
- Management compensation policy
- Fraud and bribery
- ...



The rise of ESG?

G... if for Governance

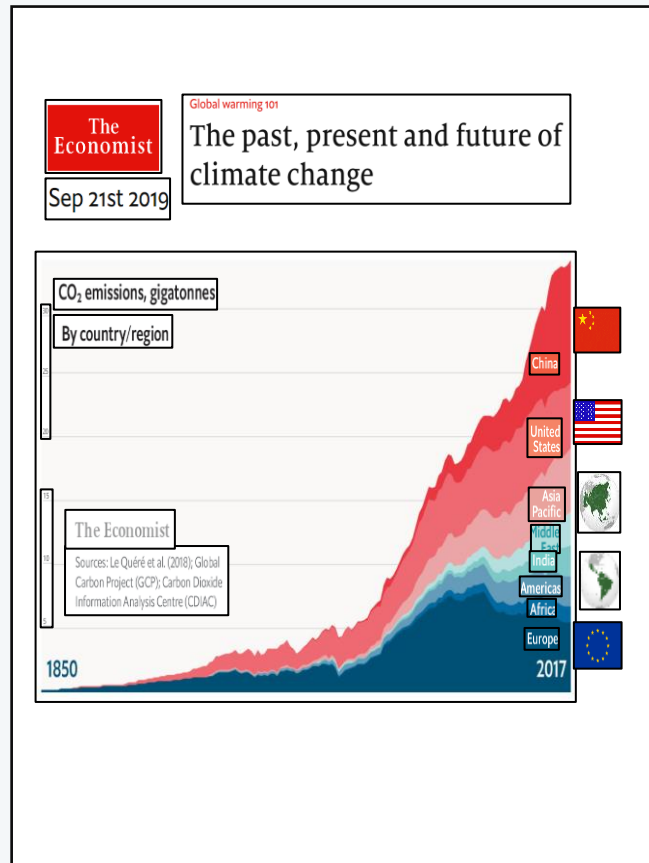
- Several scandals increased awareness to ESG risk factors



- Governments respond, but not always this has led to significant changes
 - Sarbanes-Oxley Act in 2002
 - Dodd-Frank Act in 2010
 - 2015 Paris Agreement on climate change mitigation
 - European Emissions Trading System
 - COP26 in 2021

What is driving the recent rise of ESG?

Risks and cost associated to climate change



Physical Risks:

- Extreme weather (Pankratz and Schiller 2021)
- Natural catastrophes (Barrot and Sauvagnat (2016) and Carvalho, Nirei, Saito, and Tahbaz-Salehi (2021))

Transition Risks:

- Stranded Assets
 - e.g. oil and gas reserves that will remain unburned if climate change is to be limited, real estate in coastal area

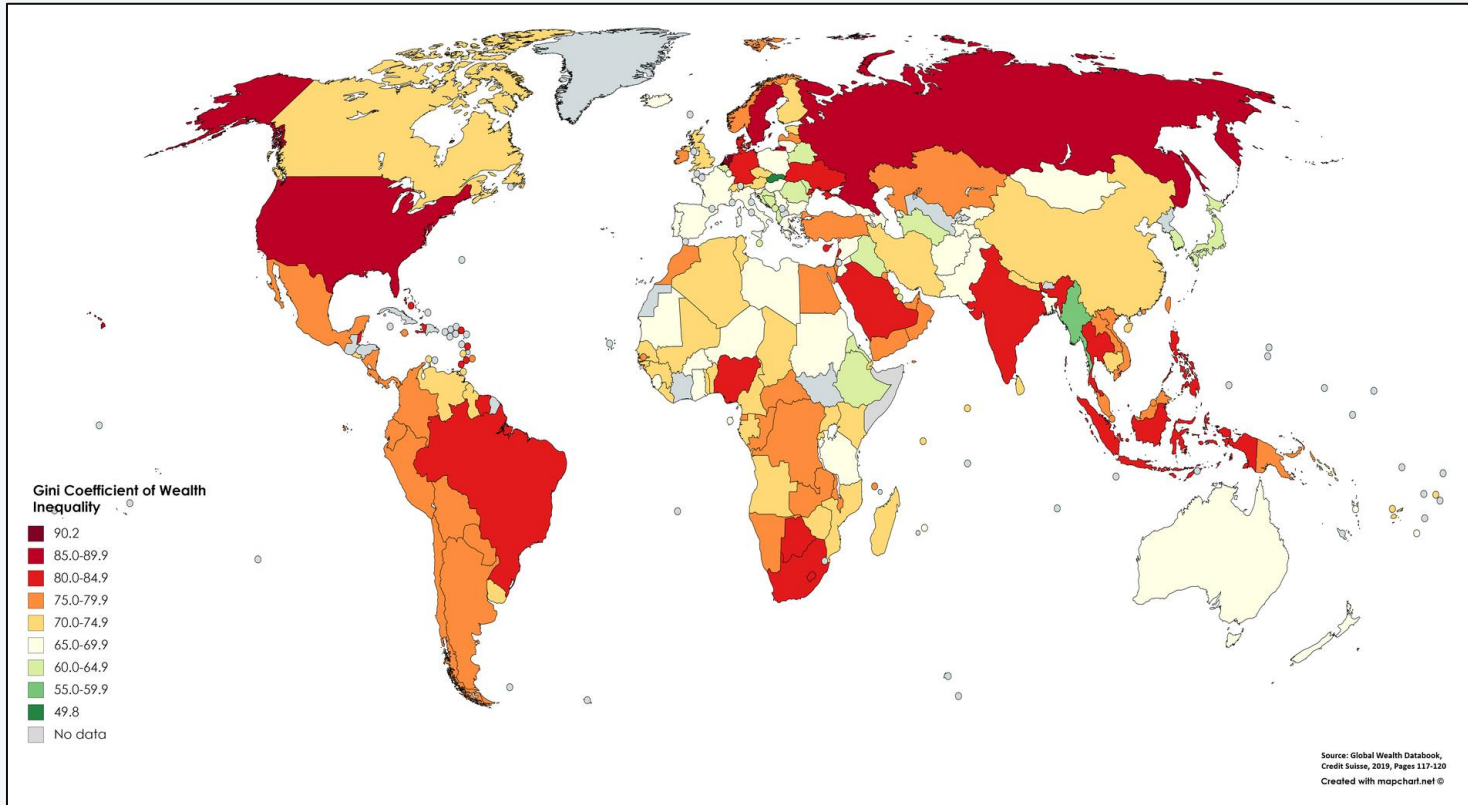
- **Bolton and Kacperczyk (2019)** show that **carbon risk is largely priced into markets**, which is consistent with a "carbon premium" required for stocks with risk exposures tied to carbon emissions

Other economic costs:

- **Custodio, Ferreira, Garcia-Appendini and Lam (2021)** show that suppliers experiencing a 1°C increase in average daily temperature decrease their sales by 2%.

What is driving the recent rise of ESG?

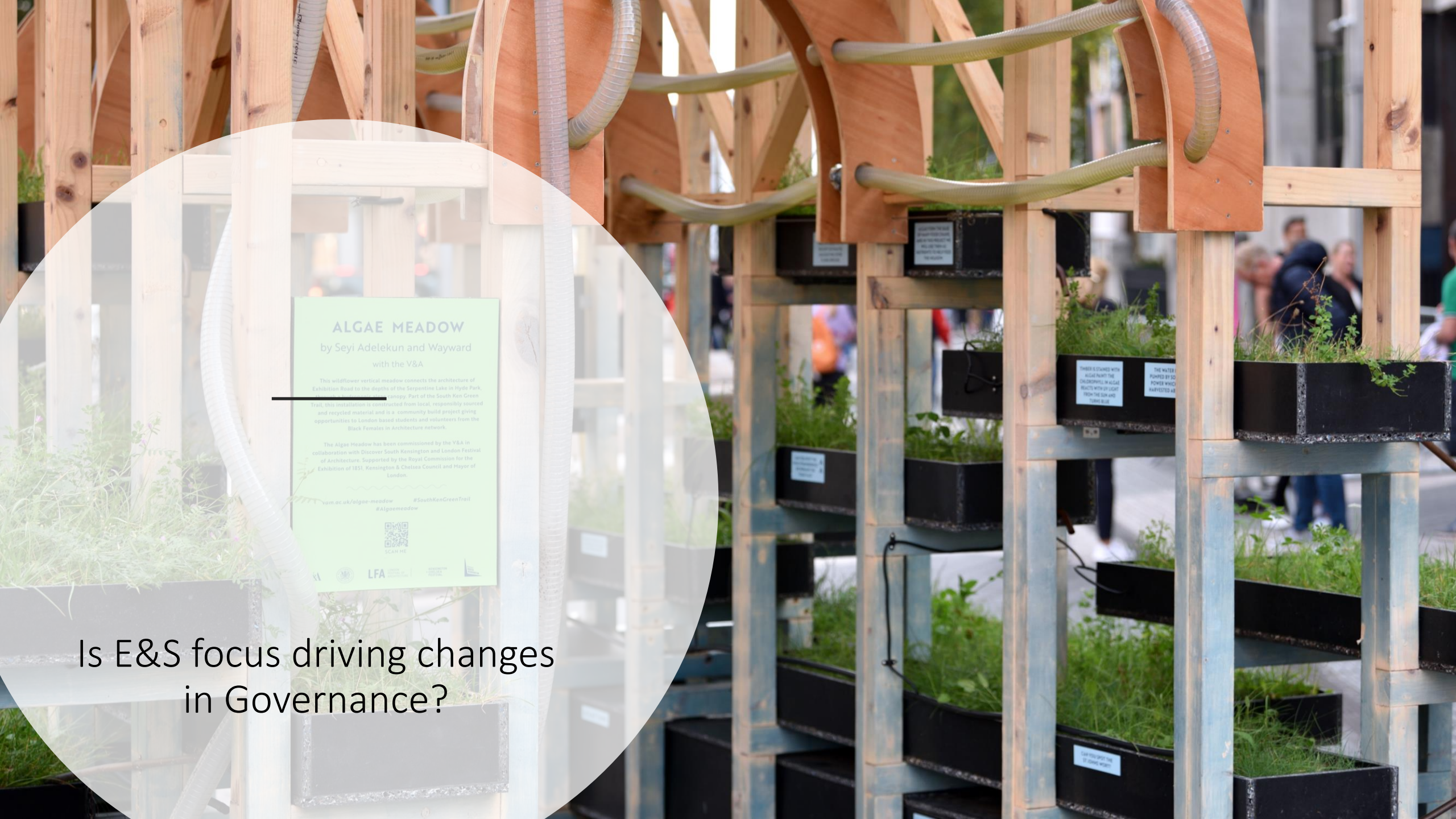
Social challenges



- Wealth inequality
- Healthcare
- Racial injustice
- Hunger and food security
- Gun violence
- ...

Hong and Kacperczyk (2009)
sin stocks are less held by norm-constrained institutions such as pension plans

El Ghoul et al (2011)
Firms with better CSR scores exhibit cheaper equity financing



ALGAE MEADOW

by Seyi Adelekun and Wayward
with the V&A

This wildflower vertical meadow connects the architecture of Exhibition Road to the depths of the Serpentine Lake in Hyde Park, London. Part of the South Ken Green Trail, this installation is constructed from local, responsibly sourced and recycled material and is a community build project giving opportunities to London based students and volunteers from the Black Females in Architecture network.

The Algae Meadow has been commissioned by the V&A in collaboration with Discover South Kensington and London Festival of Architecture. Supported by the Royal Commission for the Exhibition of 1851, Kensington & Chelsea Council and Mayor of London.

vam.ac.uk/algae-meadow #SouthKenGreenTrail
#Algaemeadow




SCAN ME




Is E&S focus driving changes
in Governance?

A new Governance model?

Shareholder vs Stakeholders



- Milton Friedman: "The social responsibility of business is to increase its profit"



- R. Edward Freeman: "Organizations must take multiple stakeholder groups into account"

E & S are pushing for changes in G

Shareholder to Stakeholders focus?

Smith (1776):

Pursuit of self-interest by consumers and corporations results in economic efficiency

Pigou (1920):

State is responsible for correcting market failures, externalities, and inequalities

Freeman (1984):

Organizations must take multiple stakeholders into account

Bénabou and Tirole (2010):

CSR is a response to the failure of the state to correct market failures and externalities

Friedman (1970):

The social responsibility of business is to increase its profit

Hart and Zingales (2017):

A model of shareholder welfare shareholders are prosocial and externalities are not perfectly separable from production decisions
Maximize welfare ≠ Maximize market value

CSR symptomatic of agency problems

Edmans (2021)

A new Pie Theory - Value creation is about society value.
Social value as by-product of firm value maximization

“Shareholder” theory

Stakeholder theory

Stakeholder's theory is complex

Going from one to many is challenging

$$NPV = \sum_{i=1}^n \frac{Cash\ Flow_i}{(1+r)^i} - Initial\ Investment$$

?

...And $Re = Rf + Be(Rm - Rf)$

"Shareholder" theory

Stakeholder theory

But if we do well (from a shareholder's view) from doing good, we are ok!

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“Doing well by doing good”

What do we know?

Time Period	Reaction to News	CSR Measure	Good and Bad Times
<p>Borgers et al (2013)</p> <ul style="list-style-type: none">• High-CSR stocks outperformed low-CSR stocks during 1992-2004• Failed to find significant results for 2004-2009	<p>Kruger (2015)</p> <ul style="list-style-type: none">• Investors have strong negative reactions to negative CSR news• But weak negative reactions to good CSR news	<p>Khan et al (2016)</p> <ul style="list-style-type: none">• Firms with high CSR materiality scores outperform firms with low scores• Firms with good ratings on immaterial CSR issues do not outperform firms with poor ratings on the same issues	<p>Lins et al (2017)</p> <ul style="list-style-type: none">• Firms with high CSR scores had higher stock returns than firms with low during the 2008-09 financial crisis

ESG/SRI fund strategies

Renneboog, Ter Horst, and Zhang (2008a) find little evidence that the average performance of SRI-focused funds in the US and UK differs significantly from that of conventional funds

Renneboog, Ter Horst, and Zhang (2008b) using a larger, global sample concluded that SRI funds have negative alphas

“Doing well by doing good”

Different types of investors care differently about E&S

Investment Horizon

Starks, Venkat, and Zhu (2018)

- Institutions with **longer horizons** tend to invest more in firms with higher ESG scores

Country of Origin

Dyck, Lins, Roth and Wagner (2019)

- Firms with higher institutional ownership have better E&S scores
- The effect is **stronger** with greater ownership by institutions from **countries with strong E&S norms** and that are PRI signatories

Ideology

Bolton, Li, Ravina, and Rosenthal (2019)

- **Public pension funds** and **investors with left ideology** support a more socially and environmentally friendly orientation of the firm



Recent Trends

ESG and Executive Compensation

Example

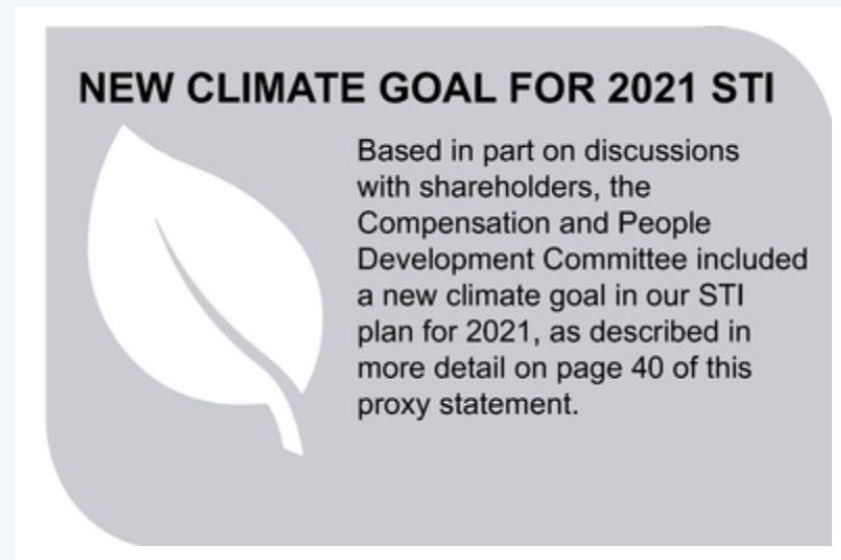
- Historically Executive Compensation has been tied mostly to financial goals and metrics. This seems to be changing.



ESG goals and strategy

At our ESG Investor Day in October 2020, our Board and management outlined the pathway to net-zero carbon emissions from electricity generation by 2050 and announced a new goal of net-zero methane emissions from our natural gas distribution business by 2030.

Welcome to the Duke Energy
Annual Meeting
of Shareholders



NEW CLIMATE GOAL FOR 2021 STI

Based in part on discussions with shareholders, the Compensation and People Development Committee included a new climate goal in our STI plan for 2021, as described in more detail on page 40 of this proxy statement.



ESG and Executive Compensation

Example

- New E and S goals including emissions and Safety of workers

NEW CLIMATE GOAL FOR 2021 STI



In 2021, our STI plan includes a new climate goal that focuses on:

- Demonstrating leadership to advance our climate strategy to cost effectively reduce our carbon footprint from electricity generation by at least 50% by 2030 and to net-zero carbon emissions from electricity generation by 2050;
- Advocating for public policy related to our climate strategy; and
- Investing in clean energy, including renewables, as well as grid capacity and capabilities to support higher levels of carbon-free generation.

The new climate goal formally incorporates these strategic objectives into each NEO's individual objectives under the 2021 STI plan and is based on a qualitative performance assessment against key measures for each objective.

SAFETY



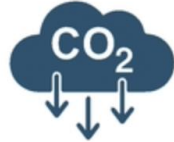
Safety remains our top priority. As an indication of our commitment to safety, we include safety metrics in both the STI and LTI plans based on the TIGR for employees, which measures the number of occupational injuries and illnesses per 100 workers, to emphasize our focus on an event-free and injury-free workplace.

CUSTOMERS




Our priority on the customer experience is measured with a customer satisfaction metric in the STI plan, which is comprised of customer satisfaction results for each area of our business. Our desire to increase customer satisfaction provides an additional incentive to generate clean energy.

CARBON REDUCTION




Our STI plan incorporates a nuclear reliability objective and a renewable availability metric to measure the efficiency of our generation assets that are helping us achieve our goal of at least a 50% reduction in carbon emissions from electricity generation by 2030 (compared to 2005 levels) and net-zero carbon emissions from electricity generation by 2050.

ENVIRONMENTAL EVENTS



To enhance our commitment to the environment, the STI plan includes a reportable environmental events metric. This objective emphasizes identification and mitigation of environmental risks associated with our operations.

STRONG GOVERNANCE



Our compensation program is based on sound governance principles and policies to reinforce our pay for performance philosophy and strengthen the alignment of the interests of executives and shareholders, as more fully described on pages 42, 52, and 53.



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ESG and Executive Compensation

Example

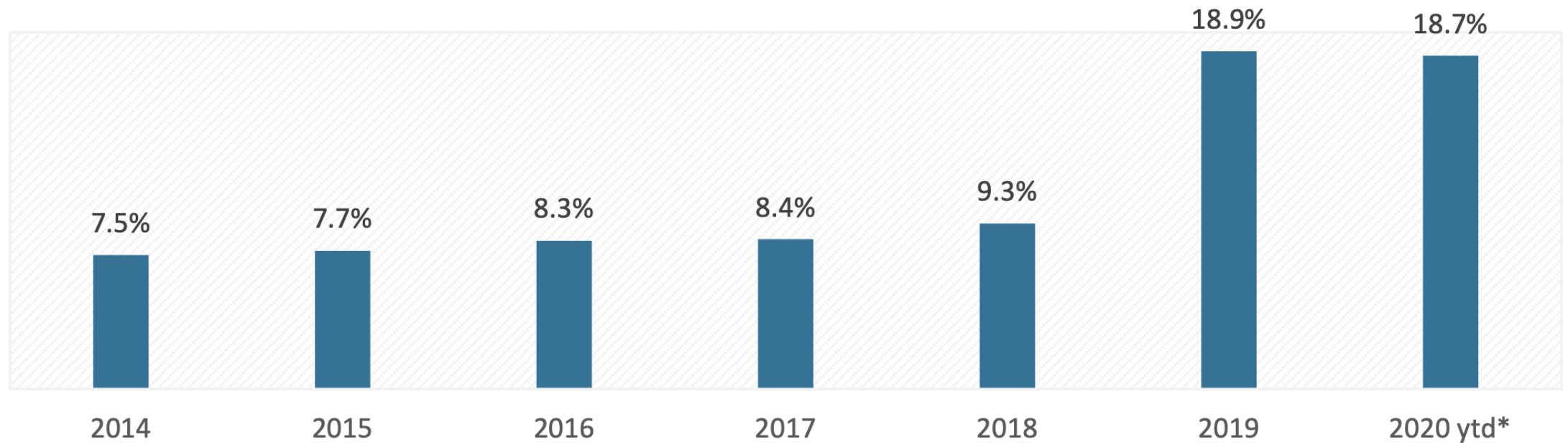
	Element	Performance Metrics Aligned to Strategy
Base Salary	<ul style="list-style-type: none"> Cash 	
Short-Term Incentive	<ul style="list-style-type: none"> Short-Term Cash Incentive 	<p>Measured over a one-year period:</p> <ul style="list-style-type: none"> Adjusted EPS O&M Reliability Safety (targets set on an absolute basis) Environmental Customer Satisfaction Individual Objectives (including a climate goal starting in 2021)
Long-Term Equity Incentive	<ul style="list-style-type: none"> Performance Shares (70%) 	<p>Measured over a three-year period:</p> <ul style="list-style-type: none"> Cumulative Adjusted EPS Relative TSR Safety (targets set on a relative basis)
	<ul style="list-style-type: none"> RSUs (30%) 	<ul style="list-style-type: none"> Service-based with three-year pro rata vesting



ESG and Executive Compensation

A more general trend

- Percentage of firms with at least one ESG compensation goal

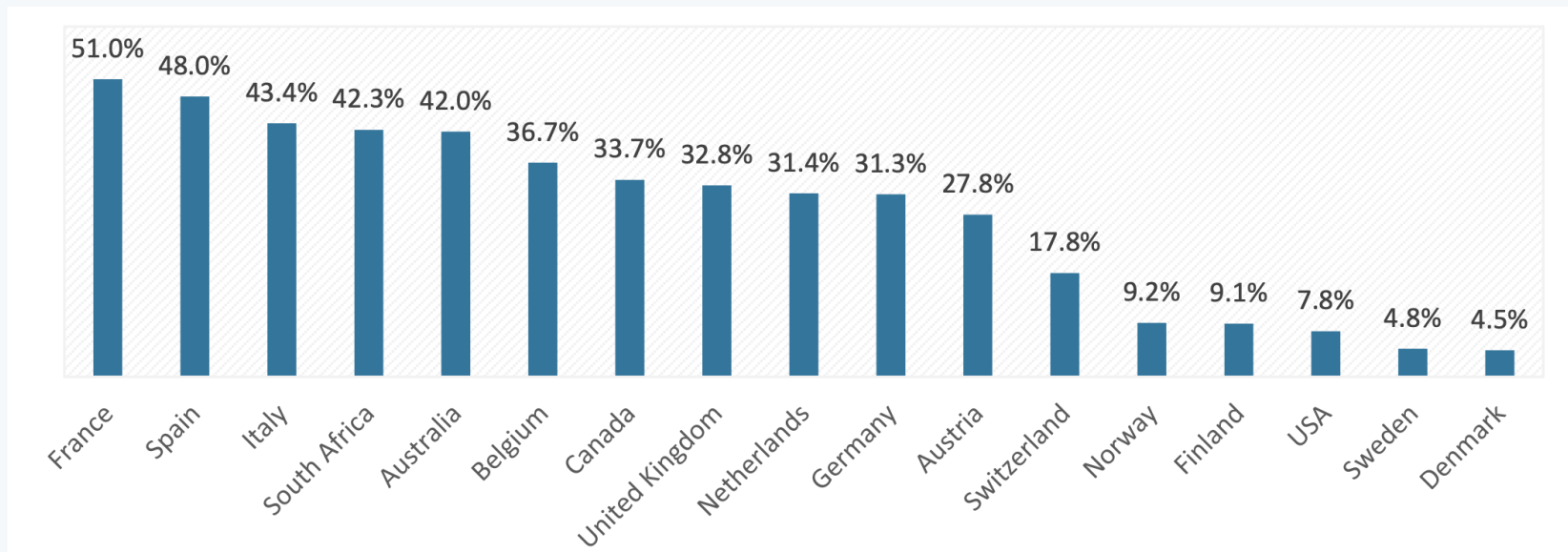


Company E&S Incentives, Source: ISS ESG, Universe: United States, Canada, EMEA, AUS/NZL.

ESG and Executive Compensation

A more general trend

- Percentage of firms with at least one ESG compensation goal by country

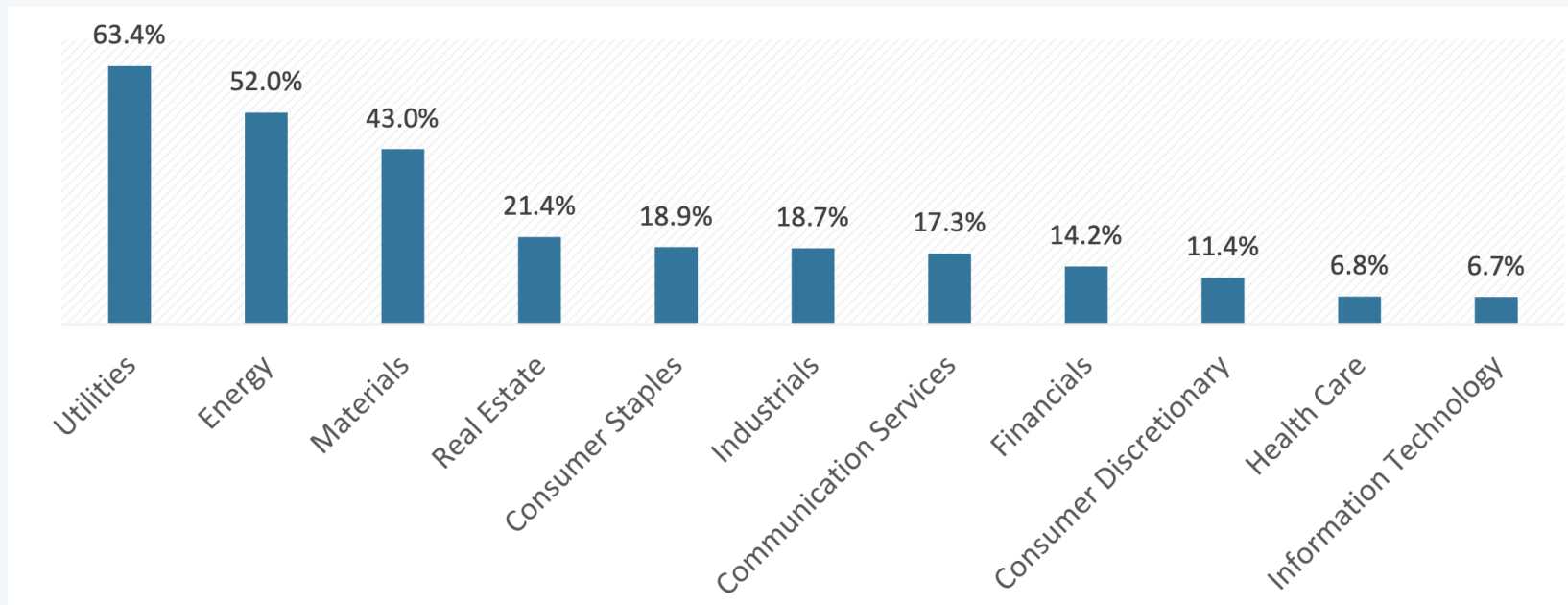


Company E&S Incentives, Source: ISS ESG

ESG and Executive Compensation

A more general trend

- Percentage of firms with at least one ESG compensation goal by sector

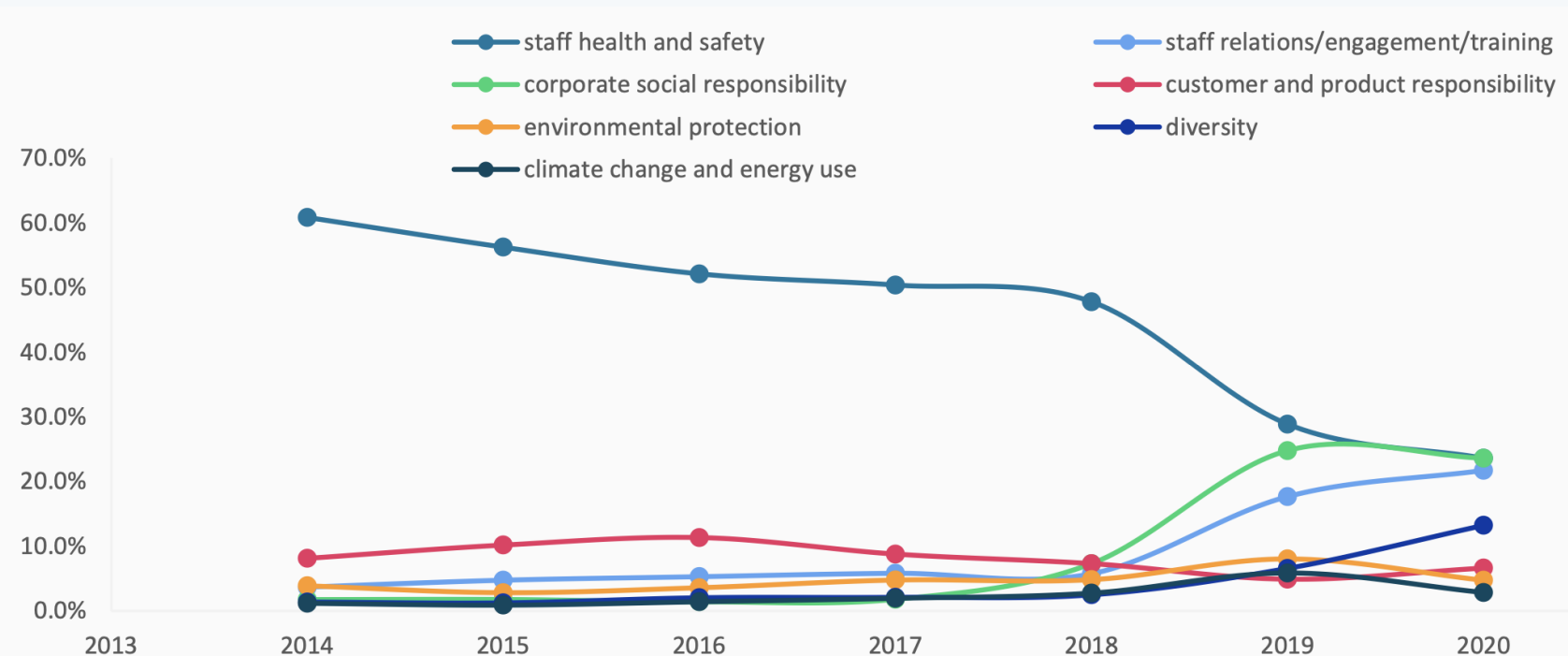


Company E&S Incentives, Source: ISS ESG

ESG and Executive Compensation

Motivating example

- Percentage of firms with ESG goals by type



Company E&S Incentives, Source: ISS ESG

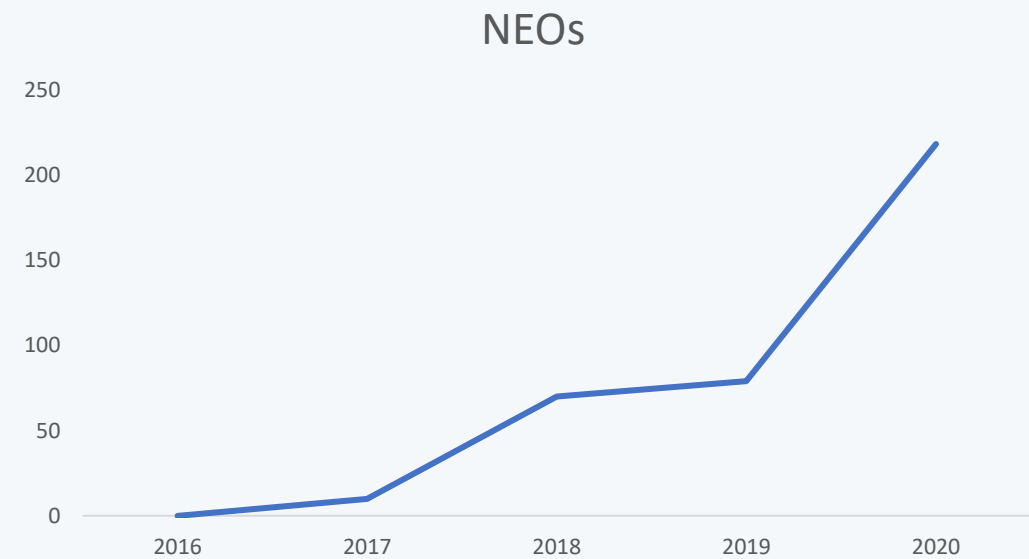


Social Pay

Social Pay

New executive compensation trends

- Number of firms with Social goals (CEOs and NEOs)



Data Source: Incentive Lab, US firms

Social Pay

New executive compensation trends

- % of firms with Social goals

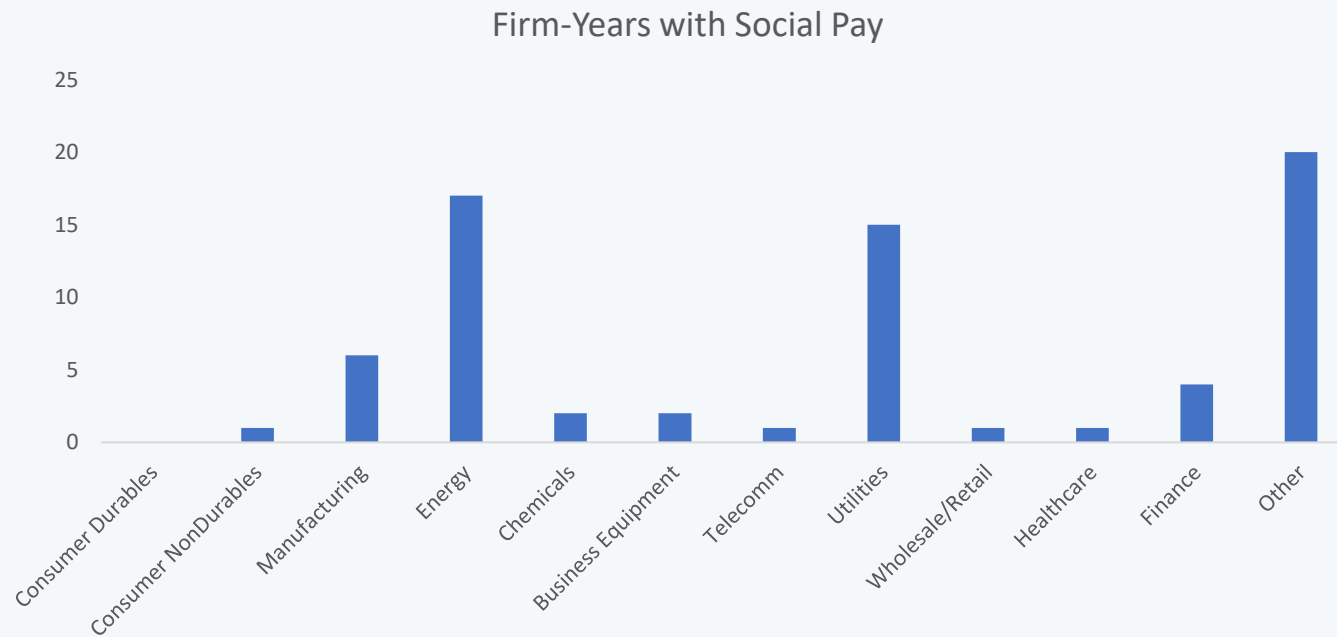


Data Source: Incentive Lab

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Social Pay Across industries

- Number of firm-years with S pay by sector



Data Source: Incentive Lab

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Social Pay

Metrics (CEOs)

- Social Pay and number of firm-years by metric (CEOs)

Pay	Mean	Count (Firm-Years)
Social Pay	2,477,115	70
Staff Health Pay	1,961,509	52 (74%)
Diversity Pay	269,155	10 (14%)
Staff Relations Pay	117,593	5 (7%)
Customer/Product Responsibility Pay	68,143	2 (3%)
Social (Other) Pay	60,714	1 (1%)

Social Pay

Metrics (NEOs)

- Number of firm-years by metric (NEOs)

Pay	Count (Firm-Years)	%
Social Pay	5100	100
Staff Health Pay	3305	64.8
Diversity Pay	694	13.6
Staff Relations, Engagement, Training Pay	653	12.8
Customer/Product Responsibility Pay	374	7.3
Society and human rights	27	0.5
Social (Other) Pay	47	0.9

Social Pay

The “social paying firm”

- Summary stats by social pay

Variable	Non-Social Pay	Social Pay
Assets	27578	49360
Tobin's Q	2.305	1.550
Debt/Assets	0.136	0.072
Cash/Assets	0.329	0.339
Capx/Assets	0.035	0.049
R&D/Assets	0.026	0.005
Acquisitions/Assets	0.022	0.007
Advertising/Assets	0.010	0.003
PP&E/Assets	0.243	0.501
Volatility	0.031	0.022
Firm Age	31.842	41.788

Social Pay Correlations

	Social Pay Indicator	
Board Independence	-0.020**	
	[-2.07]	
Board Size	0.001	
	[0.53]	
Cooption	0.009	
	[1.39]	
Percent Female Directors		0.039*
		[1.87]
Percent Minority Directors		-0.017
		[-1.13]
Percent International Directors		-0.008
		[-1.37]
Mean Director Tenure		-0.001*
		[-1.79]
Log(Assets)	0.001	0.002
	[0.67]	[1.05]
Tobin's Q	-0.001**	-0.001*
	[-2.18]	[-1.72]
Observations	4,334	4,334
R-squared	0.086	0.087
Industry FE	Y	Y
Year FE	Y	Y

Data Source: Incentive Lab

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Questions for future work

- What is the future of governance models?
- Is ESG-pay optimal?
- Even if ESG strategic goals are, are ESG-pay goals needed?
 - Do we need it in stakeholder-focused theory?
 - Perhaps in a shareholder welfare maximizing theory
- Measuring and benchmarking (*what gets measured gets managed*)?
 - The role of ESG ratings
- Future regulatory/Disclosure policies?