

ESG Disclosure: Market Trends and Strategic Opportunities

January 12, 2018

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BrownFlynn



Do Good. Do Well. Win.™

Is it time to create your own ESG narrative?

.....Or are you going to let others do that for you?

Step 1: Benchmark & Internal Discussion

- Are your competitors disclosing things you are not?

- Can you disclose these things?

- Do we want to connect the internal dots and do a report, or fill the immediate gaps?

Step 2: ESG Research Firm and Shareholder Mapping & Assessment

- Who is already looking at you and contacting you?

- Which of your largest owners have a dog in the ESG fight?

- How important are those ESG research firms and owners to you? (Prioritize)

Step 3: Strategic and Integrated Disclosure

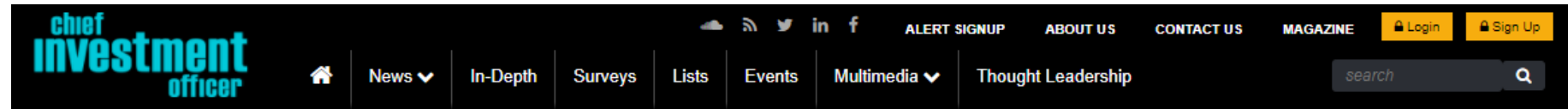
- What do we already have in-house that we're not disclosing?

- What are our most important (material) ESG issues?

- Who are the internal SMEs that can help measure, manage and disclose ESG information?

Breaking News

Latest News: Jan. 11, 2018



Home > News > Risk > NYC Pension System to Divest \$5 Billion from Fossil Fuels



New York City plans to divest roughly \$5 billion in fossil fuels reserve holdings from its \$189 billion pension system—the largest of any US municipality to date, city officials announced Wednesday.

In what the comptroller's office is calling a "first-in-the-nation" step towards the five-year divestment goal, Mayor Bill de Blasio and Comptroller Scott Stringer will submit a joint resolution to pension fund trustees. The resolution will allow trustees to analyze strategies on responsibly divesting from fossil fuels in ways that meet fiduciary obligations.



Sponsored Business Content

China phone maker Huawei defends privacy record after US snub (South China Morning Post)

Market Prediction: Gold Collapse Will Wipe Out Trillions (Dent Research)

Forget Cryptocurrencies: This Will Create the First Trillionaires (Angel Publishing)

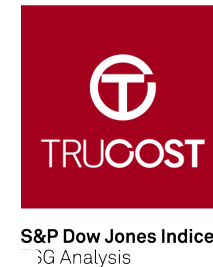
Own This Stock Before Jan. 18th To Receive An Extra Dividend Payment (Investors Alley)

dianomi

The ESG Ecosystem

Who makes up the ESG Ecosystem?

Based on sustainability reporting standards and frameworks, there are 100+ organizations producing lists, rankings, ratings, and scorecards of the “top companies” and “most sustainable” companies.



SUSTAINABLE BRAND INDEX



HUMAN RIGHTS CAMPAIGN



The Magazine for Clean Capitalism



What type of ESG disclosure is possible?

Environmental

- Materials
- Energy
- Water
- Biodiversity
- Emissions
- Effluents and Waste
- Products and Services
- Environmental Compliance
- Transport
- Supplier Environmental Assessment
- Environmental Grievance Mechanisms

Human Rights

- Non-discrimination
- Freedom of Association & Collective Bargaining
- Child Labor
- Forced /Compulsory Labor
- Security Practices
- Indigenous Rights
- Supplier Human Rights Assessment
- Human Rights Grievance Mechanisms

Labor Practices & Decent Work

- Training and Education
- Employment
- Labor/Management Relations
- Occupational Health & Safety
- Diversity & Equal Opportunity
- Equal Remuneration for Men and Women
- Supplier Assessment for Labor Practices
- Labor Practices Grievance Mechanisms

Economic

- Economic Performance
- Philanthropy
- Market Presence
- Indirect Economic Impacts
- Economic Inclusion
- Procurement Practices

Society

- Anti-Corruption
- Public Policy
- Anti-competitive Behavior
- Local Communities
- Supplier Assessment for Impacts on Society
- Grievance Mechanisms for Impacts on Society

Product Responsibility

- Customer Health & Safety
- Product & Service Labeling
- Marketing Communications
- Customer Privacy
- Product Compliance

ESG Market Evolution

How did the investor activity evolve?

Investor Coalitions & Networks

Interfaith Center on Corporate Responsibility (ICCR)

- 1972; nearly 300 members; representing over \$100 billion



Institutional Investors Group on Climate Change (IIGCC)

- 2001; over 100 members; representing over \$11 trillion



Carbon Disclosure Project (CDP)

- 2002; nearly 900 signatories; representing over \$100 trillion



Investor Network on Climate Risk (INCR)

- 2003; over 100 members; representing \$13 trillion



Principles for Responsible Investment (PRI)

- 2006; over 1,200 signatories; representing over \$45 trillion



United Nations Guiding Principles Reporting Framework

- 2013; over 67 investors; representing nearly \$4 trillion

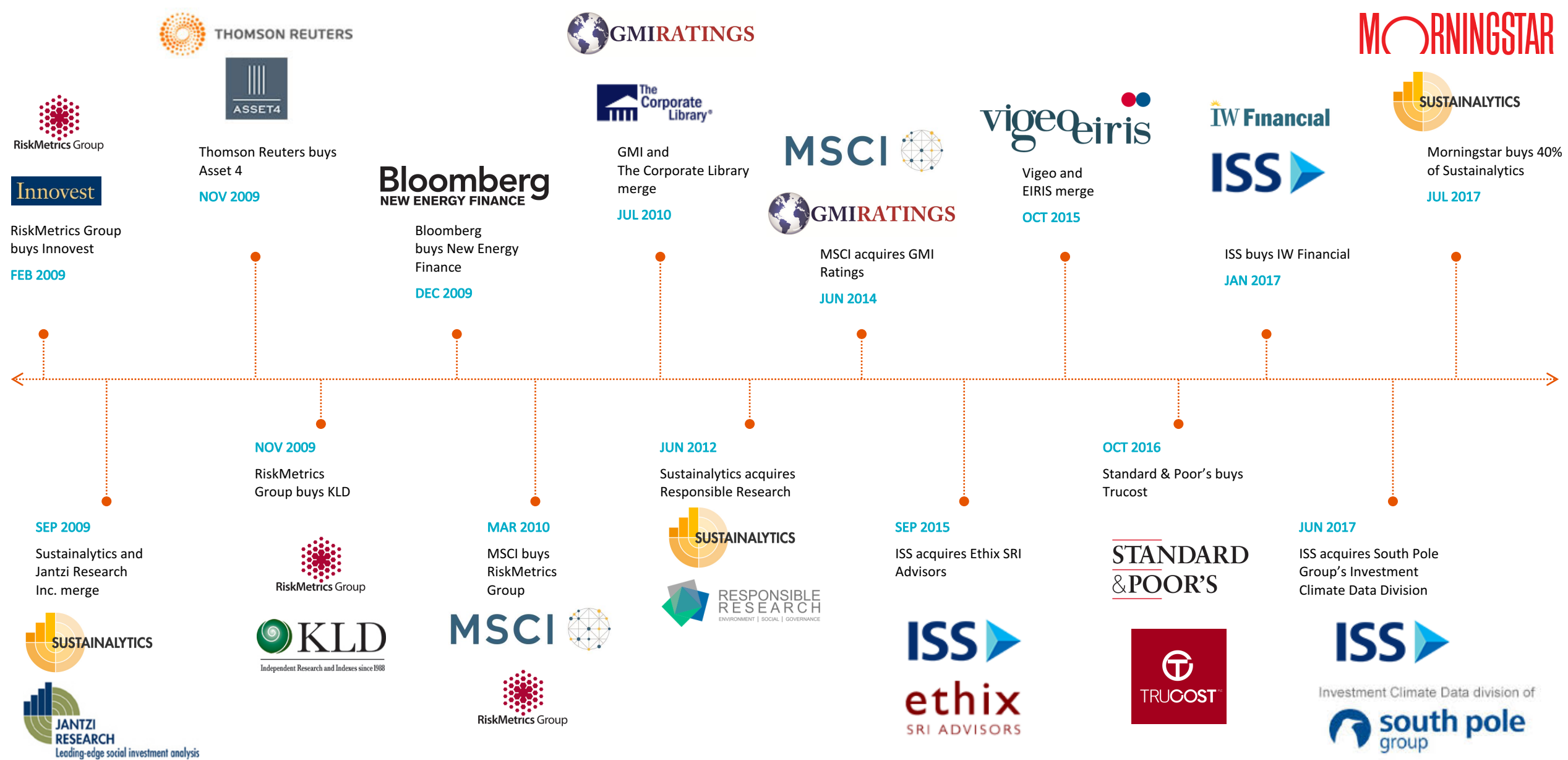


How is the investor activity evolving now?

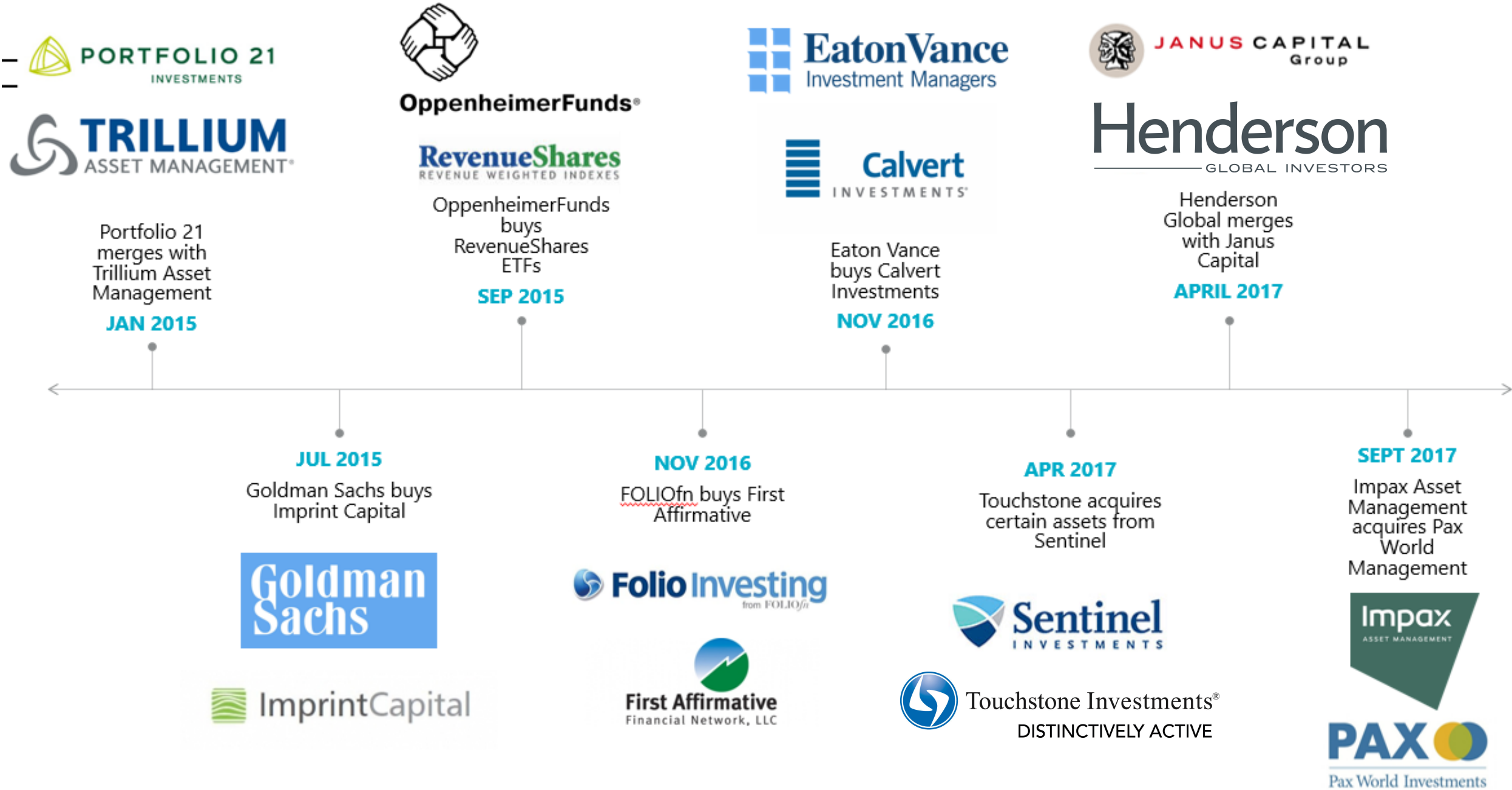


Source: <http://www.unpri.org/>

How is the ESG data provider market evolving?



How is the ESG asset manager market evolving?



What are these “reasonable investors” seeking?

Investors are increasingly asking companies to disclose strategies for long-term value creation and incorporation of ESG into the core of the organizational strategy.

BLACKROCK

“We are asking that every CEO lay out for shareholders each year a strategic framework for long-term value creation. Generating sustainable returns over time requires a sharper focus not only on governance, but also on environmental and social factors facing companies today. These issues offer both risks and opportunities, but for too long, companies have not considered them core to their business”.

Larry Fink, BlackRock Letter to CEOs, 2016



“As part of our stewardship review, we classify companies according to how they have: 1) identified material environmental and social sustainability issues; 2) assessed and, where necessary, incorporated the implications into their long-term strategy; and 3) clearly communicated their approach to sustainability and its influence on strategy.”

Ronald O’Hanley, State Street Letter to Board Members, 2017



“In the past, some have mistakenly assumed that our predominantly passive management style suggests a passive attitude with respect to corporate governance. Nothing could be further from the truth. We will be investors in your company during good times and bad. We want to see our clients’ investments grow over the long term, and good governance is a key to helping companies maximize their returns to shareholders..”

F. William McNabb III, Vanguard Letter to Directors, 2015

What is the TCFD?

The Task Force on Climate-Related Financial Disclosures (TCFD) is an industry-led task force produced recommendations designed to bridge the gap between how companies currently disclose information and how investors would prefer that information be presented.

- The TCFD seeks to improve market understanding and analysis of climate-related risks and opportunities by establishing a set of recommendations to “provide a common set of principles and “guide disclosure to help financial markets assess and price climate-related risks and opportunities.”
- The TCFD recommendations established a method for standardizing climate-related financial disclosures in a way that would be useful for investors, lenders, and insurance underwriters in understanding material risks posed by climate change.
- TCFD’s recommendations “will help companies understand what financial markets want from disclosure in order to measure and respond to climate change risks, and encourage firms to align their disclosures with investors’ needs.”

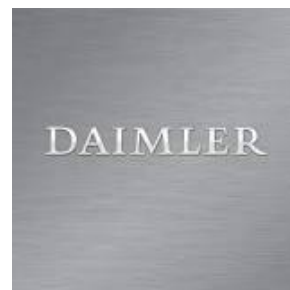


Source: [Frequently Asked Questions Understanding How SASB Standards and TCFD Recommendations Are Complementary](#)

Who Sits on the Task Force?

The Task Force is made up of 32 member organizations from around the world, including:

- ① Large banks
- ② Insurance companies
- ③ Asset managers
- ④ Pension funds
- ⑤ Large non-financial companies
- ⑥ Accounting and consulting firms
- ⑦ Credit ratings agencies



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Notable Signatories as of June 2017



Morgan Stanley



BNP PARIBAS



S&P Global

MOODY'S



CALSTRS



CPP
INVESTMENT
BOARD



PEPSICO



Notable Signatories as of December 2017



ESG Due Diligence

Oil & Gas Industry Comparison

Single Security ESG Data (BP)

BP/ LN Equity		96) Actions ▾	97) Output ▾	98) Settings	Financial Analysis	
ADJ	BP PLC	Periods 10 Annuals			Currency USD ▾ 🔍	
1) Key Stats	2) I/S	3) B/S	4) C/F	5) Ratios	6) Segments	7) Addl
8) ESG	9) Custom					
11) Overview	12) Environmental	13) Social	14) Governance	15) Exec & Dir Comp	16) ESG Ratios	17) CDP
In Millions of USD except Per Share		2011 Y	2012 Y	2013 Y	2014 Y	2015 Y
12 Months Ending		12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
ESG Disclosure Score		67.63	65.15	67.63	68.46	68.05
Environmental						
Environmental Disclosure Score		62.81	62.81	62.81	64.46	61.98
Direct CO2 Emissions		57,700.0	56,400.0	46,000.0	45,500.0	45,000.0
Indirect CO2 Emissions		9,000.0	8,400.0	6,700.0	6,800.0	6,900.0
Total CO2 Emissions		66,700.0	64,800.0	52,700.0	52,300.0	51,900.0
CO2 Intensity per Energy		0.25	0.24	0.23	0.24	0.25
Total GHG Emissions		70,800.0	68,200.0	55,800.0	55,200.0	55,800.0
NOx Emissions		141.0	138.0	130.0	130.0	123.0
SO2 Emissions		55.0	51.0	41.0	39.0	36.0
Total Energy Consumption		271,389.0	265,278.0	227,778.0	221,944.0	210,000.0
Hazardous Waste		167.0	197.0	191.0	165.0	157.0
Total Waste		717.0	689.0	507.0	528.0	423.0
Environmental Fines \$		77.4	22.4	2.5	1.0	0.6
Social						
Social Disclosure Score		68.75	64.06	72.44	72.44	76.56

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2018 Bloomberg Finance L.P.

O&G ESG Industry Analysis

BP/ LN Equity		Output		Settings		Relative Valuation					
Overview											
Equity Valuation		CDS Spreads		Op Stats		Profitability		Balance Sheet		ESG	
Name	RobecoSAM Total Sustainability	Sustainalytics ESG Rank	ISS Governance Quickscore	ESG Disclosure Score	CDP Integrated Performance	% Indep Dir on Board	% Women on Board	GHG Emis tens/MBOEs	Nox tens/MBOEs	S	
Median	64	85.57	3.50	56.43	6.00	78.17	21.43%	65.12	0.09	28.47	
100) BP PLC	66	78.35	1.00	68.05	6.00	78.57	21.43%	46.89	0.10	0.03	
101) CENOVUS ENERGY INC	84	93.81	3.00	56.02	7.00	91.67	16.67%	78.38	0.08	25.89	
102) CHEVRON CORP	57	50.52	1.00	48.13	6.00	90.91	36.36%	75.84	0.16	69.52	
103) CHINA PETROLEUM & CHEM	43	--	--	31.95	1.00	40.00	0.00%	--	--	--	
104) ENI SPA	64	94.85	8.00	58.92	8.00	77.78	33.33%	63.37	0.09	13.90	
105) EXXON MOBIL CORP	60	62.89	7.00	56.02	4.00	84.62	23.08%	86.29	0.09	67.41	
106) HUSKY ENERGY INC	41	56.70	10.00	39.83	6.00	56.25	12.50%	113.73	0.08	0.08	
107) IMPERIAL OIL LTD	34	68.04	8.00	--	2.00	71.43	28.57%	101.31	0.11	0.16	
108) LUKOIL PJSC	9	--	2.00	38.59	--	45.45	0.00%	--	--	--	
109) PETROBRAS - PETROLEO B	76	--	7.00	63.90	7.00	--	11.11%	65.12	0.23	127.9	
110) PETROCHINA CO LTD-H	10	--	--	39.83	0.00	30.77	0.00%	--	0.08	83.77	
111) PTT PCL	100	--	--	46.28	6.00	78.57	7.14%	--	--	--	
112) ROSNEFT OIL CO PJSC	48	--	9.00	58.09	0.00	33.33	0.00%	39.13	0.03	31.04	
113) ROYAL DUTCH SHELL PLC-	90	87.63	3.00	58.51	7.00	81.82	27.27%	60.34	0.09	61.83	
114) STATOIL ASA	67	91.75	4.00	57.26	7.00	90.00	50.00%	21.69	0.05	0.00	
115) SUNCOR ENERGY INC	72	85.57	3.00	63.07	6.00	91.67	33.33%	82.19	0.11	92.57	
116) TOTAL SA	95	96.91	3.00	56.85	6.00	66.67	50.00%	61.29	0.08	0.05	
(Accounting Adjustments: Adjusted for Abnormal Items When Applicable)											10 Analyze List
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O&G ESG Industry Analysis (cont.)

BP/ LN Equity		Output		Settings		Relative Valuation							
Overview		Comp Sheets		Markets		EPS Preview		Ownership		Credit		Custom	
Equity Valuation		CDS Spreads		Op Stats		Profitability		Balance Sheet		ESG			
Name		% Indep Dir	% Women on Dir	GHG Emis Intens/MBOE	Nox Emis/MBOE	Sox Emis/MBOE	Energy Intens/MBOE	Water Intens/MBOE	Fatalities/1000 Emps				
Median		78.17	21.43%	65.12	0.09	28.47	255.32	609.49	0.03				
100)	BP PLC	78.57	21.43%	46.89	0.10	0.03	175.60	--	0.04				
101)	CENOVUS ENERGY INC	91.67	16.67%	78.38	0.08	25.89	316.16	--	0.00				
102)	CHEVRON CORP	90.91	36.36%	75.84	0.16	69.52	265.96	--	0.04				
103)	CHINA PETROLEUM & C	40.00	0.00%	--	--	--	--	--	--				
104)	ENI SPA	77.78	33.33%	63.37	0.09	13.90	220.96	--	0.06				
105)	EXXON MOBIL CORP	84.62	23.08%	86.29	0.09	67.41	280.89	--	0.04				
106)	HUSKY ENERGY INC	56.25	12.50%	113.73	0.08	0.08	357.56	--	0.00				
107)	IMPERIAL OIL LTD	71.43	28.57%	101.31	0.11	0.16	439.81	--	0.00				
108)	LUKOIL PJSC	45.45	0.00%	--	--	--	--	507.49	0.02				
109)	PETROBRAS - PETROLE	--	11.11%	65.12	0.23	127.96	244.69	211.92	0.02				
110)	PETROCHINA CO LTD-H	30.77	0.00%	--	0.08	83.77	442.01	--	--				
111)	PTT PCL	78.57	7.14%	--	--	--	--	--	--				
112)	ROSNEFT OIL CO PJSC	33.33	0.00%	39.13	0.03	31.04	68.74	1.85k	0.19				
113)	ROYAL DUTCH SHELL PL	81.82	27.27%	60.34	0.09	61.83	204.25	--	0.03				
114)	STATOIL ASA	90.00	50.00%	21.69	0.05	0.00	100.84	--	0.28				
115)	SUNCOR ENERGY INC	91.67	33.33%	82.19	0.11	92.57	348.28	711.49	0.00				
116)	TOTAL SA	66.67	50.00%	61.29	0.08	0.05	162.69	--	0.01				

(Accounting Adjustments: Adjusted for Abnormal Items When Applicable)

10 Analyze List

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Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2018 Bloomberg Finance L.P.

O&G ESG Industry Analysis: Scores, Ranks & Ratings

Name	Bloomberg ESG Disclosure Score	RobecoSAM Total Sustainability Rank	RobecoSAM Governance Rank	RobecoSAM Environmental Rank	RobecoSAM Social Rank	Sustainalytics ESG Rank	Sustainalytics Environment Percentile	Sustainalytics Social Percentile	Sustainalytics Governance Percentile	ISS Governance QuickScore
BP	68.05	66	60	67	60	74.53	76.42	65.09	75.47	9
Cenovus Energy	56.02	84	83	88	79	90.57	83.96	95.28	91.51	4
Chevron	48.13	57	47	60	59	50.00	33.96	68.87	17.92	5
China Petroleum and Chemical Corp	31.95	43	57	40	41	N/A	N/A	N/A	N/A	N/A
Eni SpA	59.75	64	76	64	50	94.34	94.34	96.23	83.02	6
Exxon Mobil	56.02	60	38	59	67	61.32	60.38	66.98	23.58	6
Husky Energy	39.83	41	22	57	21	62.26	38.68	75.47	56.60	10
Imperial Oil	N/A	34	9	50	38	69.81	70.75	56.60	71.70	7
PetroChina Co	39.83	10	5	14	28	N/A	N/A	N/A	N/A	N/A
Petroleo Brasileiro SA Petrobras	63.90	76	33	91	78	N/A	N/A	N/A	N/A	7
PJSC Lukoil	38.59	9	7	16	24	N/A	N/A	N/A	N/A	4
Ptt PLC	46.28	100	90	95	100	N/A	N/A	N/A	N/A	N/A
Rosneft Oil Co	58.09	48	55	45	45	N/A	N/A	N/A	N/A	9
Royal Dutch Shell PLC	56.02	90	97	86	90	83.02	55.66	87.74	96.23	5
Statoil ASA	57.26	67	48	71	62	97.17	91.51	91.51	100.00	4
Suncor Energy	63.07	72	53	74	76	86.79	75.47	89.62	81.13	1
Total SA	56.85	95	95	97	95	99.06	99.06	98.11	84.91	2

Environmental Metrics

Industry Peer Comparison

Company	RobecoSAM Environmental Rank	Sustainalytics Environment Percentile	Total GHG Emissions (Th Tonnes)	GHG Scope 1	GHG Scope 2	Nitrogen Oxide Emissions (Th Tonnes)	Number of hazardous spills	Environmental Supply Chain Management*	Number of Environmental Fines
BP	67	76.4	56300.0	50100	6200	125.0	149	N	N/A
Cenovus Energy	88	84.0	7787.1	6539.7	1247.4	7.9	108	N	N/A
Chevron	60	34.0	72000.0	66000	6000	151	9	N	102
China Petroleum and Chemical Corp	40	N/A	N/A	N/A	N/A	N/A	N/A	Y	N/A
Eni SpA	64	94.3	40800.0	40100	700	56.0	238	Y	N/A
Exxon Mobil	59	60.4	128000.0	120000	8000	130	220	Y	N/A
Husky Energy	57	38.7	13370.0	11242	2128	9.8	170	N	N/A
Imperial Oil	50	70.8	13200.0	12300	900	14.9	4	N/A	28
PetroChina Co	14	N/A	N/A	N/A	N/A	112.7	N/A	Y	N/A
Petroleo Brasileiro SA									
Petrobras	91	N/A	66500.0	66100	400	234.8	24	Y	7
PJSC Lukoil	16	N/A	N/A	N/A	N/A	N/A	28	N	N/A
Ptt PLC	95	N/A	31586.2	29980	1606.2	14.4	2	Y	0
Rosneft Oil Co	45	N/A	76900.0	52400	24500	50.0	5034	N	N/A
Royal Dutch Shell PLC	86	55.7	81000.0	70000	11000	122.0	117	Y	N/A
Statoil ASA	71	91.5	15700.0	15400	300	39.0	18	Y	N/A
Suncor Energy	74	75.5	18734.7	17430.9	1303.9	24.9	N/A	N	18
Total SA	97	99.1	55000.0	51000	4000	75.0	73	Y	N/A

* Indicates whether the company has implemented any initiatives to reduce the environmental risks in its supply chain

Social Metrics

Company	RobecoSAM Social Rank	Sustainalytics Social Percentile	Fatalities - Total	Human Rights Policy	Social Supply Chain Management*	Training Policy
BP	60	65.09	3	Y	Y	Y
Cenovus Energy	79	95.28	0	Y	Y	Y
Chevron	59	68.87	10	Y	Y	N
China Petroleum and Chemical Corp	41	N/A	N/A	Y	Y	Y
Eni SpA	50	96.23	2	Y	Y	Y
Exxon Mobil	67	66.98	3	Y	Y	Y
Husky Energy	21	75.47	0	N	N	Y
Imperial Oil	38	56.60	0	N/A	N/A	N/A
PetroChina Co	28	N/A	N/A	Y	Y	Y
Petroleo Brasileiro SA Petrobras	78	N/A	3	Y	Y	Y
PJSC Lukoil	24	N/A	2	Y	N	Y
Ptt PLC	100	N/A	N/A	Y	Y	Y
Rosneft Oil Co	45	N/A	54	Y	N	Y
Royal Dutch Shell PLC	90	87.74	3	Y	Y	Y
Statoil ASA	62	91.51	14	Y	Y	Y
Suncor Energy	76	89.62	0	Y	N	Y
Total SA	95	98.11	1	Y	Y	Y

* Indicates whether the company has implemented any initiatives to reduce the social risks in its supply chain

Governance Metrics

Company	RobecoSAM Governance Rank	Sustainalytics Governance Percentile	% Women in Management	% Women in Workforce	% Women on Board	Number of Female Executives	Percentage of Female Executives	% Minorities in Workforce	% Independent Directors
BP	60	75.5	22	33.0	21.4	0	0.0	N/A	78.6
Cenovus Energy	83	91.5	22	27.0	16.7	2	22.2	N/A	91.7
Chevron	47	17.9	N/A	24.2	36.4	1	14.3	N/A	90.9
China Petroleum and Chemical Corp	57	N/A	N/A	36.0	0.0	0	0.0	N/A	40.0
Eni SpA	76	83.0	14	23.0	33.3	0	0.0	N/A	77.8
Exxon Mobil	38	23.6	18	28.0	23.1	1	4.8	N/A	84.6
Husky Energy	22	56.6	N/A	N/A	12.5	1	7.1	N/A	56.3
Imperial Oil	9	71.7	N/A	25.0	28.6	4	33.3	11.2	71.4
PetroChina Co	5	N/A	N/A	31.2	0.0	1	11.1	6.4	30.8
Petroleo Brasileiro SA									
Petrobras	33	N/A	N/A	16.0	11.1	1	12.5	N/A	N/A
PJSC Lukoil	7	N/A	N/A	41	0.0	1	6.7	N/A	45.5
Ptt PLC	90	N/A	N/A	N/A	7.1	5	23.8	N/A	78.6
Rosneft Oil Co	55	N/A	14	33.5	0.0	0	0.0	N/A	33.3
Royal Dutch Shell PLC	97	96.2	20	30.0	27.3	0	0.0	N/A	81.8
Statoil ASA	48	100.0	N/A	31.0	50.0	3	27.3	N/A	90.0
Suncor Energy	53	81.1	N/A	24.5	33.3	1	11.1	12.6	91.7
Total SA	95	84.9	19.9	32.4	50.0	1	14.3	N/A	66.7

Strategic ESG Action

What can issuers do to manage these issues?

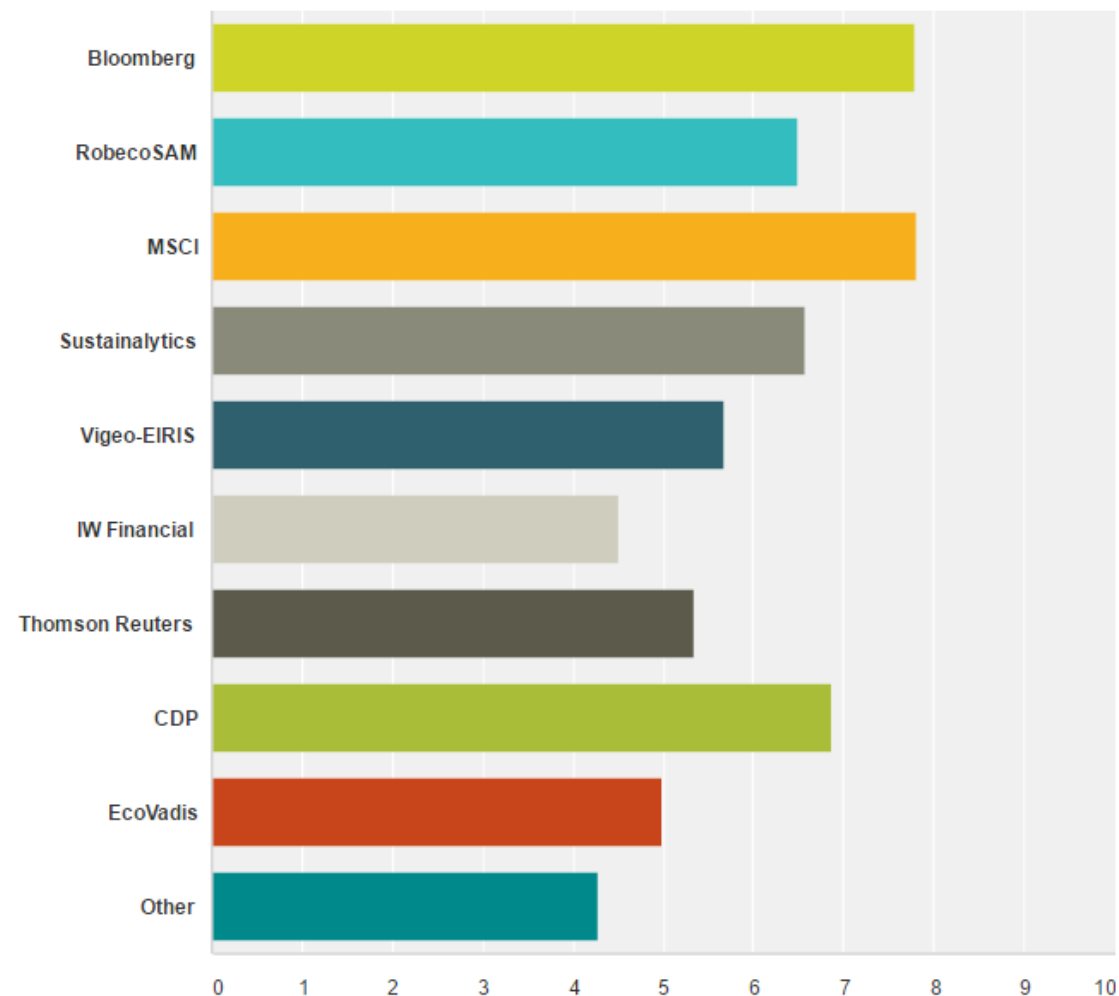
- The WBCSD ESG Ratings & Rankings Working Group was formally established in June 2016, at Pathways to Impact, a conference hosted by WBCSD and US BCSD, conducted at Yale University, with a panel presentation by guests from GISR, Sustainable Purchasing Leadership Council, CDP, EcoVadis, and Nasdaq.
- WBCSD and BrownFlynn host quarterly webinars and in-person meetings with Ratings & Rankings experts and agencies, including GISR, RepRisk, EcoVadis, and Just Capital.
- To access the presentation portions of previous webinars, visit the WBCSD page on BrownFlynn's website, under Resources.
 - <https://brownflynn.com/resources/brownflynn-wbcd/>

The screenshot shows the BrownFlynn website's 'RESOURCES' page. At the top is the BrownFlynn logo with the tagline 'Do Good. Do Well. Win.' and a navigation menu with links: ABOUT, CONSULTING, TRAINING, CASE STUDIES, EVENTS, RESOURCES (highlighted), and NEWS. Below the navigation is a large blue header with the word 'RESOURCES' in white. Underneath is a breadcrumb trail: 'Home / Resources / BrownFlynn & WBCSD'. The main heading is 'BROWNFLYNN & WBCSD Educational Series'. A paragraph states: 'As Chair of the new ESG Ratings and Rankings Working Group, BrownFlynn collaborates with the World Business Council for Sustainable Development (WBCSD) to bring unique sustainability developments and perspectives to WBCSD members. Our expertise in the financial markets, ratings and rankings, sustainable purchasing, and reporting are provided to WBCSD members through collaborative programming.' Below this are two sections: 'WEBINAR ARCHIVES' and 'PRESENTATION ARCHIVES'. The 'WEBINAR ARCHIVES' section has two items: 1. '14 DEC 2016 JUST Capital Redefining Value: Building a JUST Marketplace' with a description 'JUST Capital: A New and Unique Entrant to the Company Data and Performance Rankings Field' and a 'VIEW' button. 2. '8 SEP 2016 Navigating the Rapidly Evolving ESG Ratings and Rankings Landscape' with a description 'A BrownFlynn webinar in partnership with WBCSD, featuring special guests GISR, RepRisk, and EcoVadis.' and a 'VIEW' button. The 'PRESENTATION ARCHIVES' section has one item: '14 JUN 2016 Aligning Values: Ratings & Rankings' with a detailed description of a presentation at Yale University and a 'VIEW' button.

ESG Ratings & Rankings Survey (Initial Results)

Which organizations would you be most interested in hearing from in a private forum (i.e. – open dialogue, Chatham house rule, no attribution?)

Answered: 35 Skipped: 5



7-8 Responders:

Bloomberg, MSCI

6-7 Responders:

CDP, RobecoSAM, Sustainalytics

5-6 Responders:

Vigeo-EIRIS, Thomson Reuters, EcoVadis

4-5 Responders:

IW Financial, Other

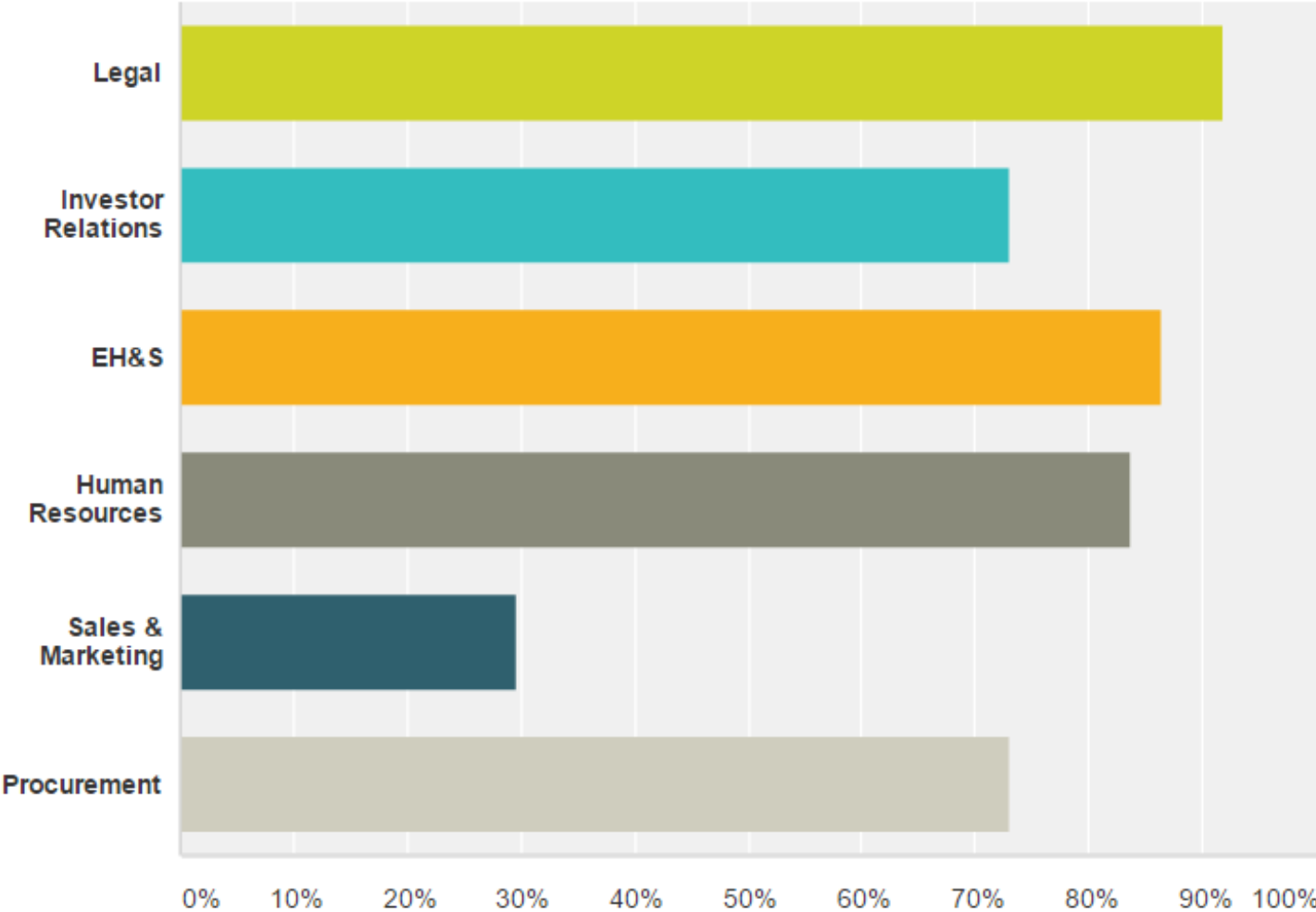
Other:

- BlackRock
- Calvert
- Trucost (S&P)
- GRI
- Investor Groups
- Mainstream shareholders: Wellington, Vanguard, BlackRock, etc.

ESG Ratings & Rankings Survey (Initial Results)

Who do you usually partner with to respond to external inquiries?

Answered: 37 Skipped: 3



Case Study: Strategic ESG Disclosure

Edwards Lifesciences

Corporate Sustainability Council

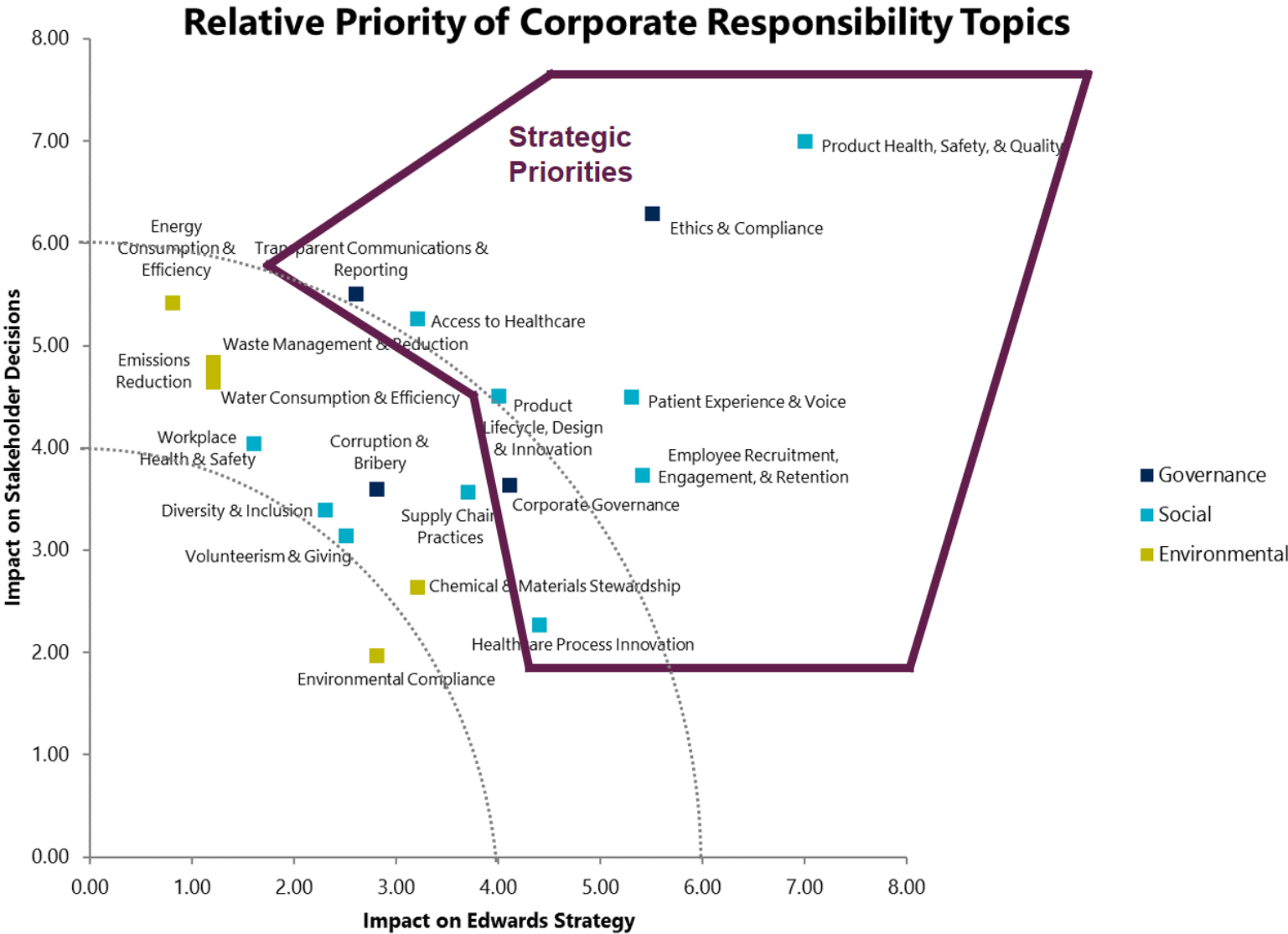
Aspiration Theme Champions

- IR, *Shareholder Value*
- Global Communications, *Innovative Technology*
- EHS, *Trusted Partner*
- Philanthropy, *Community*
- HR, *Talented Employees*

Council

- Legal
- Communications
- Global Supply Management
- Government Affairs
- Product Steward
- EU, Business Operations
- ERM
- EU, International Quality
- Strategy

Case Study: Strategic ESG Disclosure



Case Study: Strategic ESG Disclosures

Edwards Lifesciences

Sustainability Metrics at a Glance

- Published on Edwards.com
- Disseminated to most influential ESG research firms
- Good feedback and engagement

Edwards Lifesciences Our Sustainability Metrics At a Glance

Topic	Metric	2016	2015
Social			
Products	Number of regulatory approvals for new devices	3	2
	Number of global patient safety-related class 1 product removals	0	0
Ethics	Applicable employees certified to ethics code of conduct (%)	97	98
	See Corporate Responsibility site and Sustainability Report .		
Access to Healthcare	Number of underserved patients impacted through our philanthropic partners who provide education, screening and treatment	400,000	200,000
	Community Spending (Foundation, Corporate Grants and Product Donations)	\$6.6 million	\$8.2 million
	Every Heartbeat Matters Grants Awarded (USD)	\$4.4 million	\$3.9 million
	Facilities engaged in local charitable activity (%)	100%	100%
	See Political Disclosure and Accountability .		
Employee Health and Safety	Lost Time Incident Rate (Total incidents per 200,000 hours worked or 100 FTE)	0.34	0.36
	Total Recordable Incident Rate (Total recordable incidents per 200,000 hours worked or 100 FTE)	1.22	1.16
	Fatalities – Contractors	0	0
	Fatalities – Employees	0	0
	Health and Safety Policy (y/n)	Yes	Yes
	Health and safety policy is group-wide (y/n)	Yes	Yes
	Target to improve H&S performance (y/n)	Yes	Yes
See Environmental Health & Safety report for more information.			

Single Security Data

Company reported ESG data is available at a single security level. Offering complete transparency, ratios and third party scores are also available.

EW US Equity

96) Actions ▾

97) Output ▾

98) Settings

Financial Analysis

ADJ

Edwards Lifesciences Corp

Periods 11

Annuals

Currency USD ▾

1) Key Stats

2) I/S

3) B/S

4) C/F

5) Ratios

6) Segments

7) Addl

8) ESG

9) Custom

10) Shared

10) Overview

12) Environmental

13) Social

14) Governance

15) Exec & Dir Comp

16) ESG Ratios

17) CDP

In Millions of USD except Per Share	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
12 Months Ending	12/31/2016	12/31/2015	12/31/2014	12/31/2013	12/31/2012	12/31/2011	12/31/2010	12/31/2009	12/31/2008	12/31/2007
ESG Disclosure Score	50.00	49.59	46.36	37.37	16.57	15.29				
Environmental										
Environmental Disclosure Score	50.39	47.29								
Total GHG Emissions	46.4	31.6								
NOx Emissions	0.0	-								
Total Energy Consumption	108.2	81.9	102.6	-						
Total Water Use	432.5	358.0	310.0	345.0						
Hazardous Waste	0.9	0.8	0.8	0.7						
Total Waste	3.3	3.7	3.6	1.8						
Social										
Social Disclosure Score	33.33	38.60	19.30	19.30	14.04	14.04	14.04			
Number of Employees	11,084	10,116	9,100	8,600	8,200	7,800	7,000			
% Women in Workforce	62.00	62.00	-	-	-	-	-			
% Women in Mgt	-	24.00	-	-	-	-	-			
Fatalities - Contractors	0	0	0	0	-	-	-			
Fatalities - Employees	0	0	0	0	-	-	-			
Fatalities - Total	0	0	0	0	-	-	-			
Governance										
Governance Disclosure Score	66.07	66.07	55.36	51.79	51.79	51.79	51.79			
Size of the Board	9	8	8	8	8	8	8	7	6	8
Indep Directors	8	7	7	7	7	7	7	6	5	7

Financial Analysis: Source Document

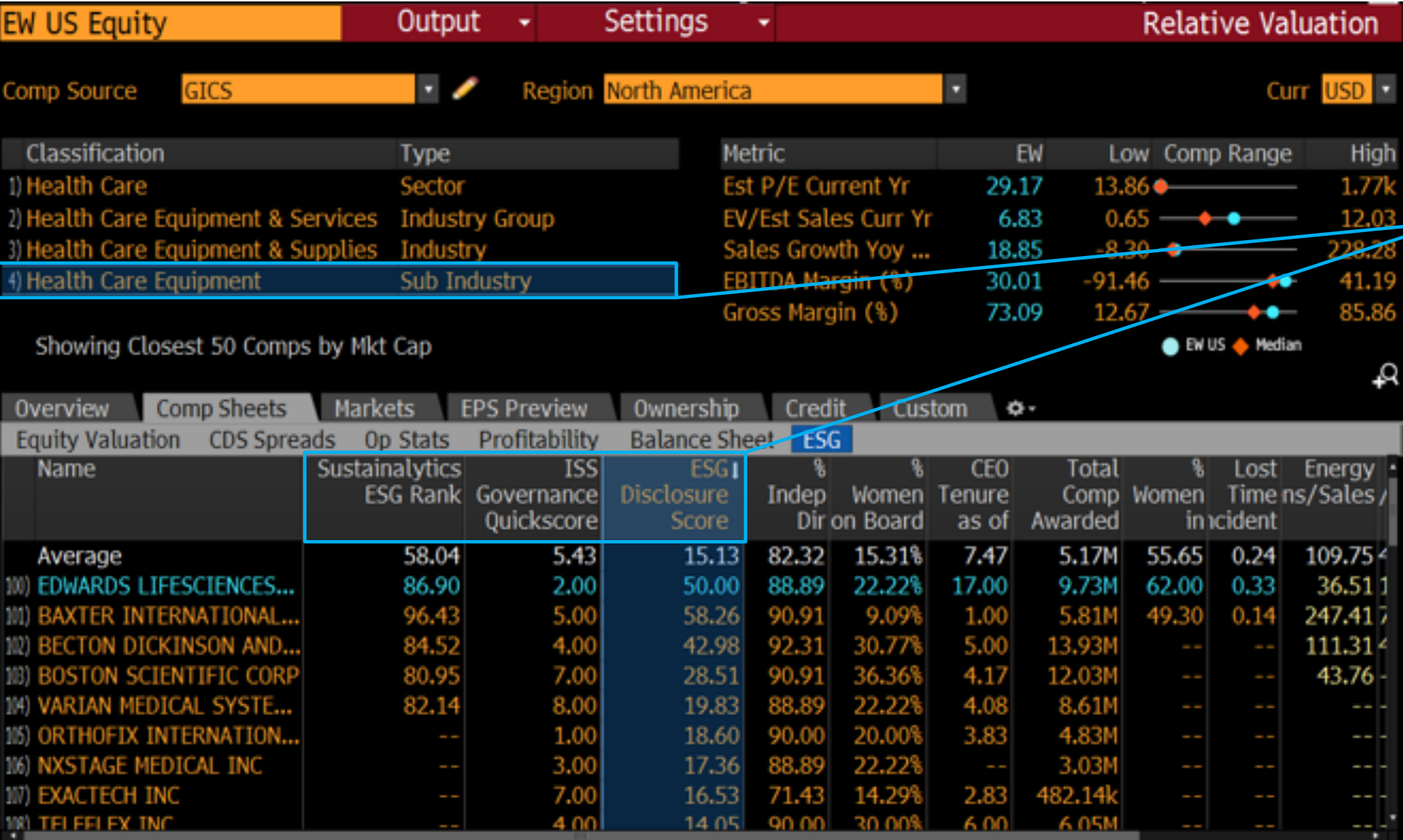
Edwards Lifesciences Corp

FY 2016

Topic	Metric	2016	2015
Environmental			
ISO 14001	Manufacturing operations maintaining ISO 14001 certification	67%	67%
Air Emissions	Scope 1 Emissions (Th Tonnes)	7.41	6.81
	Scope 2 Emissions (Th Tonnes)	39.02	33.77
	Scope 3 Emissions (Th Tonnes)	41.38	td
	Emissions Reduction Initiatives (y/n)	Yes	Yes
	Workforce participating in alternate transportation (%)	40%	40%
	Volatile Organic Compounds ROG/VOC emissions (kgs)	799	-
	Nitrogen Oxide Emissions (kgs)	3,001	-
	Sulfur Oxide Emissions (kgs)	86	-
Climate	Climate Change Opportunities Discussed (y/n)	Yes	Yes
	Risks of Climate Change Discussed (y/n)	Yes	Yes
	Climate Change Policy (y/n)	Yes	Yes
	CDP Carbon Disclosure (y/n)	Yes	Yes
	See CDP Response for more information.		
Energy	Total Energy Consumption (MWh)	108,206	94,306
	Energy Efficiency Policy (y/n)	Yes	Yes
Water	Water Consumption in Manufacturing (Thousands of cubic meters)	432.46	357.88
	See CDP Response for more information.		
Waste	Hazardous Waste (Th Tonnes)	.906	.799
	Total Waste Discarded (Th Tonnes)	1.499	1.268
	Total Waste Recycled (Th Tonnes)	.925	.874
	Waste Reduction Policy (y/n)	Yes	Yes
	See Environmental Health & Safety report for more information.		

ESG Peer Analysis

Analyze a company's ESG performance to assess current and historical risks and opportunities



ESG Performance and peer comparisons including ESG scores

Is it time to create your own ESG narrative?

.....Or are you going to let others do that for you?

Step 1: Benchmark & Internal Discussion

- Are your competitors disclosing things you are not?

- Can you disclose these things?

- Do we want to connect the internal dots and do a report, or fill the immediate gaps?

Step 2: ESG Research Firm and Shareholder Mapping & Assessment

- Who is already looking at you and contacting you?

- Which of your largest owners have a dog in the ESG fight?

- How important are those ESG research firms and owners to you? (Prioritize)

Step 3: Strategic and Integrated Disclosure

- What do we already have in-house that we're not disclosing?

- What are our most important (material) ESG issues?

- Who are the internal SMEs that can help measure, manage and disclose ESG information?

Thank You

For more information on BrownFlynn's services,
please visit www.brownflynn.com or contact us below.

Mike Wallace
Managing Director
& Senior Consultant
(424) 320 3501
mikew@brownflynn.com



Do Good. Do Well. **Win.**™

Appendices

Introduction to the TCFD

Information as of January 2018



Do Good. Do Well. Win.™

What is the TCFD?

The Task Force on Climate-Related Financial Disclosures (TCFD) is an industry-led task force produced recommendations designed to bridge the gap between how companies currently disclose information and how investors would prefer that information be presented.

- The TCFD seeks to improve market understanding and analysis of climate-related risks and opportunities by establishing a set of recommendations to “provide a common set of principles and “guide disclosure to help financial markets assess and price climate-related risks and opportunities.”
- The TCFD recommendations established a method for standardizing climate-related financial disclosures in a way that would be useful for investors, lenders, and insurance underwriters in understanding material risks posed by climate change.
- TCFD’s recommendations “will help companies understand what financial markets want from disclosure in order to measure and respond to climate change risks, and encourage firms to align their disclosures with investors’ needs.”



Source: [Frequently Asked Questions Understanding How SASB Standards and TCFD Recommendations Are Complementary](#)

Who is Behind the TCFD?

TCFD was envisioned by the G20 and spearheaded by the FSB

- The TCFD was envisioned in 2015 by the G20 Finance Ministers to investigate how the financial sector can take account of climate-related issues.
- The G20 leaders requested the Financial Stability Board (FSB) launch a Task Force on Climate-Related Financial Disclosures (TCFD, or Task Force), with the goal of helping companies better understand what financial markets need from disclosure in order to measure and manage climate risks.



FINANCIAL
STABILITY
BOARD

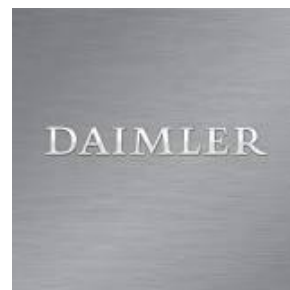


Source: [Frequently Asked Questions Understanding How SASB Standards and TCFD Recommendations Are Complementary](#)

Who Sits on the Task Force?

The Task Force is made up of 32 member organizations from around the world, including:

- ① Large banks
- ② Insurance companies
- ③ Asset managers
- ④ Pension funds
- ⑤ Large non-financial companies
- ⑥ Accounting and consulting firms
- ⑦ Credit ratings agencies



Bloomberg



BLACKROCK®



S&P Global
MOODY'S



Swiss Re



Bradesco



Air Liquide
creative oxygen

BARCLAYS

J.P.Morgan



What Does TCFD Recommend?

TCFD suggests companies include climate-related financial disclosures in their public financial filings

- Climate-related risks are material for many organizations, and as such should be included as material risks in public financial filings
- Climate-related risks should be assessed using potential future climate scenarios, including a scenario using a 2° C rise in average global temperature
- This disclosure will help assess how organizations assess various future climate scenarios, and provides key insight to the potential financial implications of climate change on an organization

Source: [TCFD Final Recommendations Report](#)

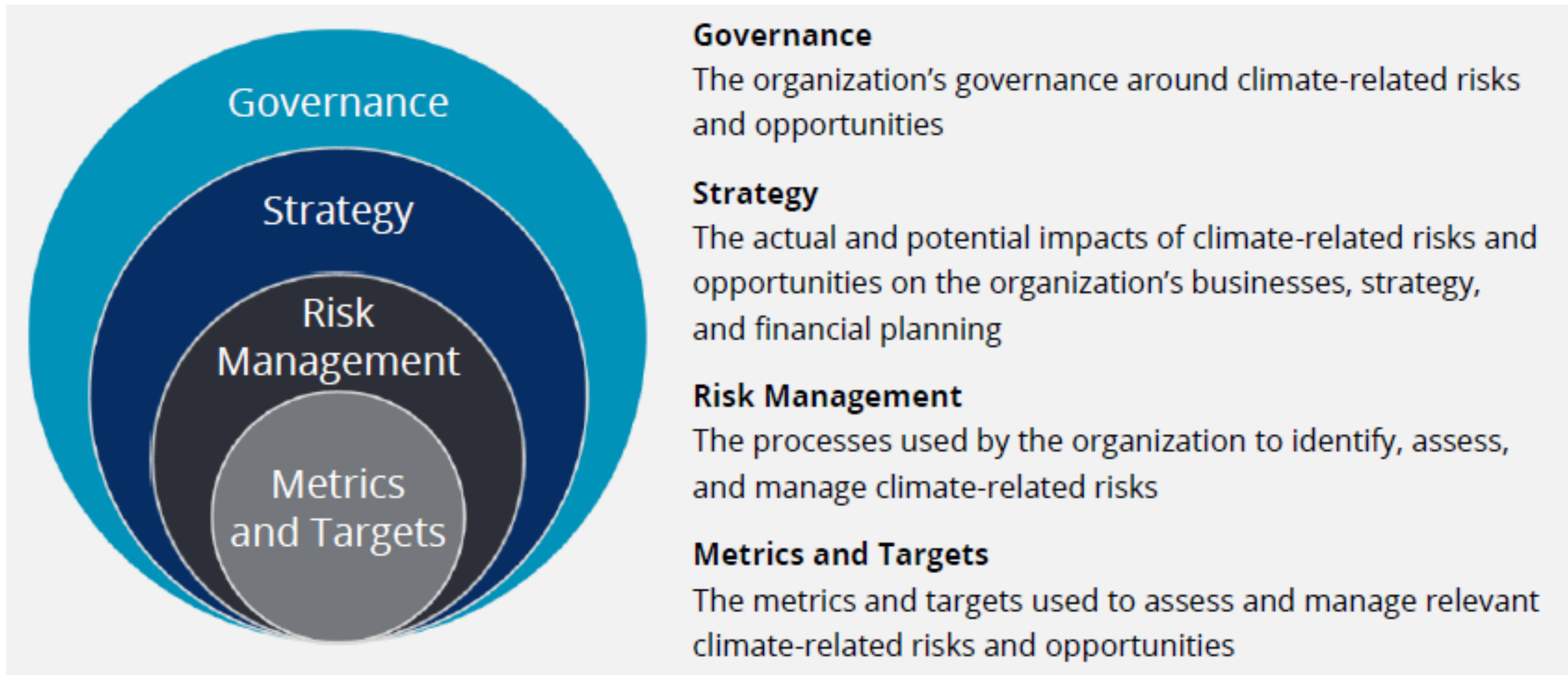
Key Features of TCFD Recommendations

TCFD recommendations are designed to be widely adoptable to organizations across sectors and jurisdictions

- ① Adoptable by all organizations
- ② Included in financial filings
- ③ Designed to solicit decision-useful, forward-looking information on financial impacts
- ④ Strong focus on risks and opportunities related to transition to lower-carbon economy

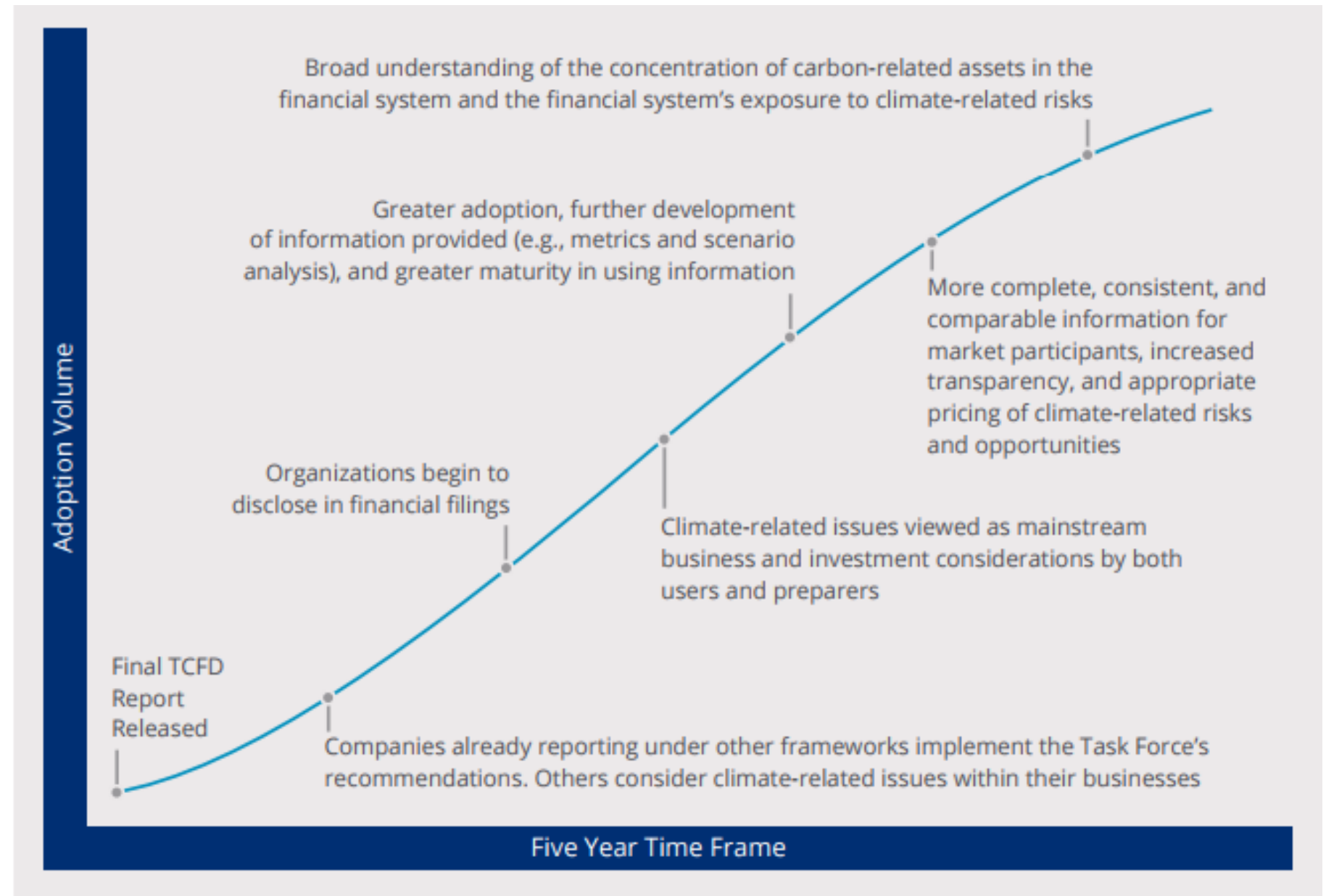
Core Elements of Recommended Disclosures

TCFD structured its recommendations around four core functions of business operation:



Source: [TCFD Final Recommendations Report](#)

5-Year Implementation Path



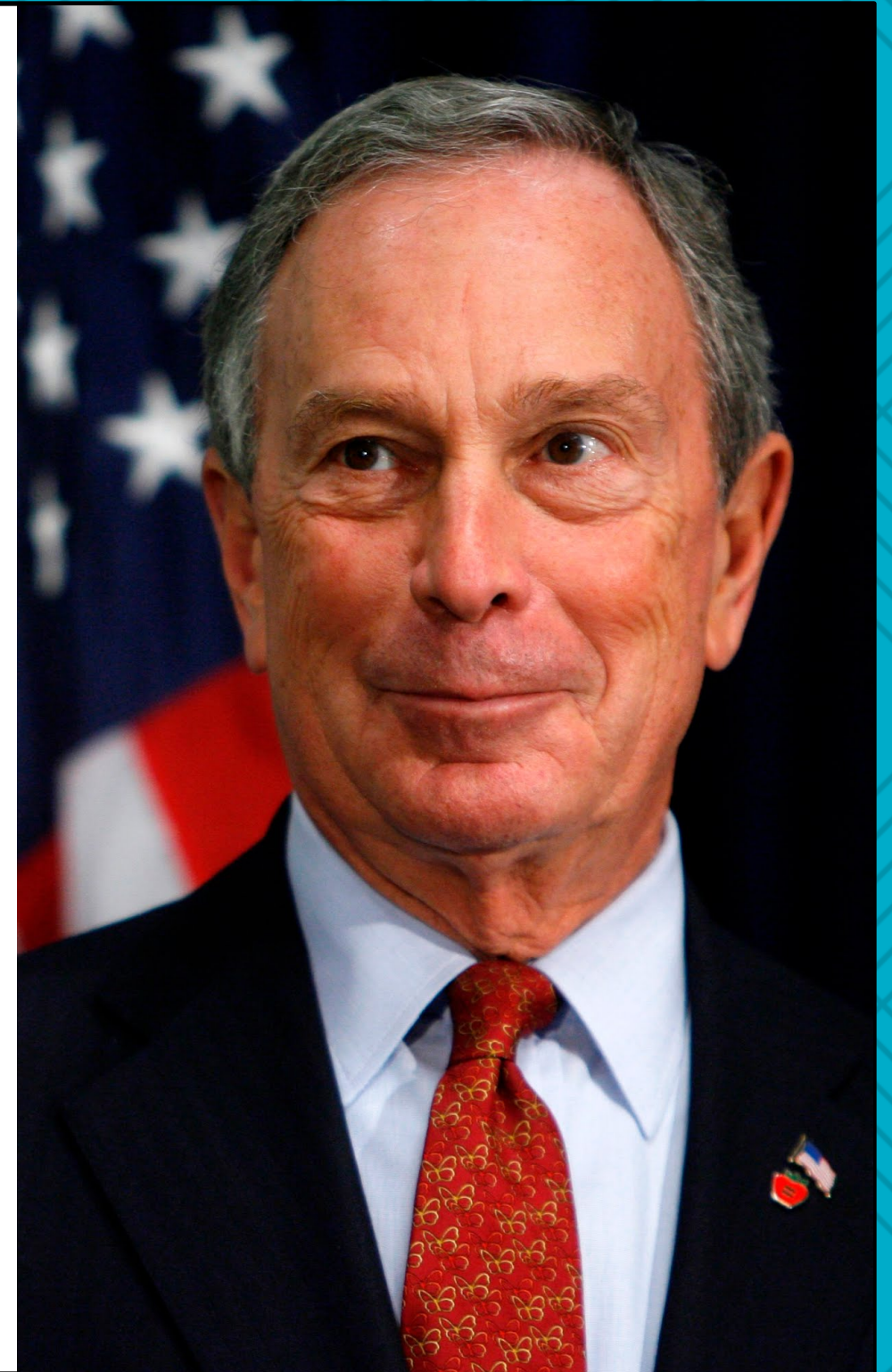
Source: [TCFD Final Recommendations Report](#)

Is TCFD the Same as SASB?

The frameworks are complimentary but not the same

- **There are several similarities between the SASB and the TCFD, including:**
 - Both initiatives are chaired by Michael Bloomberg
 - Both provide guidance for identifying climate-related risks and opportunities.
 - Both recognize climate change as one of the biggest economic risks facing the world.
 - Both connect the risks of climate change to financial impacts
 - Both suggest integrating the material risk factors of climate change into a company's mainstream financial filings
- **There are several key differences, most notably:**
 - SASB is identified as the framework by which to fulfill the TCFD recommendations
 - The TCFD recommendations include high level recommended disclosures in the areas of governance, strategy, risk management and metrics and targets **across all sectors**, while the SASB Standards provide detailed climate-related disclosure topics and metrics for **specific industries**

Source: [Frequently Asked Questions Understanding How SASB Standards and TCFD Recommendations Are Complementary](#)



How Does TCFD Align with SASB?



Source: [Frequently Asked Questions Understanding How SASB Standards and TCFD Recommendations Are Complementary](#)

[-] Sounds Great, but Does Anyone Really Care?

The growth and value of TCFD supporters indicates institutions should take the TCFD recommendations seriously

In December 2017, **BlackRock** sent a letter to **120 portfolio companies** with “material climate risk inherent in their business operations” The letter **urged** these companies “**to report climate dangers in line with the recommendations of the Financial Stability Board’s Task Force on Climate-related Financial Disclosures.**”¹

In July 2017, **Aviva Investors**, a UK fund with \$437B AUM, said it will **vote against** the annual reports of **companies that fail to embrace TCFD** recommendations in their filings.²

¹ Source: <https://www.bloomberg.com/news/articles/2017-12-08/blackrock-wields-its-6-trillion-club-to-combat-climate-risks>

² Source: <https://www.ft.com/content/69daf7c6-67e3-11e7-9a66-93fb352ba1fe>

= What Does Supporting The TCFD Mean?

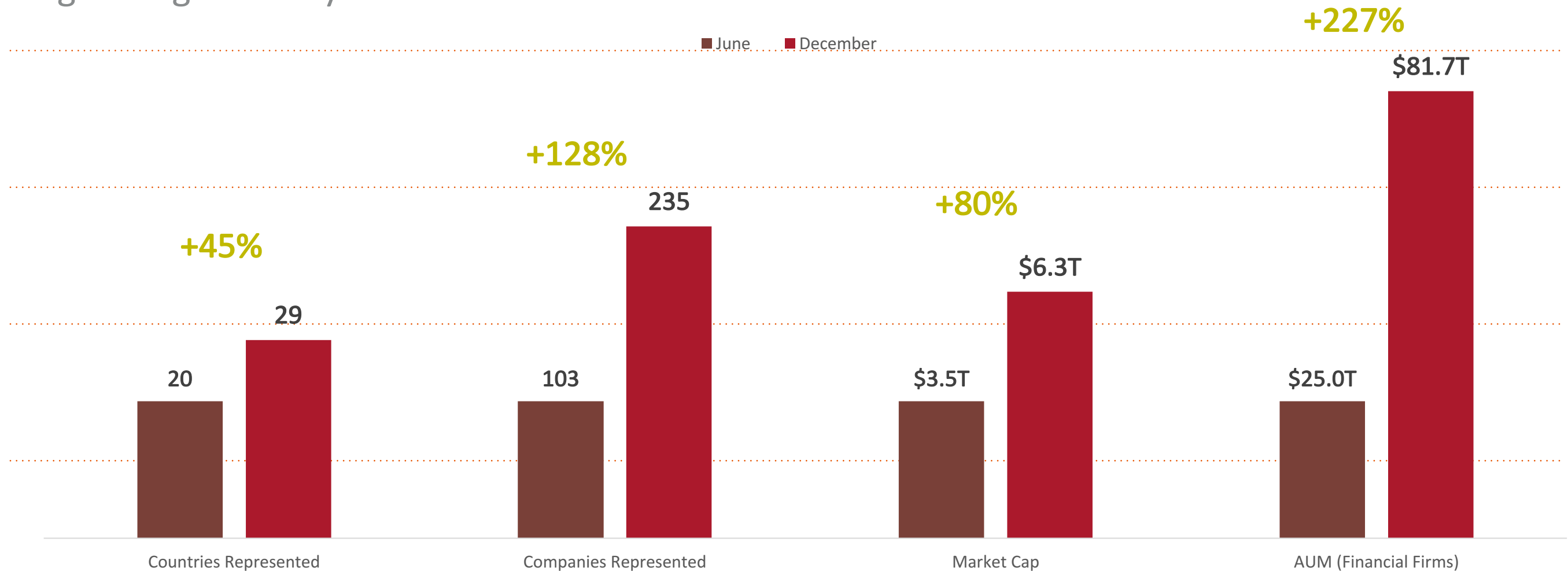
Supporters of the TCFD have signed on to a statement that includes:

“We believe that climate change will have significant impacts across many sectors and that we, as business leaders, have an important role to play in ensuring transparency around climate-related risks and opportunities.”

Source: [Statement of Support and Supporting Companies](#)

How is Investor Interest Evolving?

Between June and December 2017, the number of signatories, value and countries represented all grew significantly.



Source: [June 2017 TCFD Press Release](#); [December 2017 TCFD Press Release](#)

Notable Signatories as of June 2017



Morgan Stanley



BNP PARIBAS



S&P Global

MOODY'S



CALSTRS



CPP
INVESTMENT
BOARD



PHILIPS



PEPSICO



Notable Signatories as of December 2017

BLACKROCK®



Vanguard®



STATE STREET®

J.P.Morgan



Bank

WELLINGTON
MANAGEMENT



LLOYDS
BANKING
GROUP



CREDIT SUISSE

Standard Life Aberdeen



GLASS LEWIS



Deutsche
Asset Management

MIZUHO



Royal Bank
of Scotland

NEUBERGER

BERMAN

ISS

TESCO



nationalgrid



QANTAS
Spirit of Australia

