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Climate Change Risks and Corporate Disclosure Responsibilities: 2018 CDP Survey Lessons and Insights

Navigating Federal and State Requirements, Private-Sector Actions, and Voluntary Reporting Frameworks

THURSDAY, AUGUST 8, 2019

1pm Eastern | 12pm Central | 11am Mountain | 10am Pacific

Today's faculty features:

Jeffrey C. Fort, Partner, **Dentons**, Chicago

Robert Schuwerk, Executive Director, North America, **Carbon Tracker**, New York

Andrew R. Stewart, Counsel, **Sidley Austin**, Washington, D.C.

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August 8, 2019

Climate Change Risks and Corporate Disclosure

Part I: The Evolving Landscape of Disclosure Practices

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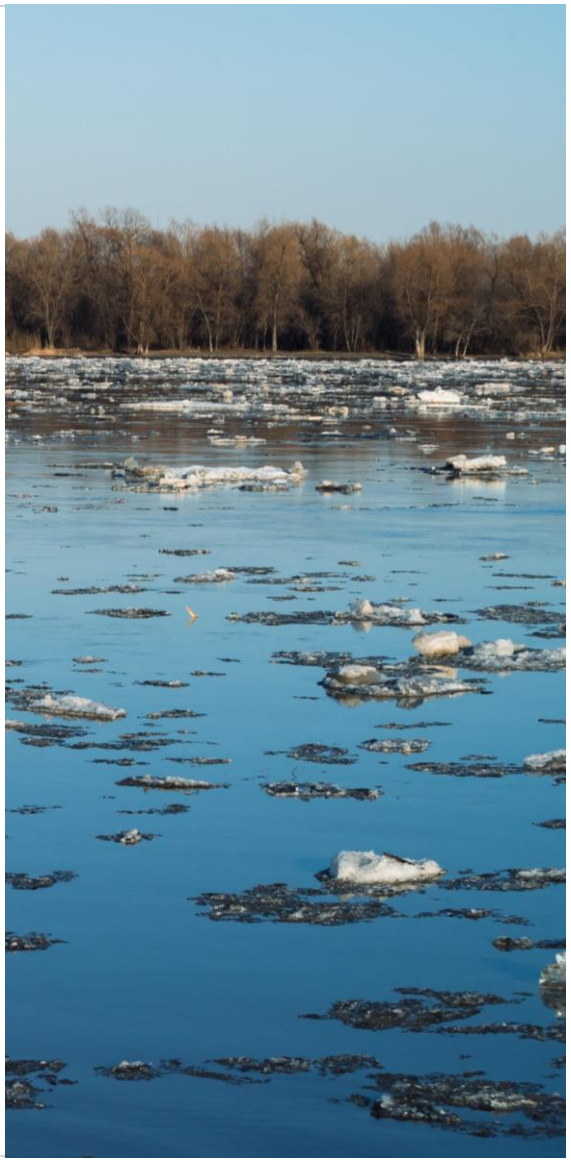
SIDLEY

AGENDA

Voluntary vs. Mandatory Climate Risk Reporting

Drivers of Enhanced Disclosures

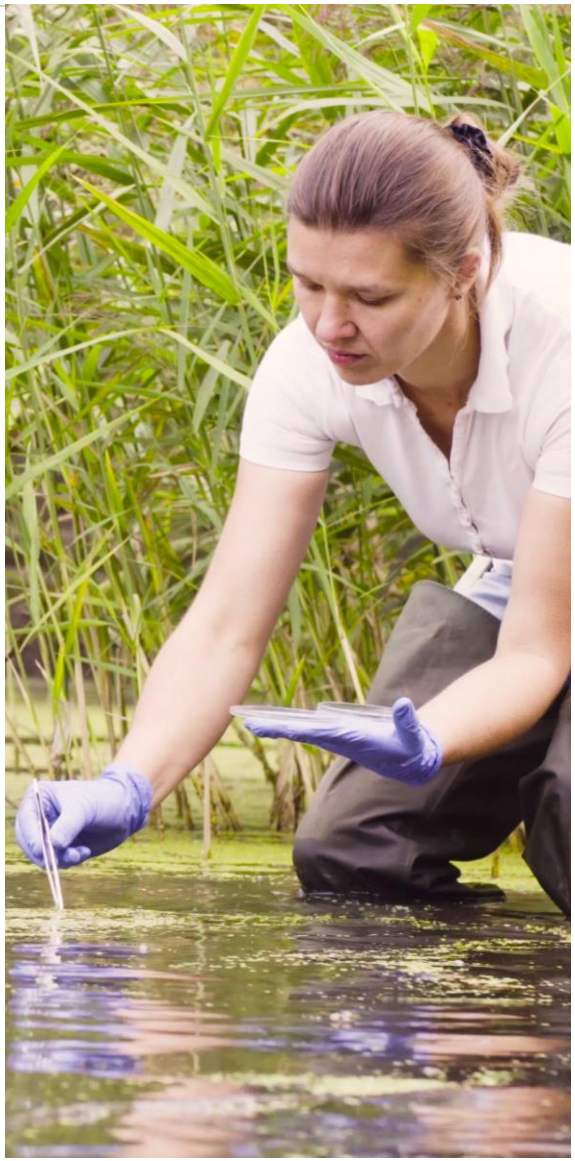
Climate Change Risk Disclosure Issues



VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

Reporting under the Securities Laws and Regulations

- **Regulation S-K:** requirements for registration statements filed under Securities Act of 1933 and periodic reports and proxy statements filed under Securities Exchange Act of 1934
  - Items in Regulation S-K relevant to environmental disclosures:
    - Item 101 – Description of Business
      - Material effects environmental compliance will have on earnings, competitive position & capital expenditures
      - Estimated material capital expenditures for “environmental control facilities” for current/next fiscal year and other periods registrant deems material
    - Item 103 – Legal Proceedings: Pending or known to be contemplated, administrative or judicial, and even if initiated by company, must be disclosed:
      - if material, or
      - if a government agency is a party and monetary sanctions may be $100,000 or more
    - Item 303 – Management’s Discussion and Analysis
    - Item 503(c) – Risk Factors
- **SEC Guidance: Disclosure Related to Climate Change (Feb. 2010)**
- **Exchange Act Rule 13p 1** – SEC 2013 conflicts minerals disclosure rule



VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

Recent Developments at the SEC

- The SEC is not currently focused on environmental issues
- 2018 rule amendments to eliminate redundant, duplicative, outdated or superseded disclosure requirements
  - Technical exercise, focused more on simplifying compliance by lawyers and accountants, without significantly altering the total mix of information provided to investors
- The SEC put modernization of disclosure requirements on its Fall 2018 Reg Flex agenda
- In October 2017, the SEC proposed amendments to improve disclosure requirements, specifically to
  - reduce the costs and burdens on registrants while still providing material information to investors
  - improve investors' ability to read and navigate public filings, and
  - discourage repetition and the disclosure of immaterial information
- 2016 SEC Concept Release
  - Sought public comment on "modernizing" business and financial disclosure requirements in Regulation S-K
  - Also sought comment on "sustainability and public policy matters, including climate change"
  - Many comment letters supported sustainability disclosure requirements
  - Proposed amendments to modernize and simplify Regulation S-K
  - Majority of comments sought better Environmental, Social, and Governance (ESG) disclosure

VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

2018 Request for Rulemaking on ESG Reporting

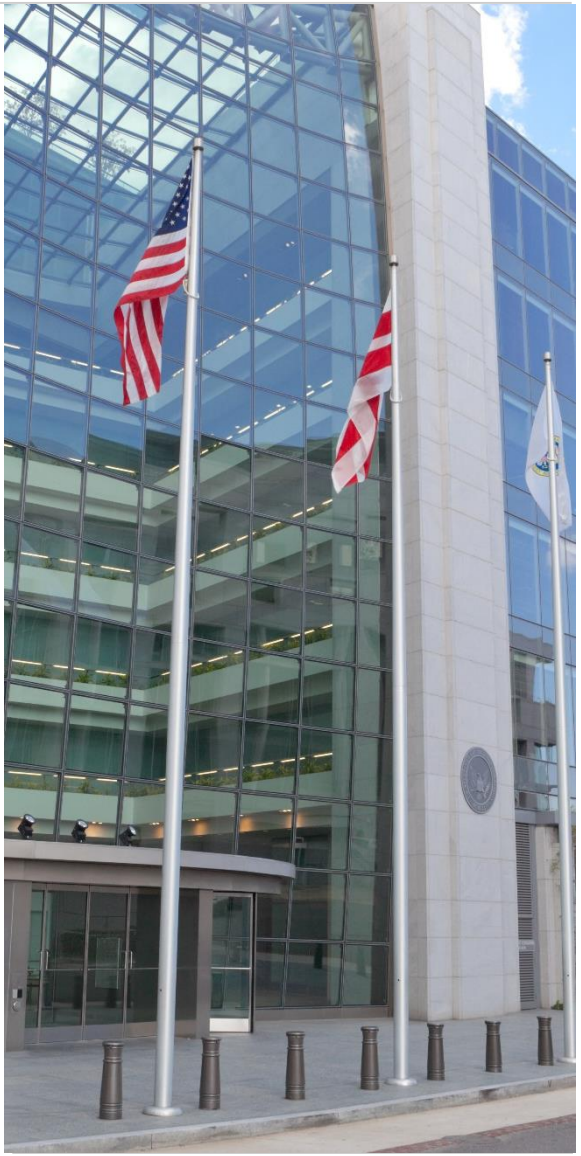
- In October 2018, investors and associated organizations representing more than $5 trillion in assets under management submitted a Petition to the SEC for rulemaking on ESG disclosure (Rulemaking Petition File No. 4-730)
- Reason for the Petition: “[S]ubstantial problems with the nature, timing and extent of voluntary “sustainability reports”
- Arguments supporting the Petition:
  - SEC has statutory authority to require ESG information, and doing so will be beneficial to capital markets
  - ESG information is material to a broad group of investors
  - Companies have difficulty providing relevant, reliable and useful ESG information
  - Voluntary ESG disclosure is “episodic, incomplete, incomparable, and inconsistent” and ESG disclosure in SEC filings is also inadequate
  - Rulemaking will reduce burden on public companies and provide level playing filed for corporations engaging in voluntary ESG disclosure
  - Petitions and stakeholders seeking different kinds of ESG information indicate that it is time for regulation

VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

SEC Enforcement*

- The SEC filed a record-setting 55 new actions against public companies and subsidiaries in 2H FY 2018, resulting in 71 new actions for FY 2018
- The SEC initiated a total of 490 independent enforcement actions in FY 2018, the third-highest number on record
- The SEC initiated 52 enforcement actions against public companies and subsidiaries in 1H FY 2019, the third most in half-year period since 2010
- In 2018, 45% of public company and subsidiary actions involved Broker Dealer or Investment Advisor/Investment Company allegations; 34% involved allegations related to Issuer Reporting and Disclosure
- Monetary penalties were imposed on 89% of public company and subsidiary defendants that reached settlements
- More than half (54%) of actions involving Issuer Reporting and Disclosure Allegations also named an individual defendant
- Majority of individuals named as defendants (53%) were CEOs or CFOs
- Climate-related disclosures per se have not been a particular enforcement focus

*Source: Cornerstrone Research



VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

Governmental Enforcement Update

- Enforcement examples with environmental implications in the last two years
  - March 2016 – Failure to disclose difficulties with EPA Clean Air Act certification
  - April 2016 – MA AG initiates investigation into adequacy of climate change disclosure
  - September 2016 – SEC complaint relating to failure to timely disclose a governmental investigation
  - January 2017 – Administrative complaint regarding timeliness of disclosure to accountants
  - October 2018 – NY AG alleges inadequate climate change disclosure under NY securities law
- Bloomberg Environment reports that the SEC last issued a climate change-related public comment letter in Sept. 2016, when it asked an energy company to expand risk factor disclosure related to California's greenhouse gas emission regulations
- In May 2018, two Democratic lawmakers urged the SEC to investigate accusations that a social media company failed to tell shareholders about illegal trafficking of endangered species occurring on its website
- On August 3, 2018, the SEC dropped its investigation into whether ExxonMobil misled investors about its accounting practices and climate change disclosures
- In September 2018, Sen. Elizabeth Warren re-introduced the Climate Risk Disclosure Act of 2018 ("CRDA"), bill that, if passed, would require public companies to disclose a considerable amount of climate-related information in their SEC filings

VOLUNTARY VS. MANDATORY CLIMATE RISK REPORTING

Private Shareholder Litigation

- Inadequate Disclosure Claims
  - Sudden “adjustment of reserves”
  - Failure to disclose
- Turning “events” into shareholder litigation
  - Macondo
  - San Bruno Pipeline
  - Santa Barbara spill
  - Aliso Canyon gas leak
  - California wildfires
- Failure to disclose climate risks
  - Commonwealth Bank of Australia (2017)

DRIVERS OF ENHANCED DISCLOSURES

Changing Expectations of Institutional Investors

Heightened Expectations for Corporate Disclosures

- **Asset Owners Disclosure Project 2017:** Funds worth $27 trillion comprising 60% of large investors around the world consider climate change when making investment decisions
- **UN Principles for Responsible Investment:** Over 1,750 signatories, representing $70+ trillion, seek to incorporate sustainability considerations into their investment and ownership practices
- **Investor Responsibility Research Institute:** Found that 78% of S&P 500 companies issued sustainability reports in 2018

2016-2019 Were Record Years for ESG

- **Companies faced 700+ environment-related shareholder proposals**: **325+** asked for reporting or action related to climate change, **120+** requested reports or reduction targets related to emissions, **80+** requested reports on **carbon asset risk**
- **Major institutional investors** voiced support for ESG shareholder proposals in general
- **ISS heavily supported** environmental proposals
- Over 500 firms, including certain of the world's largest banks, asset managers and pension funds, support the **Task Force on Climate-related Financial Disclosures**

Focus Not Necessarily on Environmental Protection For Its Own Sake

- **A portion of ESG investors are *Values-focused*:** Their goal is improvement of the environment Includes faith-based and social activist funds
- **A portion of ESG investors are *Value-focused*:** They consider ESG factors to be important corporate performance metrics that can be used to maximize financial returns. This group includes an increasing number of the largest institutional investors in North America and Europe (e.g., BlackRock)
- **Many ESG-minded investors seek *Values*- and *Value*-focused investing,** believing ESG development to be a win-win proposition

> *"Environmental, social, and governance (ESG) factors relevant to a company's business can provide essential insights into management effectiveness and thus a company's long-term prospects."*
>
> Larry Fink, CEO of BlackRock, *2018 Letter to Investors*

DRIVERS OF ENHANCED DISCLOSURES

Leading Institutional Investor Perspectives

STATE STREET

"Over the course of four years, SSGA has held over 240 climate-related engagements with 168 companies. Through these engagements we found that **few companies can effectively demonstrate to investors** how they integrate climate risk into long-term strategy. This is **particularly important for companies in the oil and gas, utilities and mining sectors** where long investment horizons could render assets stranded."

– *SSgA's Perspectives on Effective Climate Change Disclosure*, Aug. 2017

BLACKROCK

"We believe **all investors should incorporate climate change awareness into their investment processes**."

– *Adapting Portfolios to Climate Change*, Sept. 2016

"To prosper over time, every company must not only deliver financial performance, but also **show how it makes a positive contribution to society. Companies must benefit all of their stakeholders**, including shareholders, employees, customers, and the communities in which they operate."

– *Annual Letter to CEOs*, 2018

Vanguard

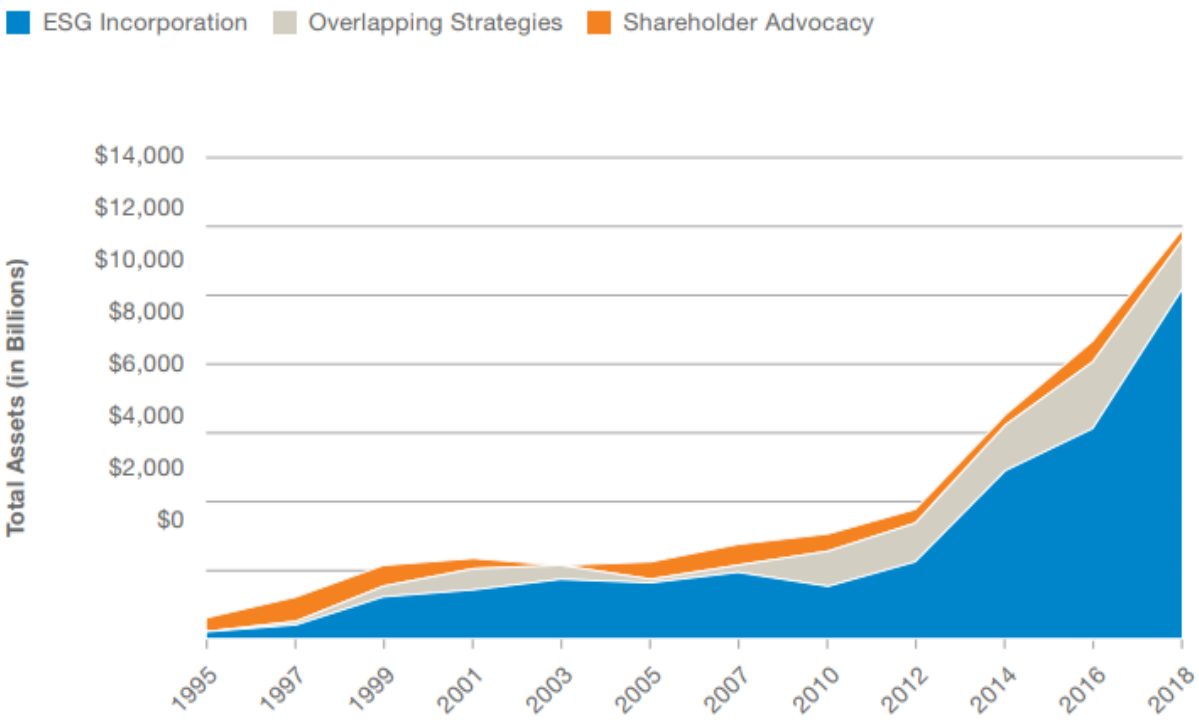
"Our philosophy on sustainability is grounded in **long-term value creation**. We aren't alone in this thinking. A consensus is growing in the investment community that certain environmental, social, and governance (ESG) matters can significantly affect a public company's long-term financial value. . . . **It is . . . important that companies be transparent about sustainability matters and disclose them to investors**. . . . . **Vanguard needs the market to efficiently value stocks based on all material risks**."

– *Investment Stewardship, 2018 Annual Report*

DRIVERS OF ENHANCED DISCLOSURES

Rise in ESG Investing

- U.S.-domiciled assets under management using ESG strategies has grown to $12.0 trillion at the start of 2018 (up 38% since 2016, an 18-fold increase since 1995) (per U.S. Forum for Sustainable and Responsible Investment)
- Examples of ESG investment strategies:
  - Positive screening/best-in-class
  - Negative/exclusionary screening
  - Integrate ESG risks & opportunities in financial analysis of potential investments
  - Impact investing (regardless of returns)
  - Asset selection related to sustainability
  - Index based
  - Direct corporate engagement & activism (e.g., shareholder proposals)

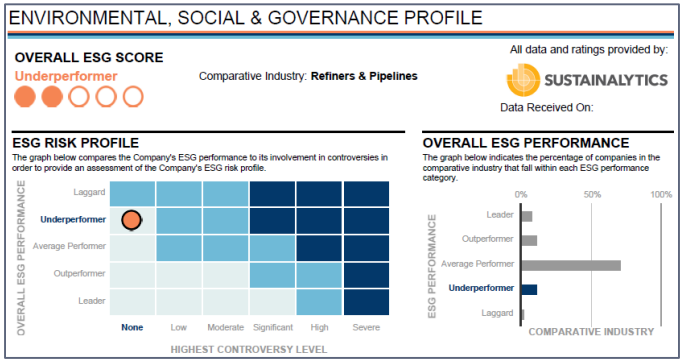


SOURCE: US SIF Foundation.

DRIVERS OF ENHANCED DISCLOSURES

ESG Investment Tools – Ratings and Indices

- Investors may utilize external providers of ESG ratings when making investment decisions, such as ratings issued by MSCI, Sustainalytics, ISS, RepRisk, FTSE, RobecoSAM, Bloomberg and Thomson Reuters
- Limitations of ESG ratings:
  - Lack of standardized rules for disclosures by companies
  - Lack of disclosure auditing process to verify reported data
  - Lack of comparability between ratings because of differences in rating criteria and weightings
  - Larger companies with more extensive disclosures and those in certain industries tend to be awarded better ratings than lower market-cap companies, even if overall ESG risks are higher
- Several indices include companies that are selected based on ESG factors, including:
  - Calvert Responsible Index Series
  - Dow Jones Sustainability Index
  - Euronext-Vigeo Indices
  - FTSE4Good Indices
  - MSCI ESG Indices
  - Morningstar Global Sustainability Indices
  - Thomson Reuters Corporate Responsibility Indices

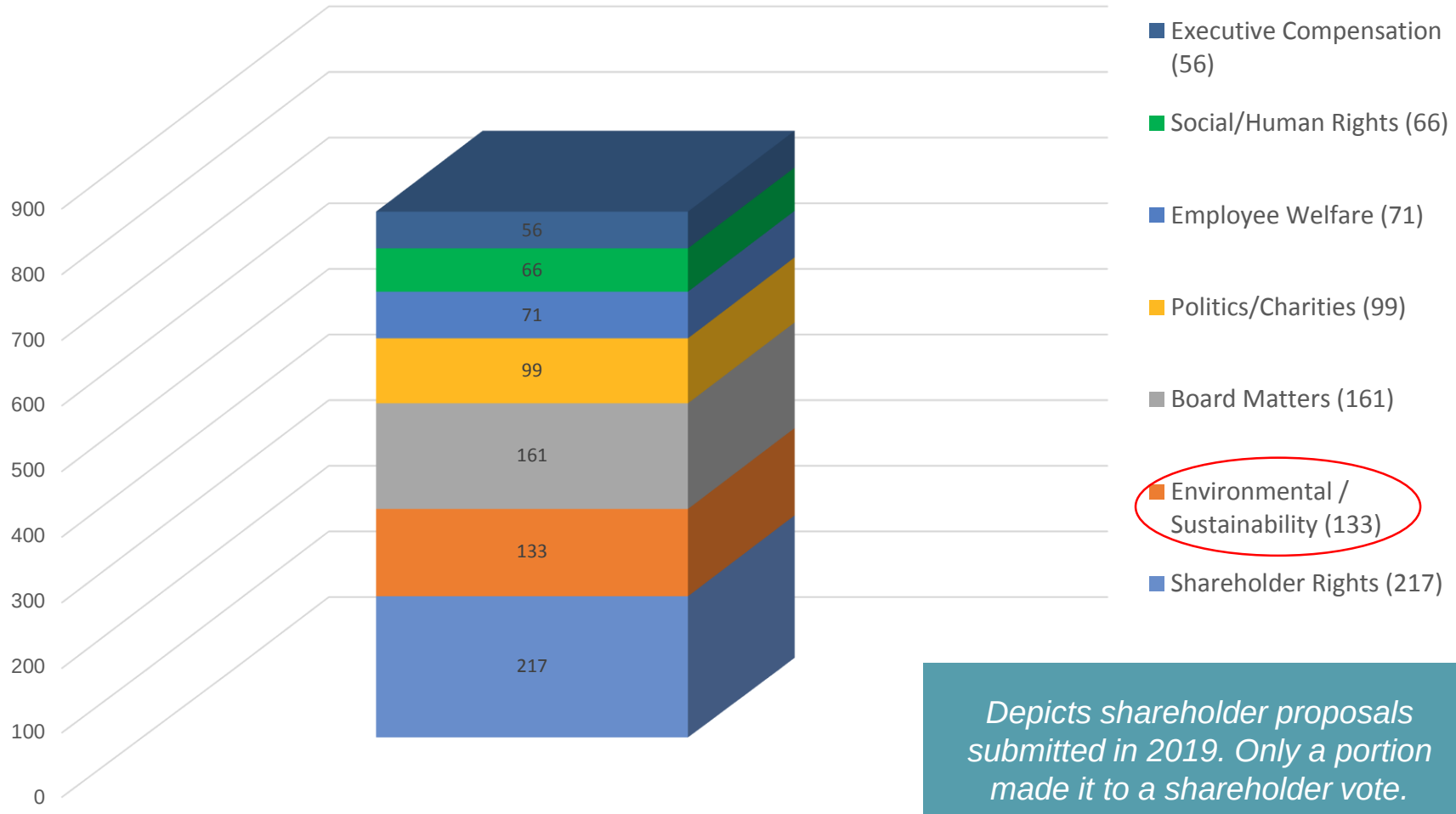


ESG SCORE CARD*

	WEIGHT	SCORE	QUARTILE
Environment	**45.0%**	**1.2**	
Toxic Emissions & Waste	15.0%	0.6	●
Biodiversity & Land Use	12.0%	0.0	●
Water Stress	10.0%	2.6	●
Carbon Emissions	8.0%	2.5	●●
Social	**27.0%**	**3.2**	
Health & Safety	15.0%	4.7	●●●
Labor Management	12.0%	1.3	●
Governance	**28.0%**	**2.2**	
Corporate Governance	16.0%	3.6	●
Corruption & Instability	12.0%	0.4	●
Overall Score			
Weighted-Average Key Issue Score		2.0	
Industry Relative Score		0.7	

DRIVERS OF ENHANCED DISCLOSURES

Shareholder Proposals in 2019



2019 Proxy Season Shareholder Proposals (803)*

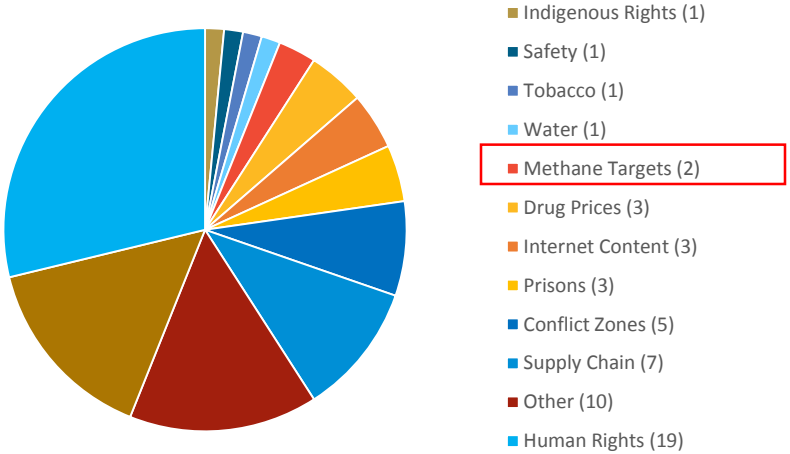
Depicts shareholder proposals submitted in 2019. Only a portion made it to a shareholder vote.

** Based on data from Institutional Shareholder Services ("ISS") as of June 1, 2019 and Sidley analysis*

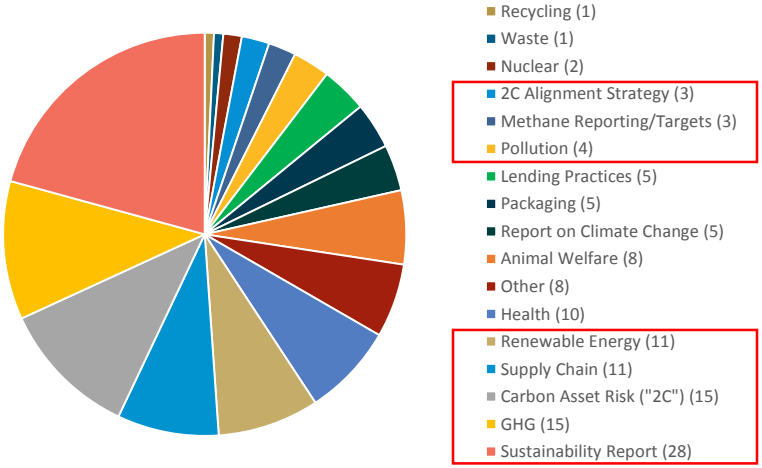
DRIVERS OF ENHANCED DISCLOSURES

14a-8 Shareholder Proposals in 2019: By Category

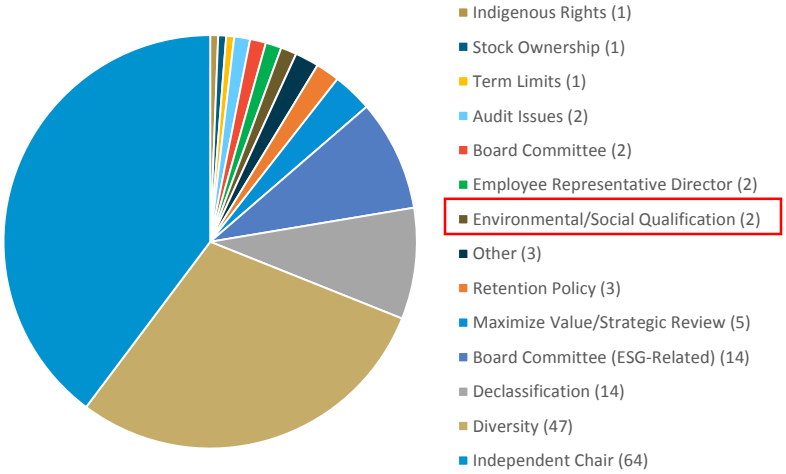
Social/Human Rights (66)



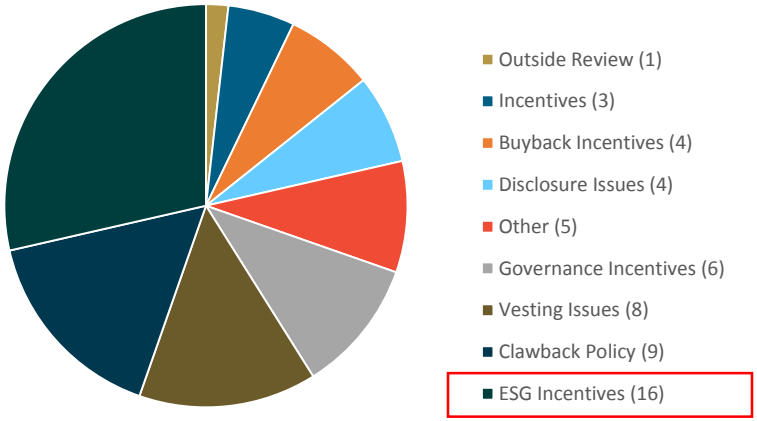
Environmental/Sustainability (133)



Board Matters (161)



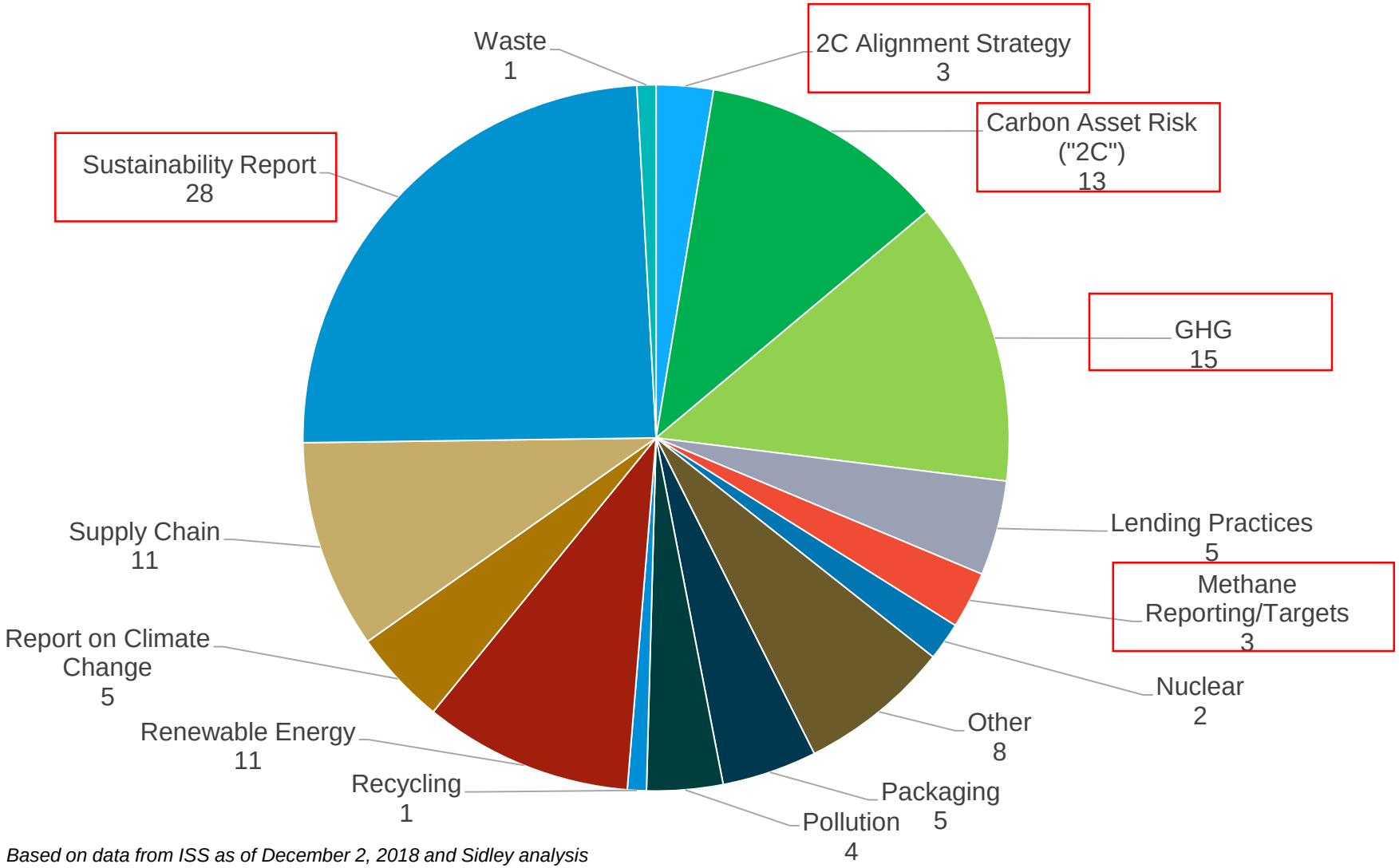
Executive Compensation (56)



** Based on data from ISS as of June 1, 2019, and Sidley analysis*

DRIVERS OF ENHANCED DISCLOSURES

Climate Change Shareholder Proposals: 2019



* *Based on data from ISS as of December 2, 2018 and Sidley analysis*

** *While methane is also a greenhouse gas, this particular subset of shareholder proposals focuses exclusively on methane gas*

CLIMATE CHANGE RISK DISCLOSURE ISSUES

Common Shareholder Proposals

Carbon Asset Risk

"Given the profound societal impacts of climate change and our company's potentially critical role in mitigating harm to society, shareholders request that the Company, with board oversight, publish an assessment, at reasonable cost and omitting proprietary information, of the plausible impacts of a climate change scenario consistent with a globally agreed upon target of limiting warming to well below 2 degrees Celsius, as well as additional scenarios reflecting higher global average temperatures."

GHG Reduction

"Shareholders request that the Company adopt company-wide targets for the reduction of GHG emissions, taking into consideration the global GHG reduction needs defined by the Paris Climate Agreement, and issue a report by December 2019, at reasonable cost and omitting proprietary information, on any plans to achieve these targets."

Sustainability Reporting

"Shareholders request that the Board of Directors issue a sustainability report to shareholders in consideration of the SASB Real Estate standard by 180 days after the 2019 Annual Meeting, at reasonable expense and excluding confidential information, summarizing the company's strategies and practices to mitigate risks, stemming from climate change, to the availability of adequate water resources."

Methane Reduction

"Shareholders request that Company report to shareholders (at reasonable cost, omitting proprietary information) the Company's actions beyond regulatory requirements to reduce its greenhouse gas emissions and associated climate risk by monitoring and minimizing its methane emissions."

CLIMATE CHANGE RISK DISCLOSURE ISSUES

Climate Change Reports

The New Wave of Environmental Reporting

PPL Corporation Climate Assessment

Assessing the Long-term Impact of Climate Policies on PPL

ExxonMobil

2018 Energy & Carbon Summary

PERSPECTIVES ON CLIMATE-RELATED SCENARIOS

MARATHON

Shell scenarios

managing climate change risks

Chevron

Integrating Climate Into Our Strategy

TOTAL

2018 Climate Change Report

Santos

Climate-Related Risks and Opportunities:

Positioning for a Lower-Carbon Economy

OXY

bhpbilliton

Climate Change: Portfolio Analysis

CLIMATE CHANGE RISK DISCLOSURE ISSUES

Competing Frameworks

Competing Regimes for Voluntary Environmental Reporting, Rankings and Data Aggregation

Reporting Regimes

CDP – DRIVING SUSTAINABLE ECONOMIES

TCFD – TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

GRI – Empowering Sustainable Decisions

CDSB – Climate Disclosure Standards Board

SASB – SUSTAINABILITY ACCOUNTING STANDARDS BOARD

SCIENCE BASED TARGETS – DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

IR – INTEGRATED REPORTING

Information Aggregators

THOMSON REUTERS

SUSTAINALYTICS

RepRisk – Due diligence on ESG and business conduct

BLOOMBERG ESG

Ceres

NASDAQ ESG

Scoring and Ranking

QualityScore – ENVIRONMENTAL.SOCIAL.GOVERNANCE

ISS-oekom

SUSTAINALYTICS

THOMSON REUTERS

BLOOMBERG ESG

2017 GLOBAL100

Carbon Tracker Initiative

Buy-Side Analytics

MSCI

REFINITIV

Proxy Advisors

ISS

GLASS LEWIS

Beijing

Boston

Brussels

Century City

Chicago

Dallas

Geneva

Hong Kong

Houston

London

Los Angeles

Munich

New York

Palo Alto

San Francisco

Shanghai

Singapore

Sydney

Tokyo

Washington, D.C.

Carbon Tracker Initiative

Part II: Climate Change Risks and Corporate Disclosure Responsibilities

Rob Schuwerk, Executive Director, Carbon Tracker North America

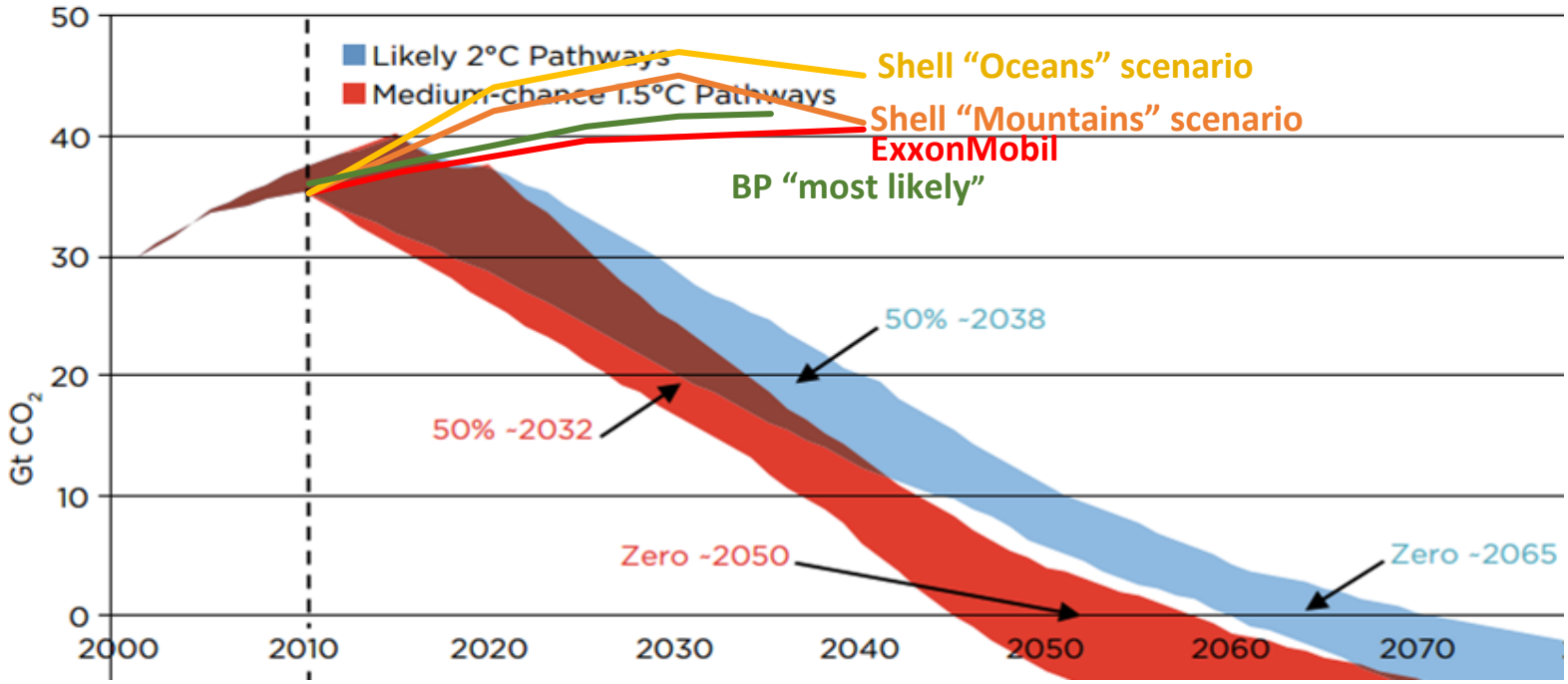
August 8, 2019

Sectoral Case Study: Oil and Gas

- Background: How climate change is a global/ environmental, corporate/economic, and disclosure-related problem.
- ExxonMobil Litigation: How sustainability reporting relates to financial reporting, and securities litigation.
- Emerging issues: How forward-looking assumptions and estimates are embedded in financial reporting and impacted by a low-carbon transition.

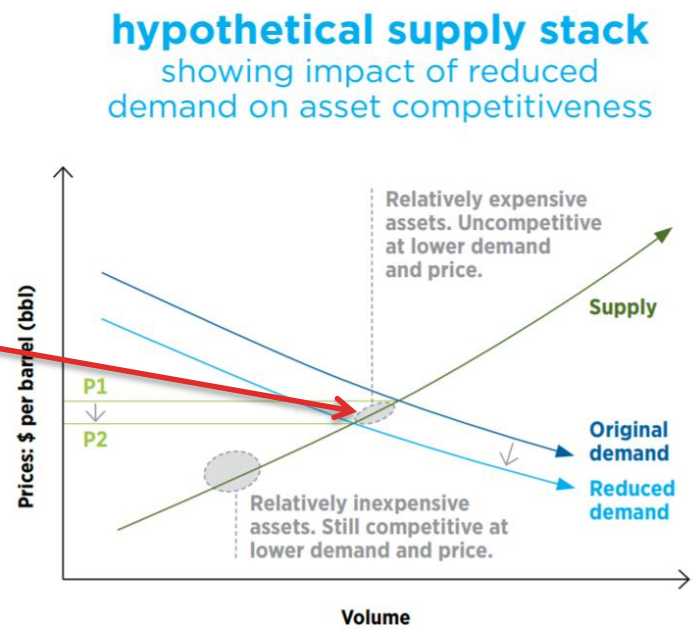
BACKGROUND: CLIMATE RISKS FOR OIL AND GAS COMPANIES

Physical constraints



Economic implications

Risk is delta between present expectations and a low carbon energy transition



P1: Original price

P2: Reduced price

Note: For illustration only. Not drawn to scale.

Source: Chevron, *Managing climate change risks, a perspective for investors*, 2017

INVESTOR DEMAND DRIVING ACTIVITY

Shareholder Resolutions

- Past 3 years, majority of shareholders have asked Exxon (62%), Occidental (67%) and others to disclose impact of low-carbon transition on firm.

Asset managers

- Focus on climate risks from largest asset managers, BlackRock, Vanguard, State Street, Legal & General and others

Climate Action 100+

- Over 33$ Trillion AUM
- Three objectives:
  - Alignment with Paris Agreement
  - Governance regime to implement
  - Disclosure to verify actions

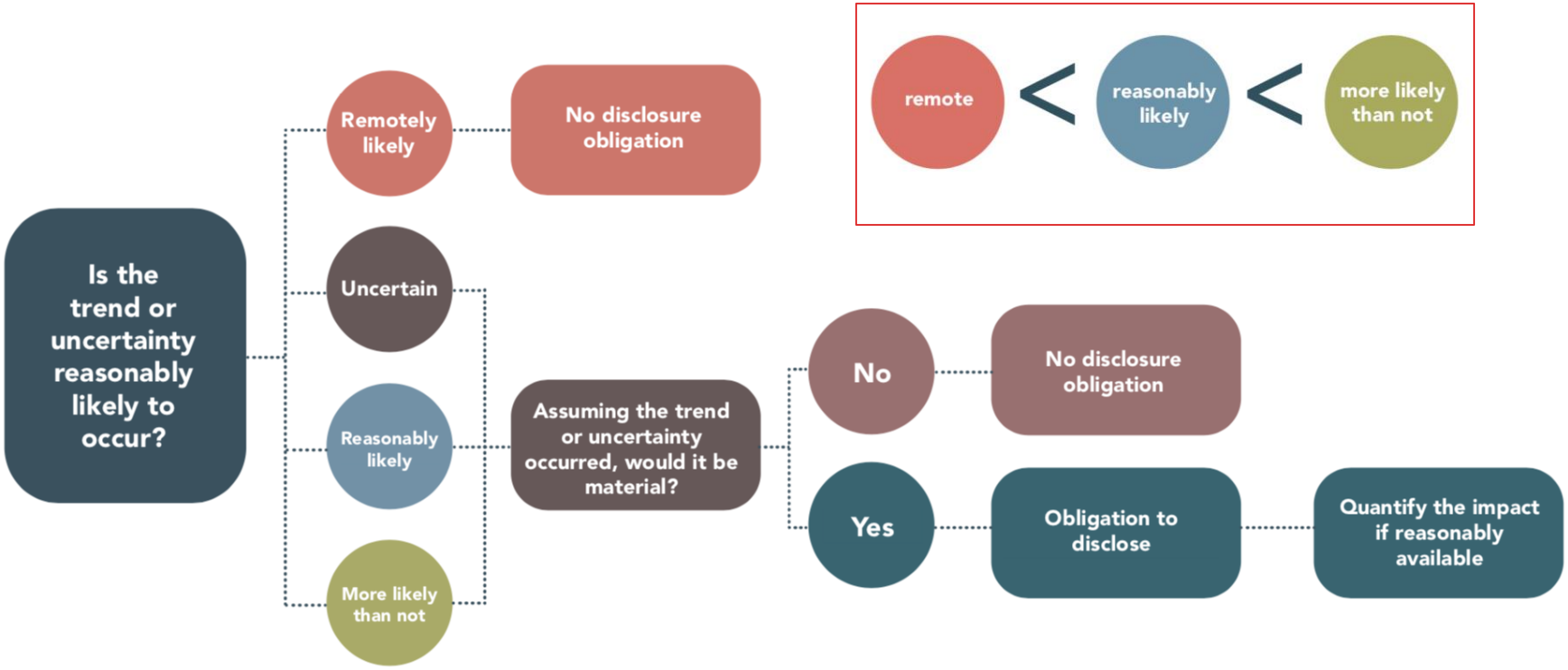
Disclosure obligations--SEC

- Reinterpretation of existing standards.
- SEC 2010 Climate Guidance on MD&A:

- Requires disclosure of “known trends, events, demands, commitments and uncertainties that are reasonably likely to have a material effect on financial condition or operating performance.”
- Could include, “legal, technological, political and scientific” developments that have financial impact on the company.
- Two-part disclosure test: “Reasonably likely…”
- Must discuss impact on financial condition or results of operations; typically qualitative but may be quantitative if “reasonably available.”
- No safe-harbor time period—depends on context.

See *75 Fed.Reg. 6294 (Feb. 8, 2010).*

MD&A Two-Part Test



LITIGATION: EXXON CASES

ExxonMobil Cases

- *Ramirez* v. *ExxonMobil Corp., et al.*, C.A. No. 16-CV-3111-K (N.D. Tex.)
- *State of New York* v. *ExxonMobil Corp*., Index No. 452044/2018 (N.Y. Supr. Ct., County of N.Y.)

Background:

- Investor demands for risk disclosures
- Investigation and suits
  - Pre-Complaint subpoena by NYAG
  - Private securities class action filed
  - NYAG compliant filed
- Motions
- Current state of play

Takeaways

- Need for consistency between external statements and internal practices.
  - Especially important when responding to investor demands for risk management.

- Can management plan around one set of figures, but use a different set for the accounts?
  - Where reporting and accounts require management to make judgements and assumptions, the SEC typically requires those to be consistent with other areas of reporting—important not to keep 2 sets of accounts.

- Climate related risks may require reviewing information external to the corporation, make sure you use that accurately and fairly.

EMERGING ISSUES IN FINANCIAL REPORTING AND DISCLOSURE

Climate risks, investors, accounting and auditing

GLOBALLY, FINANCIAL REGULATORS CONSIDERING CLIMATE RISKS

Lots of Activity

- 2015 TCFD noted importance of considering accounting implications
- CSA: Initial study in 2017, noted areas of increased scrutiny around governance. Now revisiting with stakeholders on what more should be done.
- IASB now reviewing IFRS 6—Exploration for and Evaluation of Mineral Resources
- Legislative efforts at EU level and UK for ”implementation of TCFD”
- Similar reviews for financial sector/fund management and insurance sector
- AASB Study *Climate-related and other emerging risks disclosures* (May 2019):

  “… [E]ntities can no longer treat climate-related risks as merely a matter of corporate social responsibility and may need to consider them also in the context of their financial statements.”

Will these developments come to the US?

- Trick question: Exxon cases show they have already arrived.
- Investors are demanding risk assessment in the planning process, addressing that may require considering implications for financial statements.
- SEC guidance: Staff Accounting Bulletin No. 114 (2011)
  - Assumptions used in financial statements should be consistent with disclosures.
  - And if material, disclosed and the implications discussed in MD&A.
- Lots of items to consider:
  - Impairments: Driven by an assessment of future cash flows (future prices and costs): Will prices remain high if demand falls?
  - Asset retirement obligations: Driven by estimates for the timing of future obligations (end of asset life) and the costs at that point—will those assets live out their useful lives in an energy transition? How significant would be to unwind the discount on those assets?
  - Fair value measurements: Sometimes valued on a discounted cash flow basis—given the above, are revisions to those estimates required?
- These are applicable to other sectors wherever accounting opinions are driven by forward-looking assumptions.

Climate Change Risks and Corporate Disclosure

Part 3: Business responses and emerging issues and approaches

August 8, 2019

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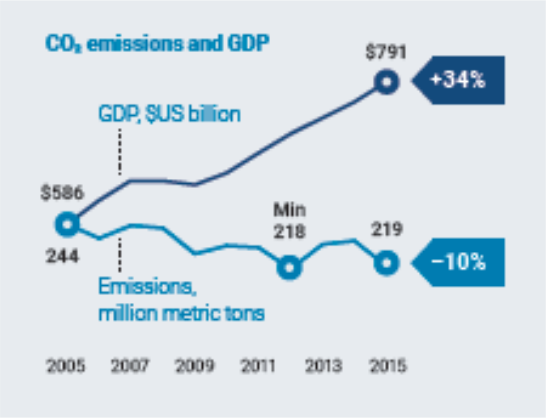
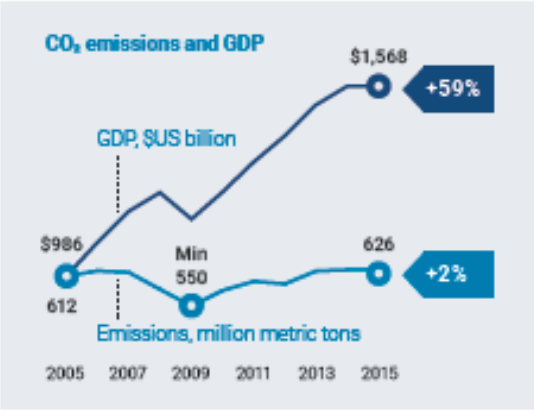
Climate Risks and Disclosure

Myth - that economy depends on increasing GHGs

Illinois



Texas



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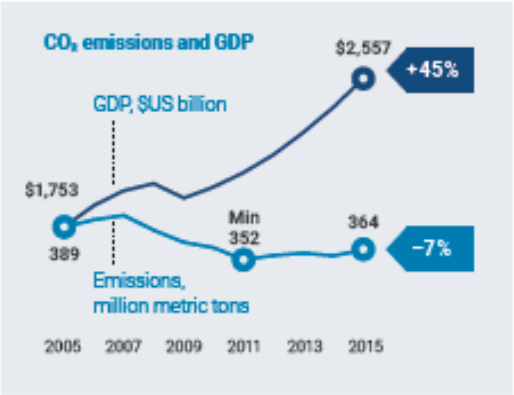

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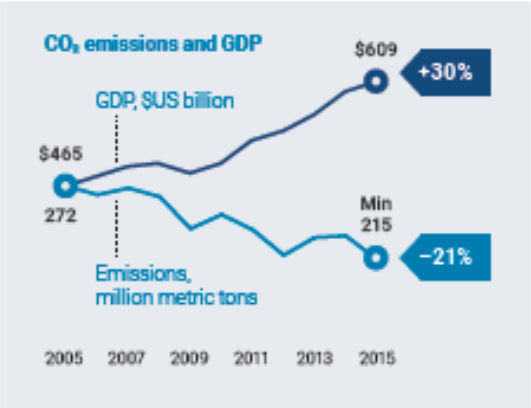
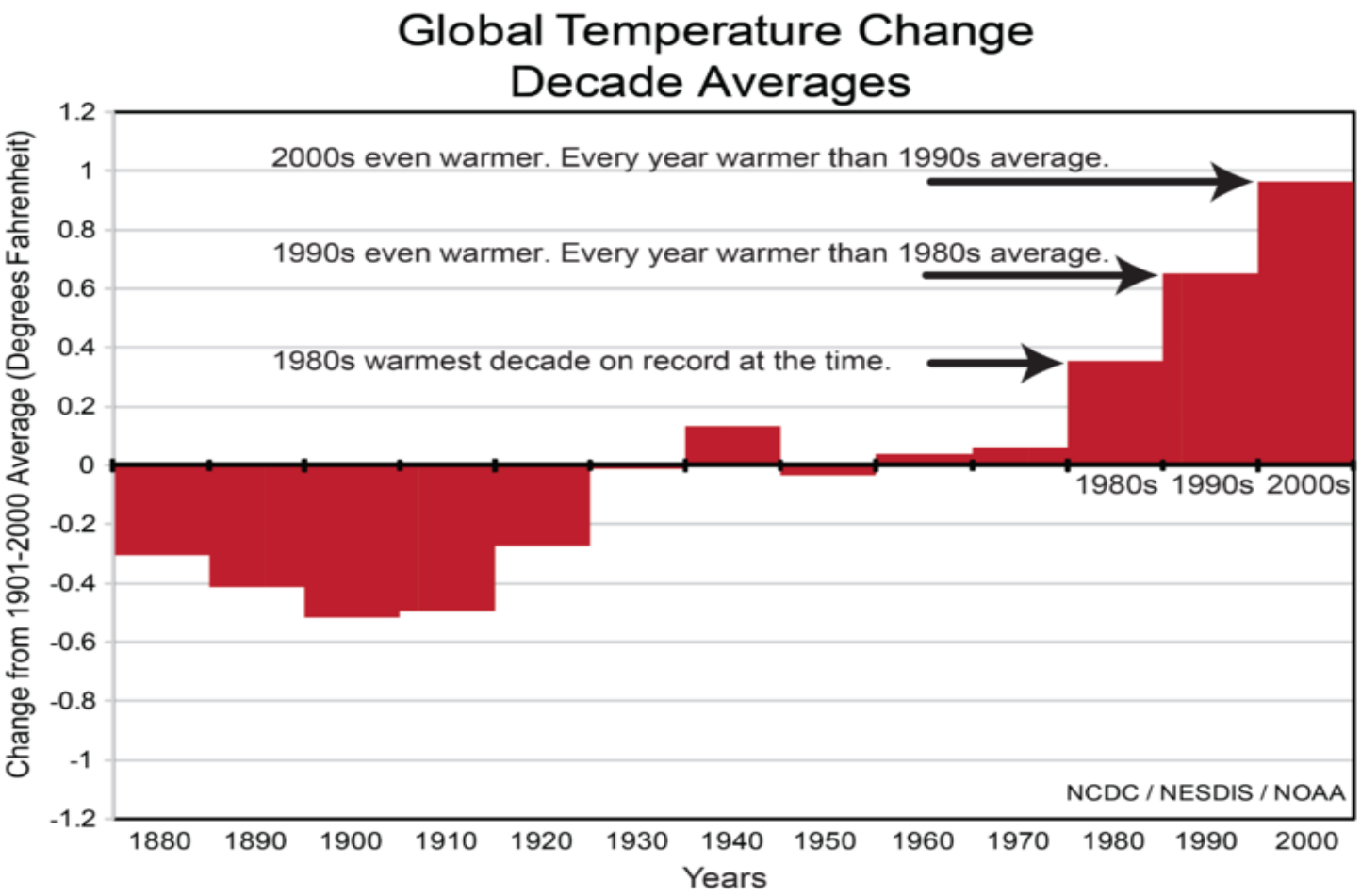


Climate Risks and Disclosures

Extreme weather



Climate Change and Disclosures

Hotter and hotter

- UN agency [IPCC] created in 1992, Kyoto Agreement in 1997
- Of last 20 years, all but two are among the hottest on record.
- Last 5 years are the hottest ever

Climate Risks and Disclosures

Task force on climate-related financial disclosures

- Set up by Financial Stability Board
- TCFD recommends:
  - “Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material”
- Recommended disclosures
  - Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long-term
  - Describe the impact of climate-related risks and opportunities on the organization’s business, strategy and financial planning
  - Describe the resilience of the organization’s strategy, taking into consideration different climate scenarios, including a 2C or less scenario

Climate Risks and Disclosures- the TCFD criteria

	Risks	Opportunities
Policy & Legal/Resiliency	Increased regulation, reporting and costs; litigation	Expand access to capital with lower risk profile
Technology/Resource Efficiency	Technology shifts	More efficient production, transport, buildings
Energy Source	Costs and energy reliability	Lower costs, use of carbon markets, supportive gov't policy
Products & Services	Changing consumer behavior may diminish	Or enhance sales
Market	Fossil fuel competition and reduction of fossil subsidies	Access to new markets and public sector support
Reputation	Stigma for sector, higher employee costs,	Better access to capital, better labor relations
Acute/Chronic	Extreme weather, rising mean temps and sea levels	

Climate Risks and Disclosures

Use of Scenarios as part of TCFD

- Scenario analyses:
  - Plausible, distinctive, consistent, relevant, challenging
  - Typical categories:
    - Market and technology shifts,
    - Reputation,
    - Policy and legal,
    - Physical risk
  - A process for applying, perhaps by review of IEA and IPCC scenarios
    - Assess materiality, identify and define range of scenarios, Evaluate business impacts, Identify potential responses, Document and disclose
  - Both transition and physical scenarios, with interplay
    - E.g. mitigation scenarios from BAU, to moderate, to strong, to aggressive mitigation strategies
    - May vary over time
      - Acute
      - chronic

Climate Change Risks and Disclosure
Illustration of disclosures

- The CDP report summarized a few of the management activities on climate:
  - One respondent stated: our “position [is] that climate change is an important global business issue and that the company must proactively participate in finding solutions that also consider our business interests and those of our customers”
  - Another concluded “it was facing real operational disruptions, as well as potential regulatory burdens…[and set] a target to reduce its greenhouse gas emissions by 50% by 2050…and [to] developing the market for sustainable aviation biofuels…”
  - Others in the agricultural industry consider the geographic diversity of company operations lowers risk. And the “cost of responding to potential supply chain risks is mitigated by the Company’s ability to move production or growth projects to other sites within the company portfolio.”

Climate Risks and Disclosures

Insurer disclosures

- Overall losses from North Atlantic hurricane season estimated at $215 billion, with $120 billion uninsured.
- Property insurers adapting--
  - In areas most exposed to hurricanes, limiting personal homeowners, landlord package and manufactured home new business policies, implementing tropical cyclone deductibles and not offering continued coverage on certain properties.
  - “Severe weather data enters pricing models quickly. “Should climate change produce changes in weather patterns, Allstate will be able to quickly adjust our product pricing to ensure appropriate returns for the risks we write.”

Climate Risks and Disclosures

Changing governance expectations; US still lags

- CDP Governance Data
  - The number of S&P 500 companies reporting board level oversight on climate issues has steadily increased from 50% in 2011, to 71% in 2017.
    - Board level oversight: US = 67% ; rest of world = 90%
  - US companies are lagging significantly behind the rest of the world when it comes to board-level oversight on water issues, with 52% of US companies reporting this versus the global average of 78%.
    - US board oversight = 52%; rest of world = 78%
  - Board oversight of deforestation risks lags in the US compared to the global picture, as 36% of US companies report board level oversight versus the global average of 67%.
    - US board oversight = 36% ; rest of world = 67%
- What does increasing Board involvement portend for counsel?
  - Is there an effect from “We are still in…” campaign? US companies stepping in for US Administration.

Climate Risks and Disclosures

Estimated Risks from Climate Regulation

Risks, estimated by 215 of 500 largest companies	Total about $970 billion
$179 billion	Increased operating costs
$170 billion	Write-off value for high risk locations
$102 billion	Reduced demand from consumer preferences
$73 billion	Change in policy, asset impairment, early retirement

Climate Risks and Disclosures

Estimated Opportunities from Climate Regulations

Opportunities estimated by 225 of the 500 largest companies	$2.1 trillion
$970 billion	Low emission products and services
$487 billion	Better competitive position from shifting consumer demand
$236 billion	New adaptation solutions
$198 billion	Increased capital availability

Climate Risks and Disclosures

- US companies included in survey had less than half the value of the opportunities identified than EU companies.
  - Perhaps due to EU having established climate rules and policies [even if still being adopted and implemented], versus uncertain/conflicting policy in US
  - Or might it also be due, in part, to less involvement by US Boards in overseeing climate issues specifically?
  - Or does the TCFD policy require greater precision and analysis?

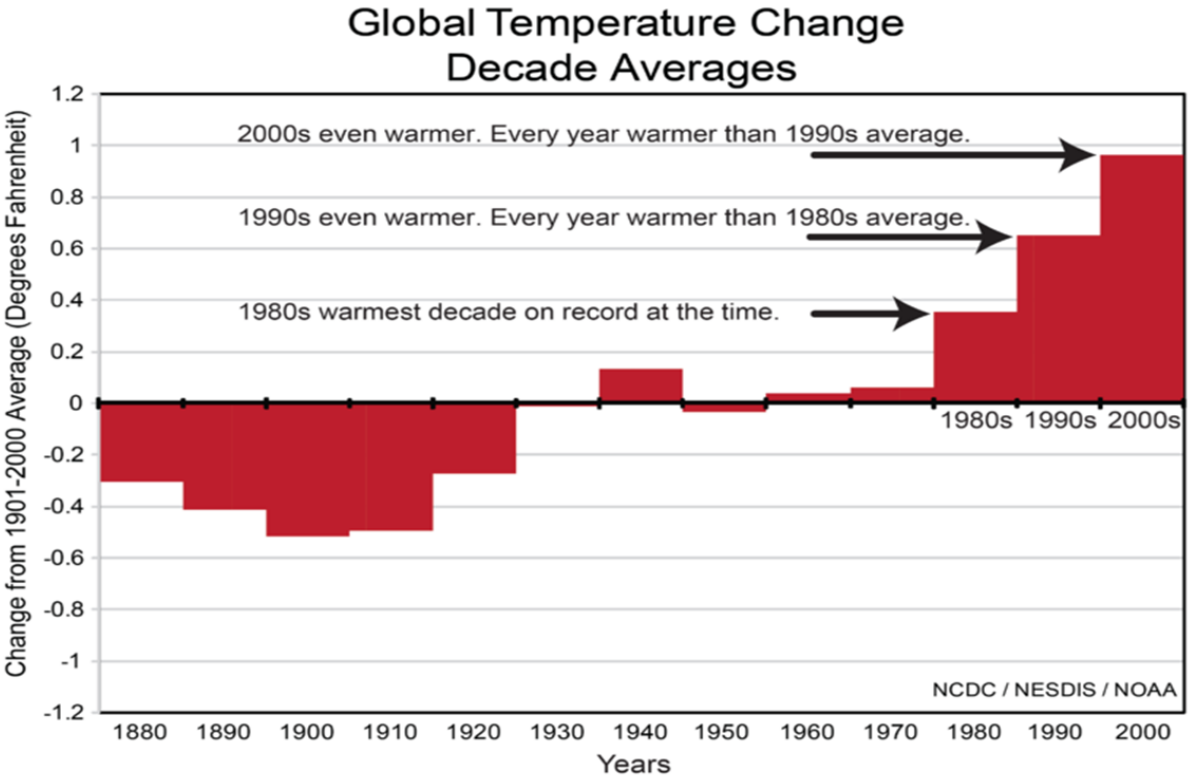
Climate Risks and Disclosure

Now a different rate of change -- in disclosure criteria?

- "Extreme weather" only 10 years ago was predicted to be in 20-30 years
  - Now 100 year storms and floods become common
  - 25 year storm event ("first flush" for sewer design) now frequent
  - Now, declarations of "climate emergency" and "net zero" is needed by 2050
- Will declarations like "climate emergency" change the reporting duty of care?
  - International standards expect to be beyond US
  - NYSE locus for financings of foreign companies
  - NY disclosure laws
  - Or will "science-based" targets like TCFD change standard of care?

Climate Risks and Disclosures

The Hockey Stick versus the Hockey Puck



Hockey Rule, skate to where the puck will be, not to where it is [or was]

Climate Risks and Disclosures

Atmospheric CO2 breaks a record. Here's why it matters

Chelsea Harvey, E&E News reporter • Published: Thursday, May 16, 2019

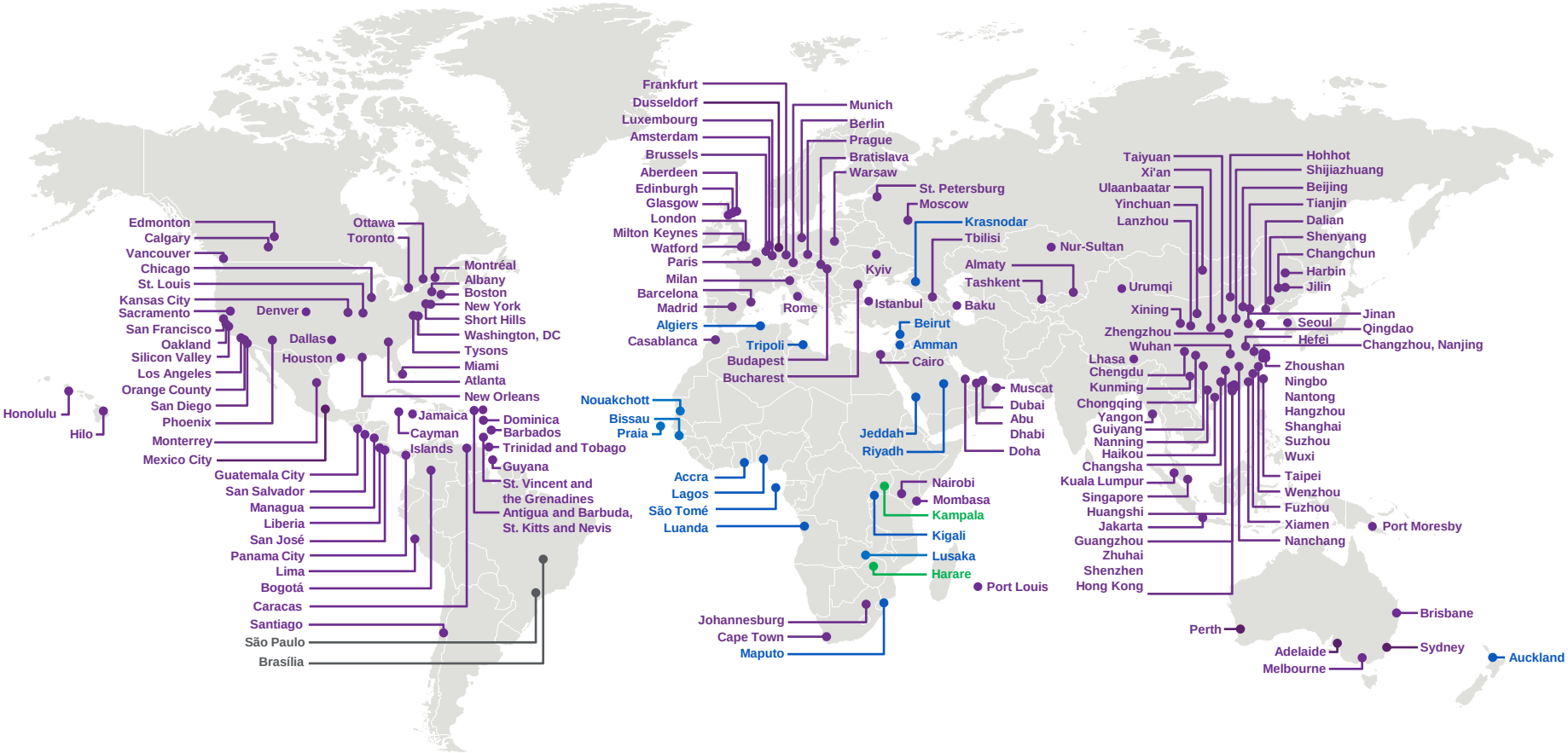
Earth is seen from a satellite on May 10; hours later, atmospheric carbon dioxide hit its highest levels in human history. LEONELLO CALVETTI/SCIENCE PHOTO LIBRARY/Newscom

Record breaking ….

- 415 ppm CO2 levels recorded for the first time in human history
- Atmospheric CO2 is rising at accelerating rate -- now at 3 ppm per year
- Of the hottest years or record, all but two were in the last 24 years
- Carbon budget: emitting an added 420,000,000 to 570,000,000 tons of CO2 gives the world 66% chance of meeting the 1.5 C temperature goal.
  - Same as only 12 years worth of current global GHG emissions!

- The last time CO2 levels over 400 ppm on earth
  - Temperatures were 3 C higher
  - Sea levels were several feet higher
  - *Homo sapiens* civilization not present.

Global coverage



Locations in purple represent Dentons offices.
Locations in blue represent associate firms, offices and special alliances.
Locations in green represent proposed combinations that have not yet been formalized.
Locations in gray represent Brazil Strategic Alliance.

Thank you

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