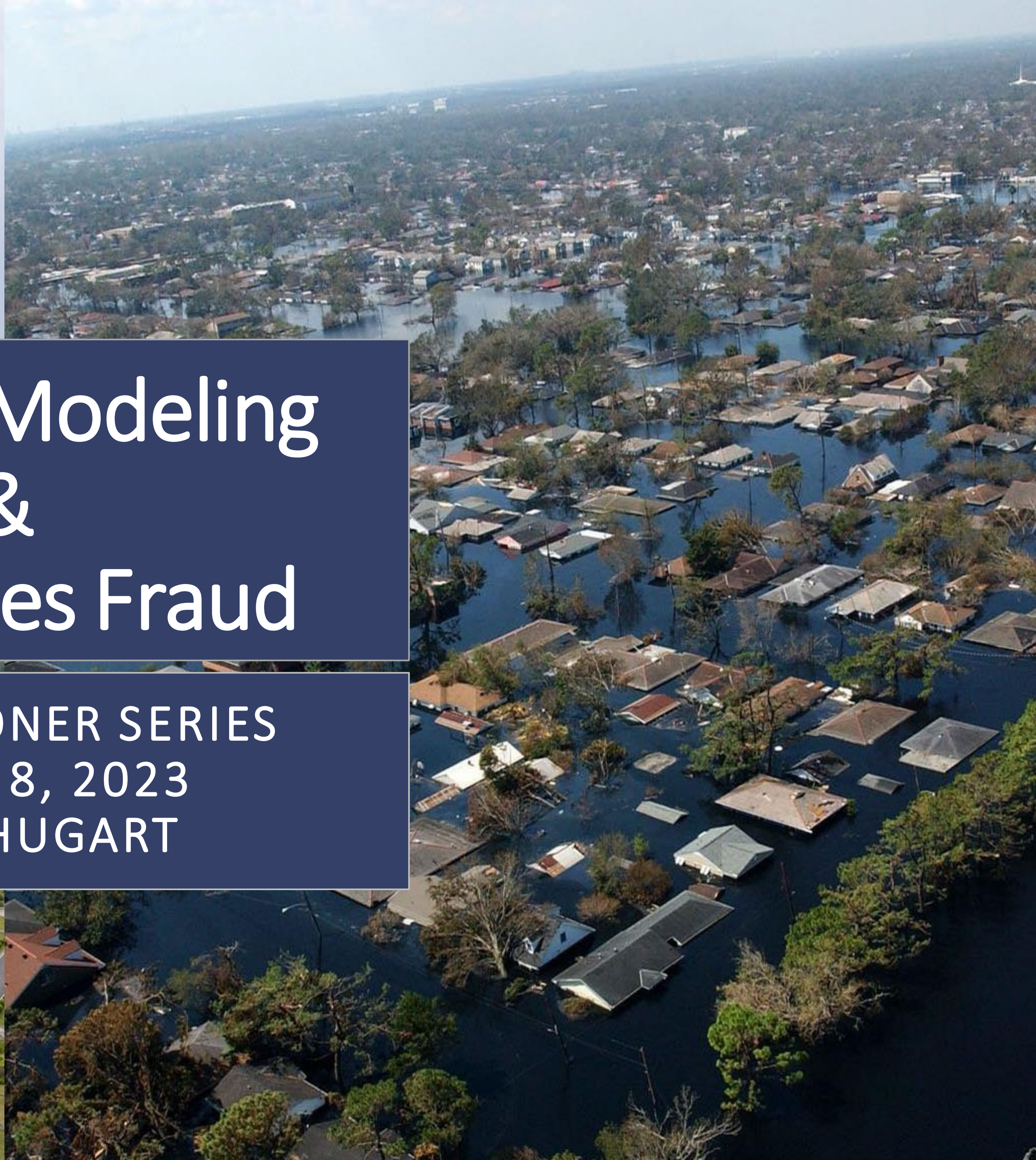


Climate Modeling & Securities Fraud

THE SCHOONER SERIES
MARCH 8, 2023
SAM SHUGART

Outline

1. Intro Climate Modeling
2. Climate Risk
3. Securities Fraud
4. Activism & Lawsuits
5. Materiality & Disclosures
6. Current Work

Me (Sam Shugart)

B.A. in International Relations

Five years in Myanmar – PM – Agribusiness –> Blended Finance – Risk

Worked in Logistics Startup in the US

UW MS in Business Analytics ‘23

Obsession with Climate Risk

Now helping UW Climate Risk Lab

Career Transition -> Finish this June

Problem: Climate Change

Large % of Greenhouse Gas Emissions (GHGs) come from few major companies

Push from regulators, consumers, general public to focus on not burning the world

Question: What drives corporate action?

Corporate Basic Bins of Action

Bin 1

We should do **Something**

Bin 2

We are doing **Something**

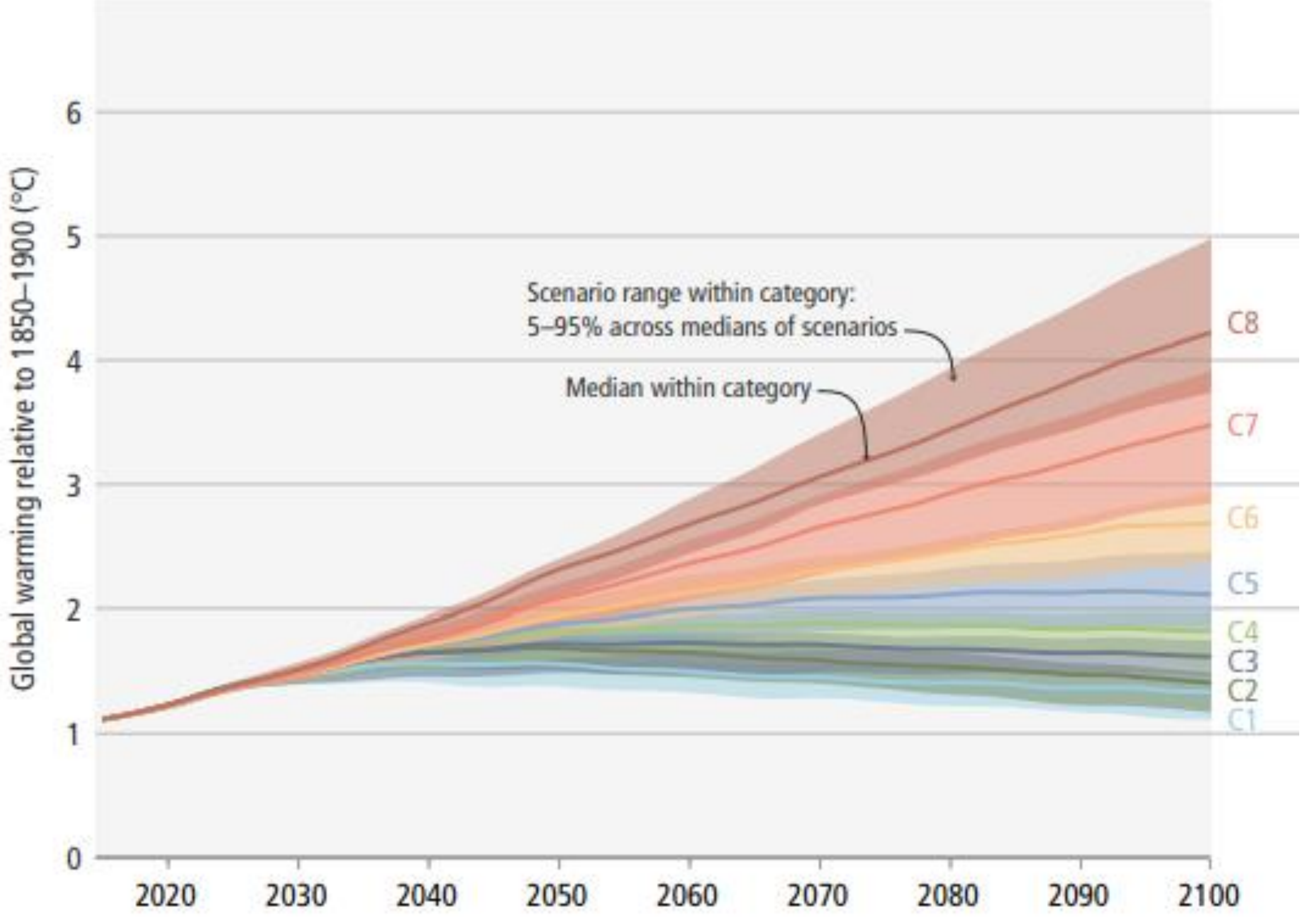
Bin 3

Leadership wants weekly updates until **Something** is **done**

Intergovernmental Panel on Climate Change (IPCC) Climate Modeling

Range of assessed scenarios results in a range of 21st-century projects for global warming

a. Median global warming across scenarios in categories C1 to C8



What role do businesses play?

Making future plans – be they strategic investments or net zero commitments – require some understanding of the future

Planning for net zero requires understanding a complex mix of emission scenarios, government policy, consumer demand changes, and risk from climate events themselves.

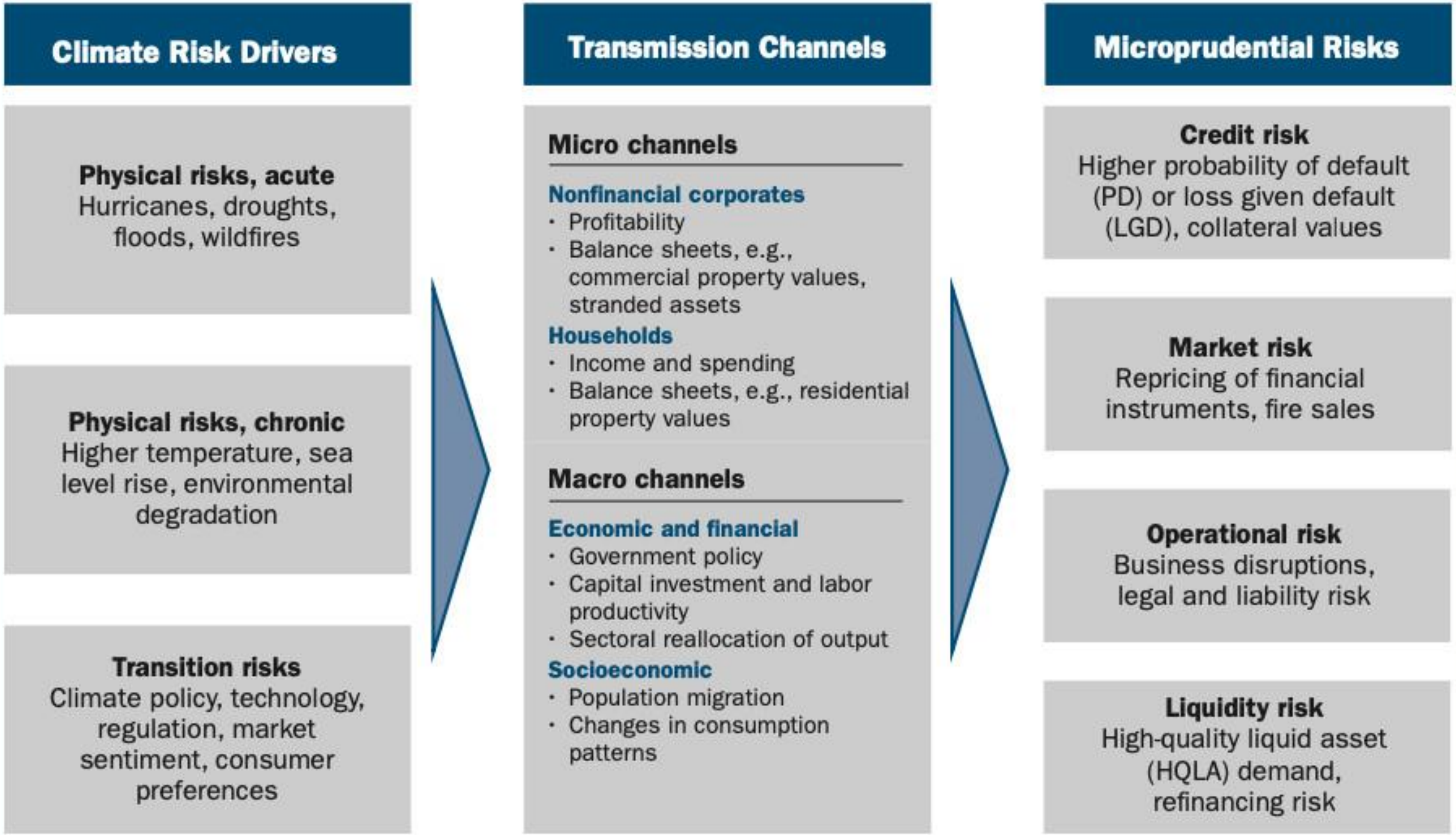
Businesses view these two areas of risk:

Physical Risk – Wildfires, drought, hurricanes, flooding, and others

Transition Risk – Risk to business from economic shift to a low carbon economy, includes many different factors.

Figure 1. Climate risk drivers manifest as prudential risks

Climate risk drivers could bring about microprudential risks to supervised financial institutions. These risks may manifest through a variety of transmission channels.

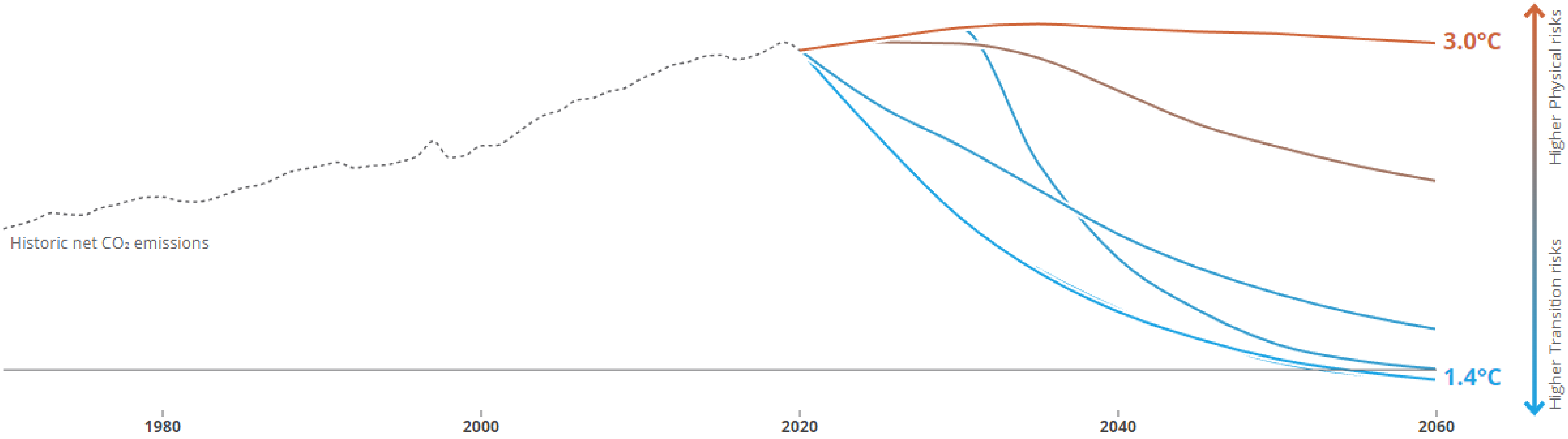


Note: Examples are indicative and not exhaustive.

https://www.federalreserve.gov/publications/files/csa-instructions-20230117.pdf

Climate scenarios enable us to

- explore possible futures and examine their assumptions
- understand the courses of action that lead to these futures
- assess potential risks and opportunities



NGFS Scenario Explorer

https://www.ngfs.net/ngfs-scenarios-portal/explore

Academic Problem to Financial Risk

The SEC wants companies to disclose how climate change is affecting them

March 21, 2022 · 12:26 PM ET

Heard on Morning Edition

DAVID GURA

2-Minute Listen

+ PLAYLIST

https://www.npr.org/2022/03/21/1087832674/the-s-e-c-climate-change-disclosures-companies

BANKINGDIVE Deep Dive Opinion Library Events Topics

Fed lays out details of its climate pilot

The nation's six largest banks have until July 31 to analyze the impact two natural disasters would have on real estate lending portfolios, and factor in changing sentiment regarding climate change.

Published Jan. 18, 2023

Dan Ennis
Senior Editor

https://www.bankingdive.com/news/fed-climate-pilot-exercise-risk-transition-barr/640646/

Financial Terms Intro

SEC - Securities and Exchange Commission: Regulates publicly traded (on the stock market) companies in the US.

Audited Financial Disclosures: Publicly traded companies have to release annual financial reports and risk disclosures to the public to inform current or potential investors

Role of Auditors: Ensure companies disclosure accurate information….fraud is bad

Securities Fraud

Money Stuff

Everything Everywhere Is Securities Fraud

Also chicken Libor, spoofing and insider trading.

By Matt Levine

June 26, 2019, 4:01 PM UTC

Matt Levine is a Bloomberg Opinion columnist covering finance. He was an editor of Dealbreaker, an investment banker at Goldman Sachs, a mergers and acquisitions lawyer at Wachtell, Lipton, Rosen & Katz, and a clerk for the U.S. Court of Appeals for the 3rd Circuit.

Read more opinion

Follow @matt_levine on

Everything is securities fraud

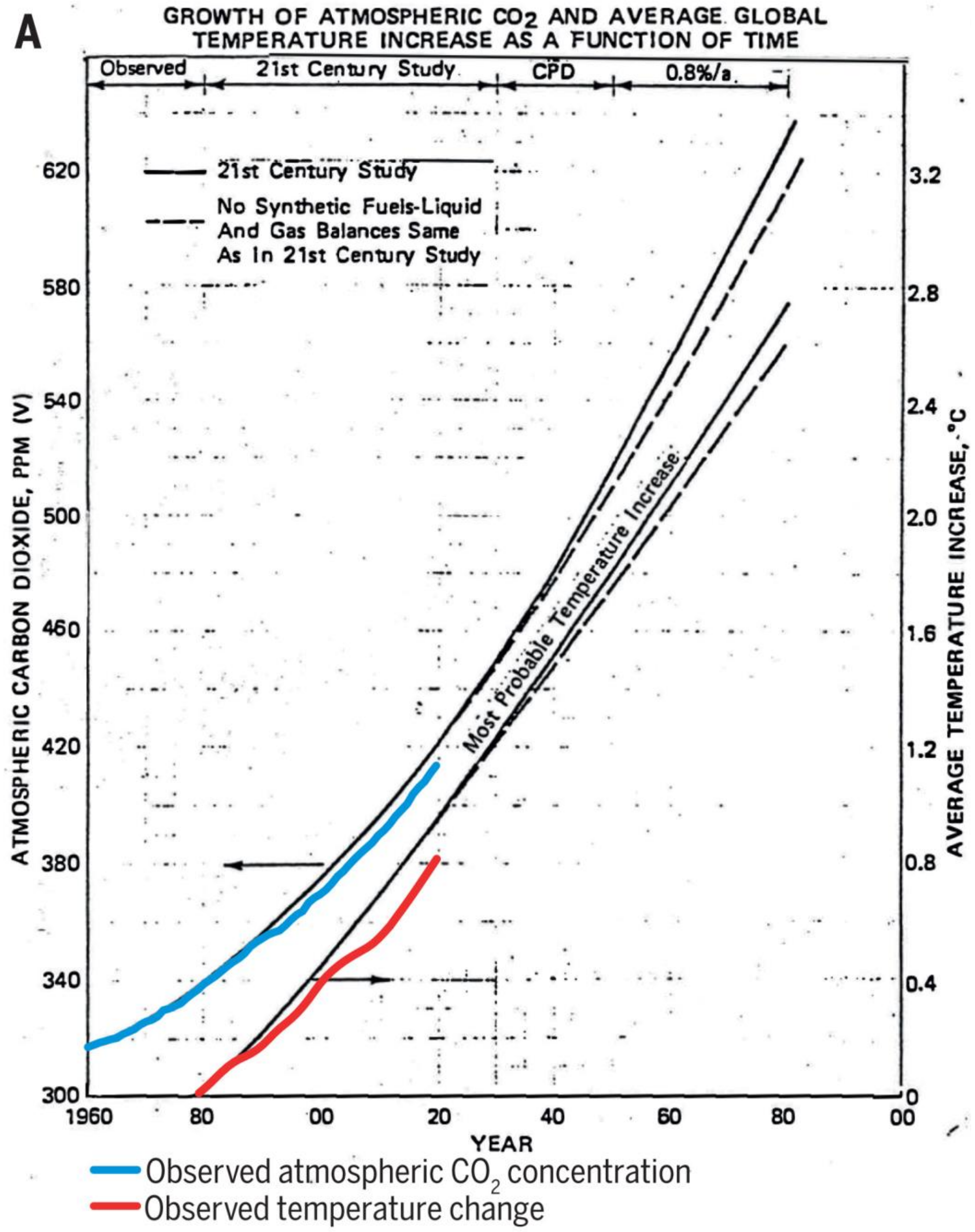
You know the basic idea. A company does something bad, or something bad happens to it. Its stock price goes down, because of the bad thing. Shareholders sue: Doing the bad thing and not immediately telling shareholders about it, the shareholders say, is securities fraud. Even if the company *does* immediately tell shareholders about the bad thing, which is not particularly common, the shareholders might sue, claiming that the company failed to disclose the conditions and vulnerabilities that allowed the bad thing to happen.

https://www.bloomberg.com/opinion/articles/2019-06-26/everything-everywhere-is-securities-fraud

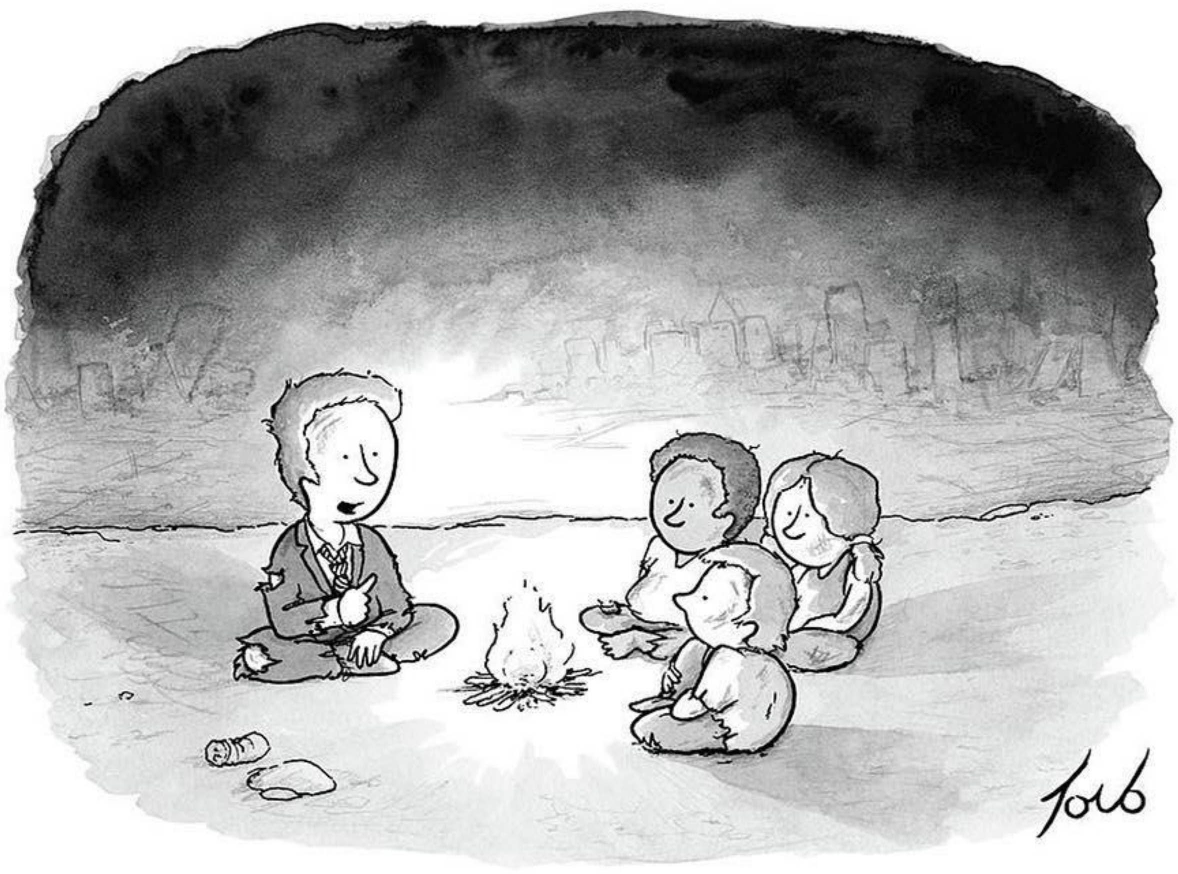
Assessing ExxonMobil's global warming projections (1980)

Historically observed temperature change (red).

Atmospheric carbon dioxide concentration (blue) over time compared against global warming projections reported by ExxonMobil scientists.



https://www.science.org/doi/10.1126/science.abk0063



"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

https://www.insidehook.com/article/art/story-tom-toro-new-yorker-climate-cartoon

Is short or long term $$ better? (Money Stuff)

If you actually think that Exxon Mobil is engaged in a diabolical conspiracy to suppress climate ……the ***last* people you should be worried about are Exxon's *shareholders***.

They're the ones profiting from all that destruction! For another thing, if you *are* concerned about those shareholders, **the *last* thing you should do is fine Exxon a lot of money**.

From Activist Shareholder Lawsuit:

*Exxon's **failure to abide by its representations** has also had the effect of moving the company's investments toward more GHG-intensive assets.*

*This trend is borne out by the increasing GHG intensity of Exxon's upstream assets over the past decade. In addition to having negative environmental consequences, the **increased GHG intensity of Exxon's assets exposes the company to greater risk from climate change regulation than Exxon represented to investors.***

What do we do? Corporate Disclosures

Public companies produce long disclosure reports that include a list of risks

New regulation proposed be SEC would make these reports include climate risk

The key test if risk needs to be disclosed in financial reporting is if a risk is considered "**material**"

Materiality

Public companies are expected to **disclose all risks** that could have a **MATERIAL impact** on the company.

The Supreme Court definition:

"a substantial likelihood that the ... fact would have been viewed by the <u>reasonable investor</u> as having significantly altered the 'total mix' of information made available"

What does that mean? Nothing and Everything (IMO)

<u>Key point: Expectations of information needs can change</u>

Shell directors personally sued over 'flawed' climate strategy

Claimants ClientEarth say the oil company's plan puts the company at financial risk as the world transitions to clean energy

A placard outside Shell's headquarters in London. Directors of the company are being sued in the first case of its kind. Photograph: Vuk Valcic/Sopa Images/Rex/Shutterstock

The directors of oil major Shell are being personally sued over their climate strategy, which the claimants say is inadequate to meet climate targets and

Punish directors who don't make climate disclosures, says hedge fund

TCI threatens to dump stakes in firms that do not have plan to reduce emissions

Investors are putting more pressure on companies to step up their disclosure on climate risks. Photograph: Christopher Furlong/Getty Images

Julia Kollewe

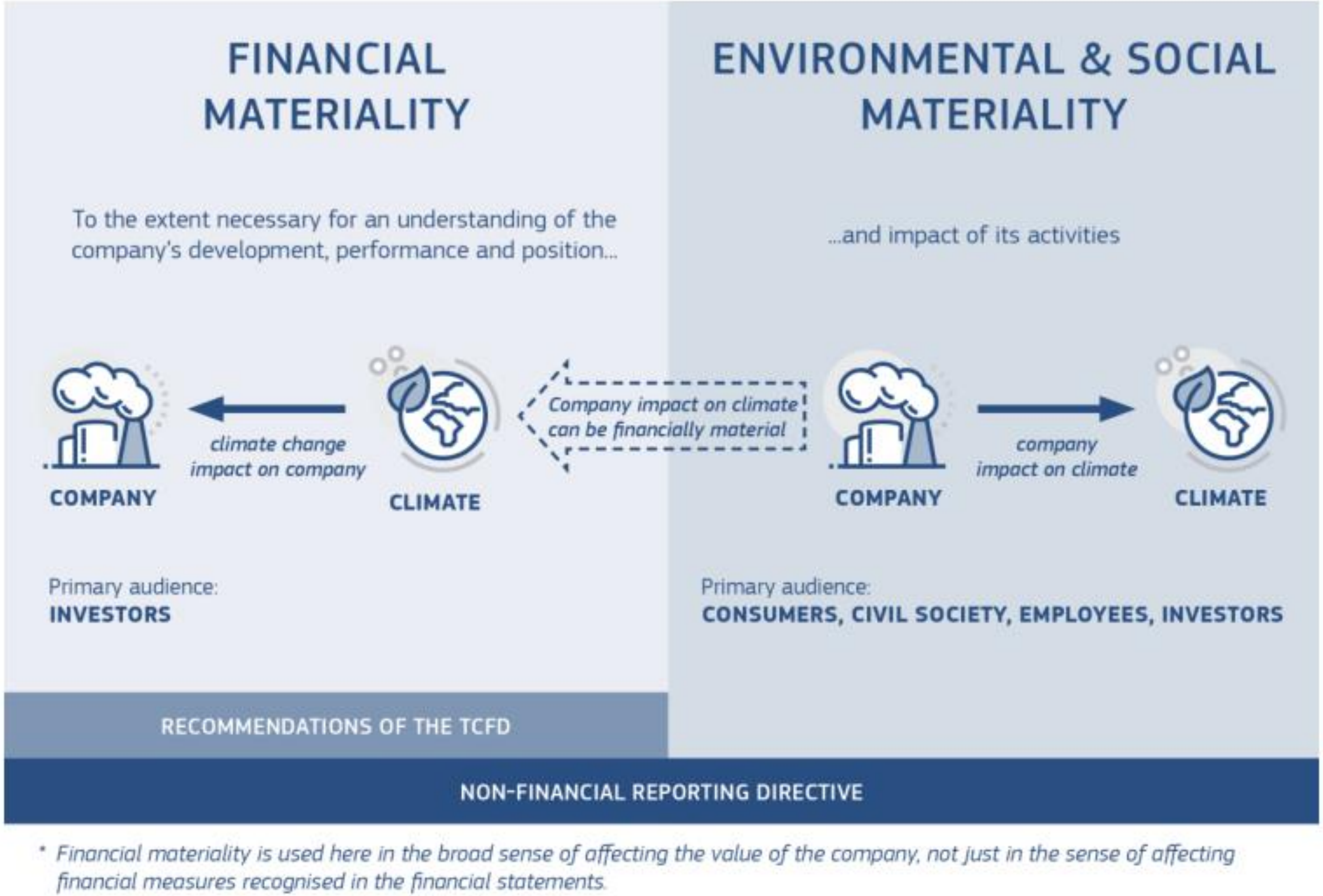
Mon 2 Dec 2019 05.10 EST

The activist hedge fund TCI plans to target directors of companies that fail to disclose their carbon emissions, in the latest sign that investors are putting more pressure on boardrooms to step up their disclosure on climate risks.

https://www.theguardian.com/environment/2023/feb/09/shell-directors-personally-sued-over-flawed-climate-strategy

https://www.theguardian.com/business/2019/dec/02/directors-climate-disclosures-tci-hedge-fund

Double Materiality: EU concept seeing wider Adoption



Example: BlackRock – TCFD Report

Exhibit S.8: New Climate Scenarios in 2021 Analysis

	Orderly – Net Zero 2050	Disorderly – Delayed Transition	RCP 4.5 – Some Climate Action	RCP 8.5 – No Climate Action
Description	Stringent climate policies and innovation, reaching global net zero CO_2 emissions around 2050	Climate policies are delayed, which forces a very aggressive policy response starting in 2030	Emissions peak around 2040 then decline	Global emissions grow through the rest of the century
Expected Temperature Rise *	1.5°C	1.8°C	2.4°C ** (1.7°C to 3.2°C)	4.3°C (3.2°C to 5.4°C)
Transition or Physical	Transition	Transition	Physical	Physical
Source	NGFS	NGFS	IPCC	IPCC

* * Expected temperature rise by 2081-2100 relative to 1850-1900. Numbers in parenthesis correspond to the likely range

** The physical risk models in Aladdin Climate were developed utilizing the Fifth Assessment Report of the IPCC

Sources: IPCC, 2014: Climate Change 2014. Chapter 2. Available at: https://www.ipcc.ch/report/ar5/syr/ Network for the Greening of Financial Services ("NGFS"). "NGFS Scenarios Portal". Available at: https://www.ngfs.net/ngfs-scenarios-portal/explore/.

https://www.blackrock.com/corporate/literature/continuous-disclosure-and-important-information/tcfd-report-2021-blkinc.pdf

Example: Microsoft – TCFD Report

Business and strategy area	Impact
Supply chain and/or value chain	• Our supply chain and/or value chain strategy extends to at least 2030, which is the date by which we have committed to cut our Scope 3 emissions by more than half. We will partner throughout our supply chain to achieve this commitment. • The impact of climate-related opportunities on our supply chain is primarily the prioritization of suppliers that provide more energy-efficient, lower-emission components, products, and services. We have opportunities to reduce energy consumption from our operations (e.g., moving to more efficient building design/operation) and material procurement and to deliver low-emission goods/services, which relies on our ability to source efficient components for our hardware and reduce the footprint of our datacenters. • From July 2020, our top suppliers (by spend) are required to report their Scope 1, 2, and 3 GHG emissions and upon request develop a plan to reduce them. We plan to highlight suppliers with lower emissions output with special attention and action. We prioritize investment with suppliers that: (1) meet our requirements for lower-emission components, goods, and services and (2) demonstrate a commitment to climate change performance, such as through emissions reporting and target setting (e.g., engaging top suppliers through the CDP Supply Chain program and working with cloud infrastructure suppliers to help set carbon reduction targets).

Complexity and Caveats

US regulation becoming increasingly political and contested

Companies can ignore or do bare minimum to respond

Took decades for global accounting systems to standardize, still US v the rest of the world in several cases

Forward-looking (or future) statements are complicated – the tension between holding the firm accountable and the future is inherently unpredictable – Safe Harbor law

My Current Research

Understanding how Corporate Disclosure requirements are changing across major markets –UK 2022, New Zealand 2023, EU to phase in 2024, and other similar markets

Use supervised learning to highlight key points from corporate disclosure reporting (Better CRTL+F)

Career Transition - Interested to connect with anyone working in financial disclosure or climate risk

What you can do

Support legislation to evaluate the company's net-zero goals

Keep track of reporting by NGOs and similar groups holding companies to account

Get involved – local action and global accountability

- People for Climate Action: Coalition of groups working to advocate and advise for robust and compressive climate action plans across counties and cities
- OS-Climate: Open-Source collaboration community to aggregate data and shift global investment from GHG-intensive areas to sustainable and high-impact solutions

Conclusions

Climate modeling allows us to develop shared understanding of future impacts

New regulations will require companies to disclose their GHG emissions, transition strategy, scenario modeling, and other information (in some cases)

Investors, NGOs, and other groups have levers to hold companies accountable

Thank You!

FOLLOW-UP/COPY OF SLIDES: SHUGSAM@GMAIL.COM

Source - Dear Alice
https://www.youtube.com/watch?v=z-Ng5ZvrDm4&ab_channel=THELINE