

The Landscape of Climate Exposure for Investors

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Agenda

- Background
- Introduction to climate exposure
- Managing climate exposure
- Conclusions and recommendations

Background

Project background

Objectives:

- Understand climate exposure landscape
- Better identify and manage climate exposure

Approach:

- Collaborative effort between [CPI](#) and Stanford's [Steyer-Taylor Center](#)
- 22 stakeholder interviews
- Tool + product investigations
- Literature review

Interviewed Organizations:

INVESTMENT/ ASSET MANAGERS,
ADVISORS, CONSULTANTS

BLACKROCK

MERCER

Calvert
INVESTMENTS

HALL CAPITAL
PARTNERS LLC

Kepos
Capital

ESG TOOL PROVIDERS

MSCI

TRUCOST

Bloomberg

IMPACT INVESTORS

SONEN CAPITAL

generation__

FAMILY OFFICES, PHILANTHROPIES,
ENDOWMENTS

BLACK CORAL
CAPITAL

TOMKAT
CHARITABLE TRUST

WWF

UNIVERSITY
OF
CALIFORNIA

ADVOCATES AND
STANDARDS-CREATORS

CDP
DRIVING SUSTAINABLE ECONOMIES

SUSTAINABILITY ACCOUNTING
SASB
STANDARDS BOARD

Ceres

DivestInvest

RESEARCH ORGANIZATIONS

ROCKY MOUNTAIN
INSTITUTE

21investing
initiative

Energy Transition Advisors
ETA

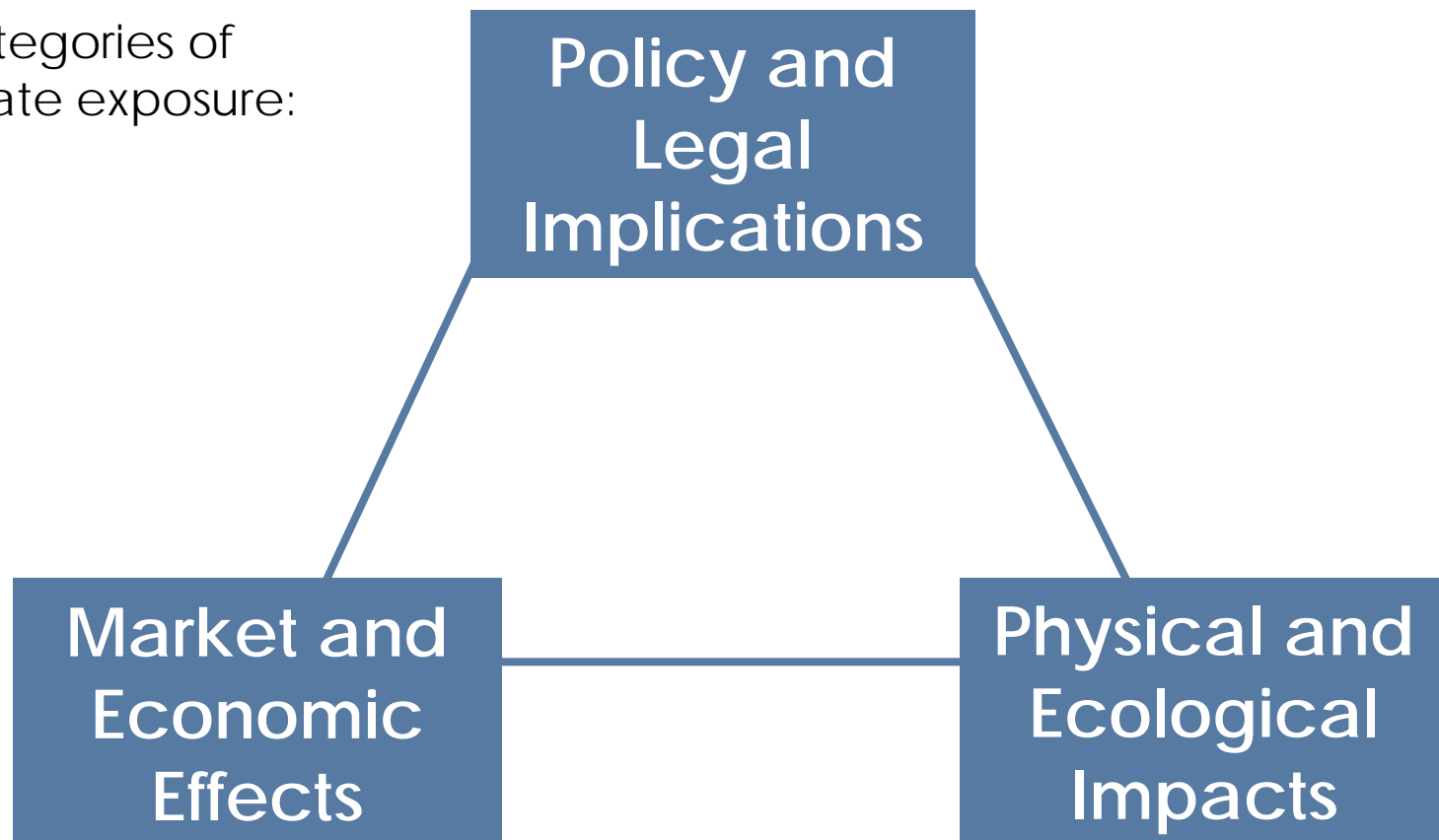
Energy Transition Advisors
ETA

Introduction to climate exposure

What is climate exposure?

Potential gains or losses in an investor's portfolio due to climate change

3 categories of climate exposure:



Why does it matter?

Climate exposure is expected to have widespread effects on the value of financial assets

Through...

- Cost of compliance with standards or policies
- Higher energy prices
- Risk of stranded assets
- Changing agricultural and commodity prices
- Scarcity of essential resources (e.g. water, fertilizer, etc.)
- Disruptions in business supply chains
- Damage to infrastructure and other assets

... and so much more

Challenges of managing climate exposure

Misalignment in timeline of risks

- Investors are more concerned with short-term risks
- Risks associated with climate change can be long-term

Emphasis on the risks from policy actions and changing fuel prices

- Less emphasis on how the physical impacts of climate change are affecting and will affect portfolios

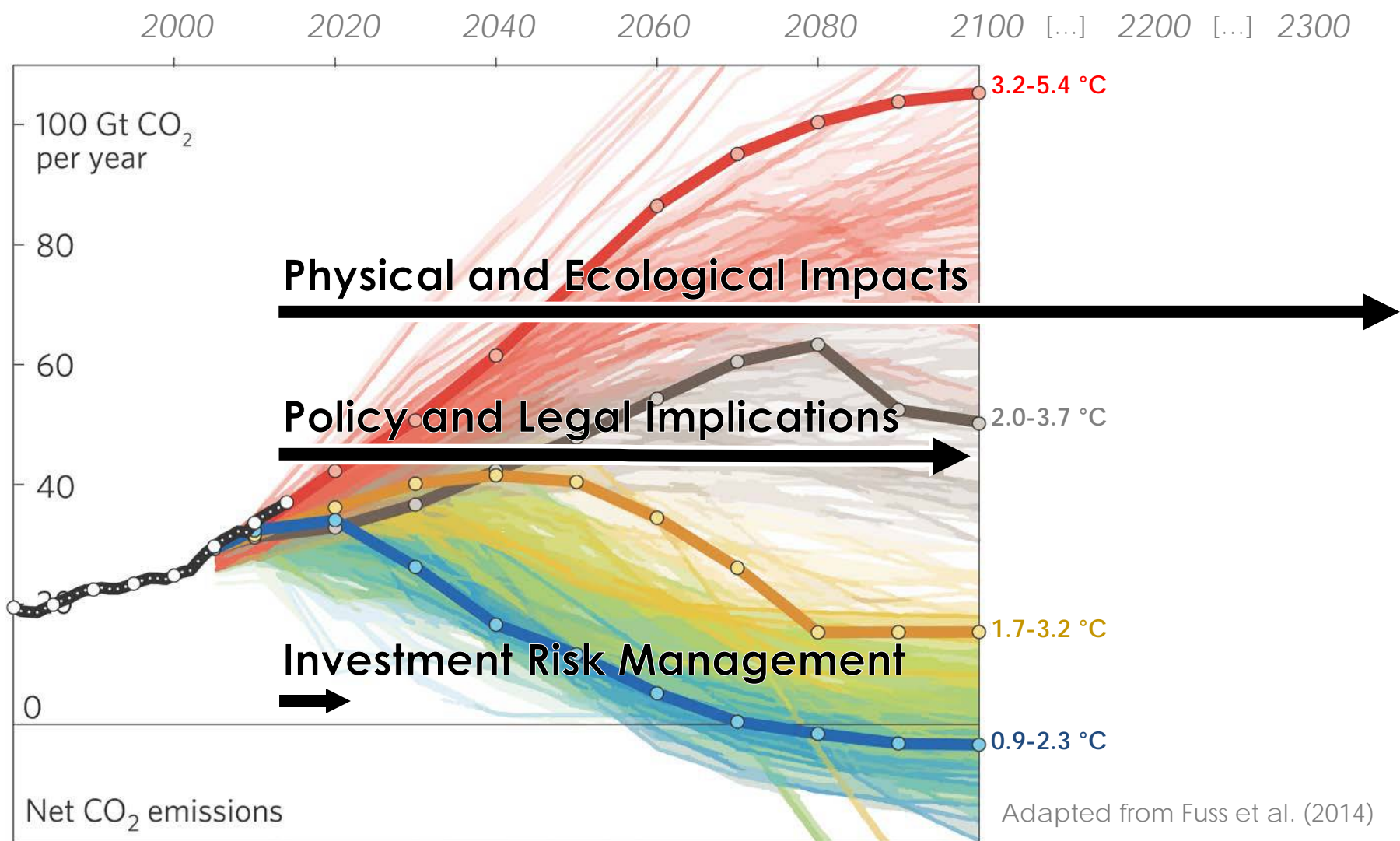
Focus on “brown” downside risks

- Harder to pursue “green” side and opportunities in a strategic way

It is a “definitionally-challenged, metric-challenged space”

- Terminology isn't universal; metrics are preliminary

Challenges of managing climate exposure



Emissions pathways and temperature scenarios overlaid with physical and ecological impacts, policy and legal mitigation efforts, and investment risk management horizons

Managing climate exposure

Managing climate exposure

- An ideal framework for managing climate exposure involves both minimizing climate risk and maximizing climate opportunities.
- Environmental, social, and governance (ESG) data is the primary source of information for investors seeking to manage climate exposure.
- Currently, more ESG data supports understanding **climate risk** rather than exploring potential **climate opportunities**.

Influencing Mechanism

Shareholder engagement

Divestment

Pro-climate deployment of capital

Investing Methods

Environmental, Social, and Governance (ESG) Integration

Thematic or Impact Investing

ESG Data Tools

Flagship ESG tools

Bloomberg ESG • TruCost • MSCI • Sustainalytics

ESG and Alternative Financial Products

- *Low Carbon Indexes*
- *Stranded Asset Total Return Swaps*

- *SRI funds*
- *Fossil Free Indexes*

- *Thematic Indexes*
- *Green Bonds*
- *YieldCos*
- *Bespoke impact investment products*

Examples of environmental ('E') factors within ESG

Disclosure: evaluating companies on the detail, breadth, and veracity of their disclosed environmental data

Emissions: by type of greenhouse gas, by source, by greenhouse gas protocol reporting standard, per unit of revenue, emissions trading activity, amount of emissions reductions, etc.

Energy: total amount of energy consumed, amounts of particular fuels consumed, energy per unit of revenue, renewable energy used

Water: amount consumed, percent reused, total discharged, etc.

Waste: amount generated, amount recycled, and amount of hazardous waste

External initiatives: participation in sustainability initiatives (e.g., UN Global Compact, GRI, PRI, etc.)

Fines and litigation: number and cost of environmental fines and/or ongoing environmental litigation

Operational policies: related to energy efficiency, renewable energy, waste reduction, emissions, green buildings, packaging, etc.

Where do ESG tools and financial products fit into the landscape of climate exposure?

Companies disclose Environmental, Social, and Governance (ESG) information through mandatory and voluntary channels.

- Mandatory reporting (e.g. 10-k filings)
- Voluntary reporting to:
 - Shareholders (e.g. company CSR reports)
 - 3rd Party Orgs (e.g. CDP questionnaires)

A note on disclosure frameworks:
SASB, GRI, and IIRC guide companies on the types of financially-material ESG information to disclose.

- SASB creates industry-specific technical disclosure standards meant to fit within current mandatory SEC filings.
- GRI and IIRC emphasize financial materiality within voluntary disclosures.

In theory, investors could compile company disclosure information from each publicly available source...

ESG Data and Research

Organizations provide tools that aggregate, normalize, and contextualize huge amounts of ESG information for investment purposes. This ESG information is also a primary input to ESG financial products.

...but it is often more practical to get ESG information from various ESG data tools and research aggregators.

Investors use ESG data and financial products to evaluate company and portfolio performance and to manage climate exposure.

MANDATORY AND VOLUNTARY REPORTING DATA

ESG DATA TOOLS AND FINANCIAL PRODUCTS

ESG data tools can help investors tackle the challenges associated with the patchwork of available ESG data, by:

1 Aggregating and normalizing large amounts of ESG data – disclosed through many different channels by many different actors – in a single location

2 Comparing ESG performance between peer companies, across entire portfolios, and against many different benchmarks

3 Often adding additional proprietary ESG research and analysis which helps contextualize data and facilitate comparisons

...but they often emphasize minimizing climate risk and are limited in providing information on climate opportunities.

While ESG data tools help investors understand their climate exposure, **ESG financial products** allow investors to actually change it.

ESG financial products incorporate external analysis of ESG factors into traditional financial products like indexes.

Performance-based ESG investing is a relatively new phenomenon, starting only in the early 2000s.

ESG indexes provide accessible solutions for investors who don't want to conduct ESG analysis in-house or across their entire portfolios.

There are three main categories of ESG indexes, each with different approaches and limitations...

ESG indexes

ESG INDEX TYPE	DESCRIPTION	EXAMPLES
EXCLUSIONARY	<ul style="list-style-type: none"> Excludes fossil fuel companies, or particular subsectors like coal or tar sands, from index holdings; often referred to as divestment indexes 	<ul style="list-style-type: none"> Fossil Free Indexes US MSCI Global Fossil Fuels Exclusion Indexes FTSE Group, Blackrock, and NRDC ex-Fossil Fuels Index Series
NON-EXCLUSIONARY	<ul style="list-style-type: none"> Does not exclude fossil fuels, but often overweights high-ESG performers and underweights low-ESG performers 	<ul style="list-style-type: none"> MSCI ACWI Low Carbon Target Index STOXX Global ESG Leaders SXI Switzerland Sustainability 25 Index iShares MSCI ACWI Low Carbon Target ETF
THEMATIC	<ul style="list-style-type: none"> Emphasizes economic, social, environmental, and other trends to inform investment strategies Often emphasizes investment in companies focused on climate change mitigation and adaptation 	<ul style="list-style-type: none"> MSCI Global Climate Index S&P/TSX Energy and Clean Technology Index MSCI Global Environment Index

Sources: SSGA 2014; BlackRock 2015; SMI Indices 2014; STOXX 2014; MSCI 2014

Alternative green investments are an important start, but still have a long way to go

GREEN BONDS

- Fixed income opportunities for green investment
- Market has grown significantly (\$40 billion in 2014 vs. \$15 billion in 2013 issuances), but is still relatively small and illiquid
- Lack a universal definition of “green” criteria
- Are often repackaged corporate bonds
- May or may not increase the total amount of financing towards low-carbon or climate-resilient projects

YIELDCOS

- Have grown enormously into a \$20 billion global market over the past few years
- But might be more accurately described as “GrowthCos”
- Growth is predicated on the drop-down of additional renewable energy assets
- Often don’t offer the stability needed by large institutional investors

Conclusions and recommendations

Capitalizing on climate opportunities

1

Investors can design a strategy to minimize exposure to climate risk and pursue climate opportunities.

2

Standard-setting organizations, disclosure initiatives, and investors can lead the way towards greater disclosure from companies.

3

Investors and regulators can continue mainstreaming ESG investment.

4

Financial product and service providers can create new financial vehicles for green investments and improve existing ones.

5

Investors can share best practices for minimizing climate risks and maximizing climate opportunities.

Thank you!



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