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# Catalysing The Green Development Pact Through Financial Architecture Reform

Tuesday, 23 May 2023



**hexTerra**  
Fund Management

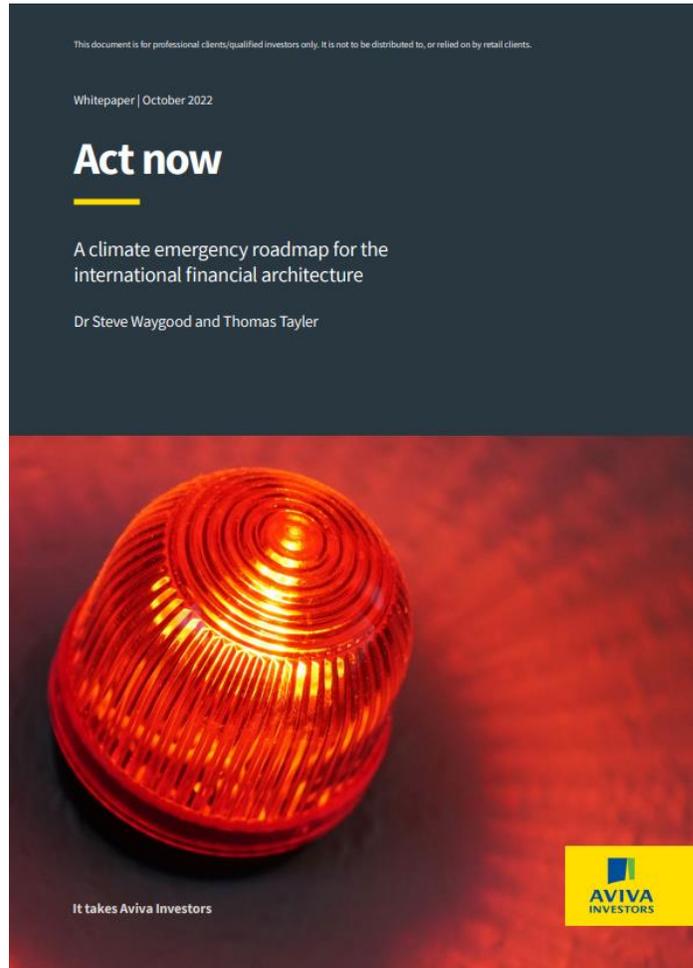
# The Green Development Pact Through Financial Architecture Reform

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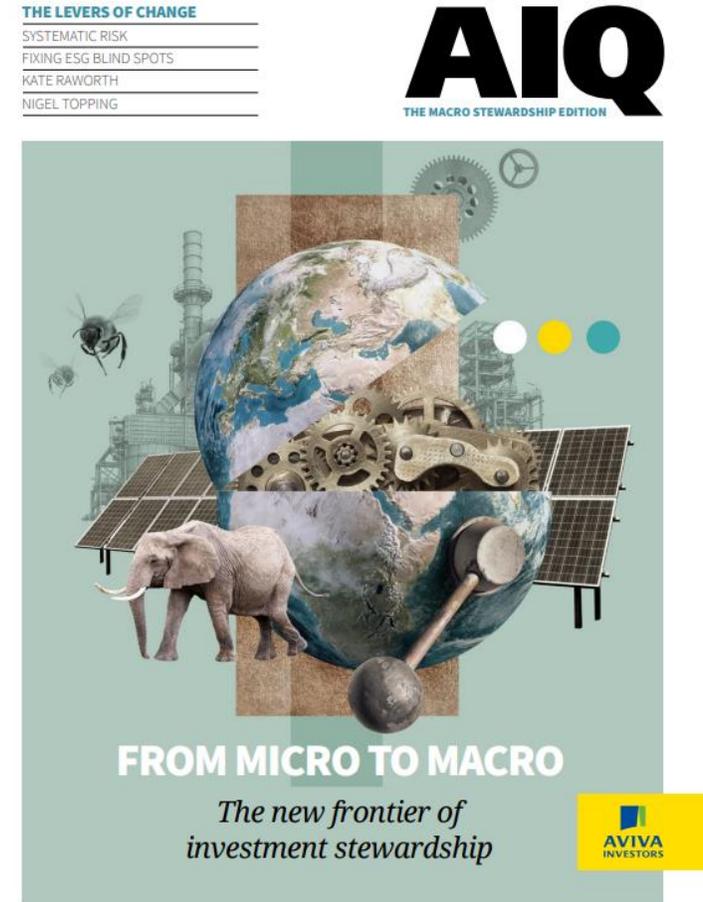
Steve Waygood, Chief Responsible Investment Officer

23 May 2023

# The role of market participants as advocates for the changes we need to see



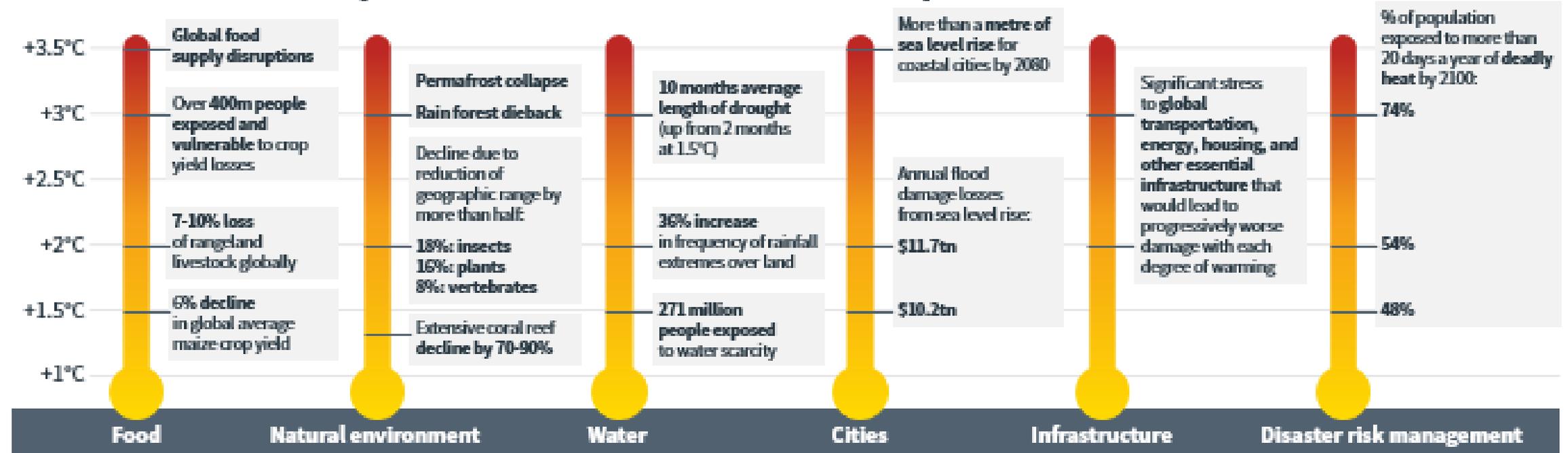
<https://www.avivainvestors.com/en-gb/views/aiq-investment-thinking/2022/11/climate-emergency/>



<https://www.avivainvestors.com/en-gb/views/aiq-macro-stewardship/>

# The urgency of acting on climate change

## The risk of catastrophic events increases with temperature



Investing \$1.8 trillion in these areas (2020-2030) could generate **\$7.1 trillion in total net benefits**

Source: World Resources Institute, adapted from the IPCC and others. Not cost/benefit analysis from Global commission on adaptation report: September 2019.

# Significantly off track with a closing window

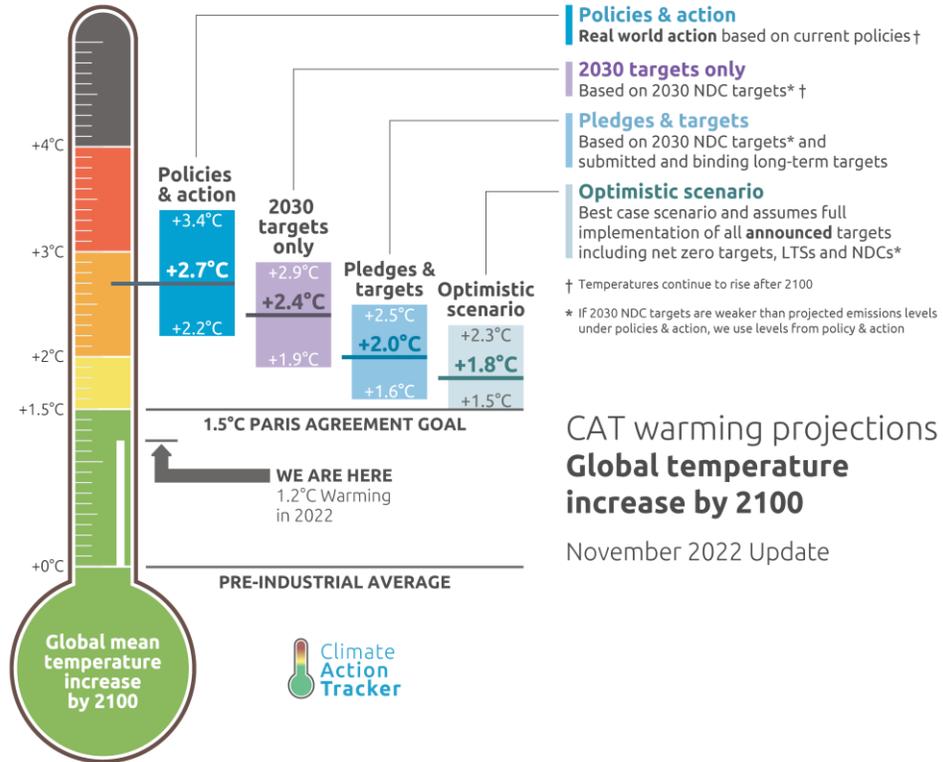
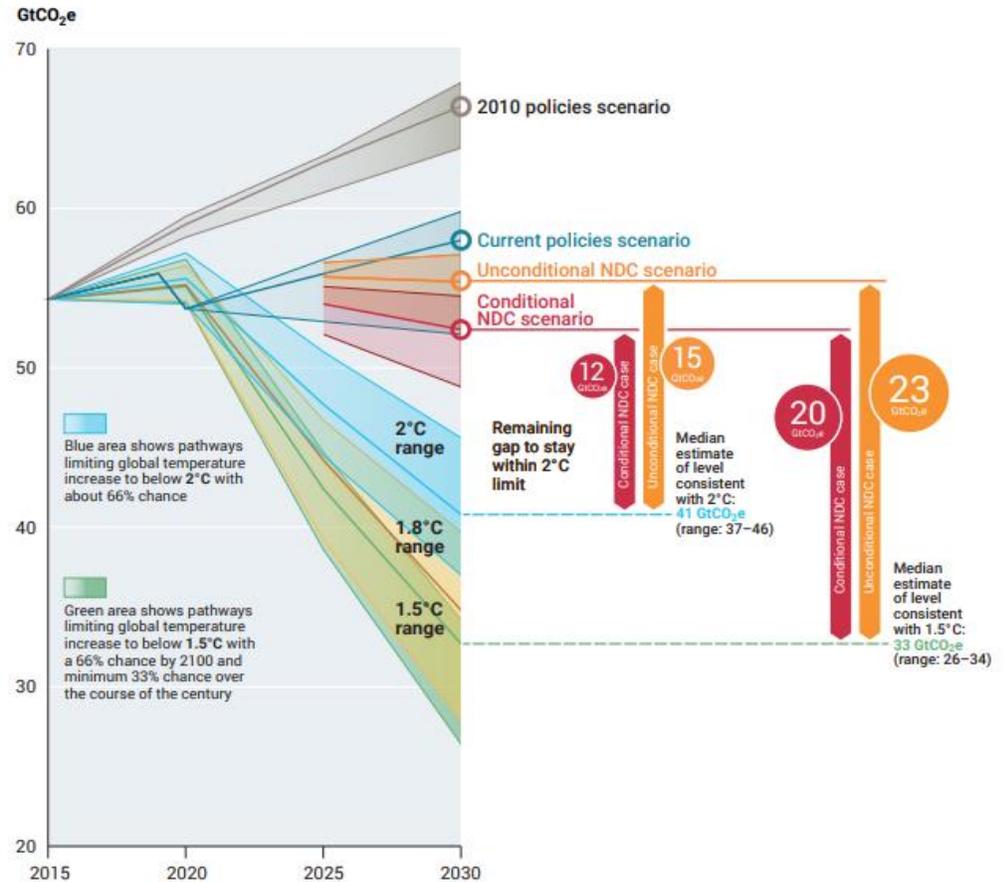


Figure ES.3 Global GHG emissions under different scenarios and the emissions gap in 2030 (median estimate and tenth to ninetieth percentile range)



# The reality of climate change

## Ocean acidification

**30% increase in acidity of oceans since industrial revolution**

30% CO<sub>2</sub> emissions absorbed by Oceans

## Extreme weather

**70%** of all extreme weather events studied were made more likely or more severe by human caused climate change



## Sea level rise

**+3.7mm per year**

Rate of rise has trebled since the 1970s



## CO<sub>2</sub> concentrations up

**425 parts per million** in April 2023

The highest level since the Pliocene era 3-5 million years ago

## Global temperature increase

**+1.1°C to 1.2°C increase**

Since industrial revolution



## Extreme heat

**75% global population**

exposed to life threatening climatic conditions by 2100 under business as usual scenario



## Ice sheets melt

**-475 Gt / year**

Loss six times faster in 2010s than in 1990s

All IPCC scenarios project at least one practically ice free summer in the Arctic before 2050

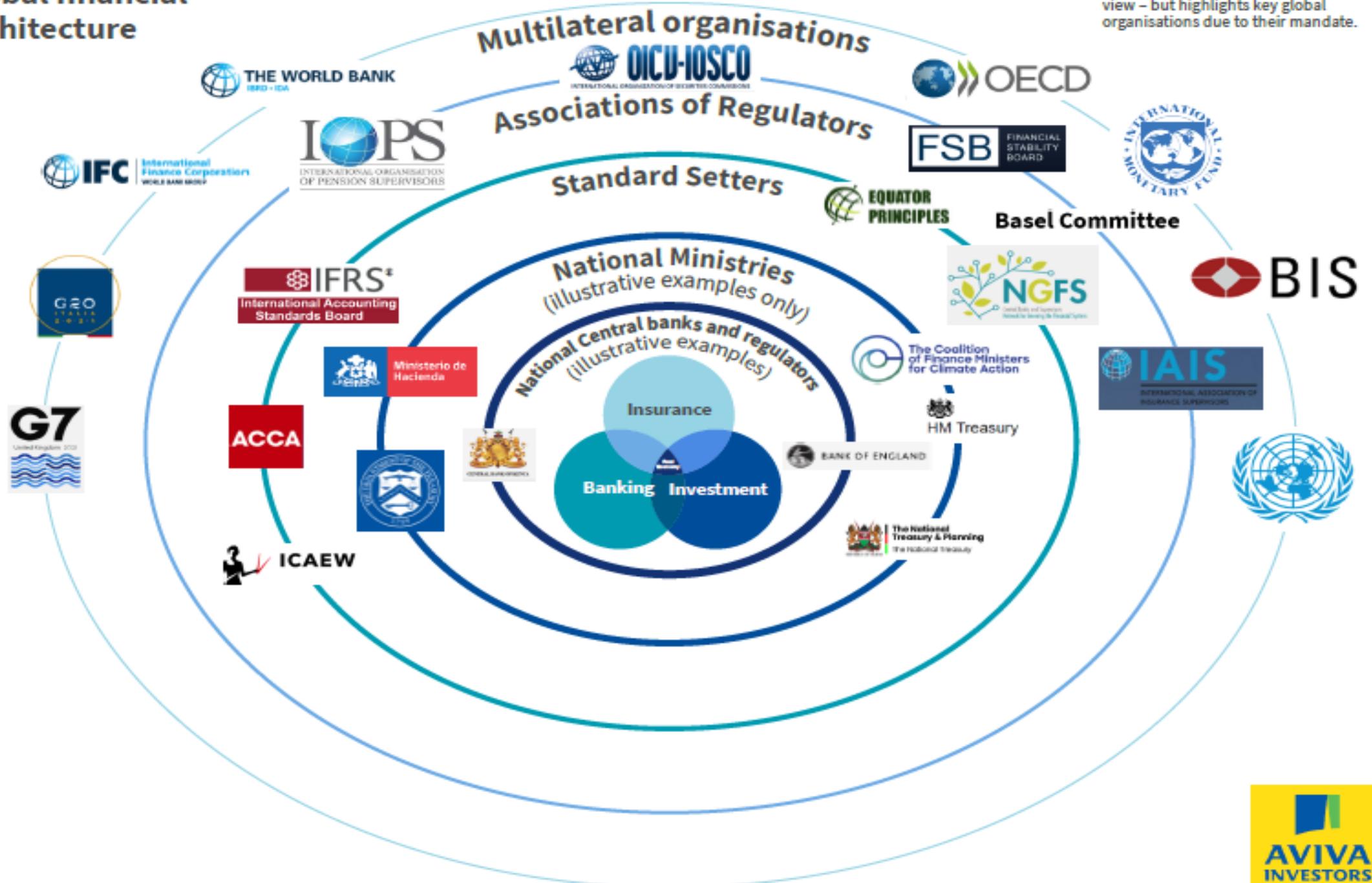
# Transition plans – everything, everywhere, all at once

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# Global financial architecture

This is not a completely exhaustive view – but highlights key global organisations due to their mandate.



# Geopolitical alignment for action?

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2023

G7 Japan

G20 India

COP28 UAE

2024

G7 Italy

G20 Brazil

COP29 Eastern Europe

2025

G7 Canada

G20 South Africa

COP30 Brazil?

80<sup>th</sup> anniversary of  
Bretton Woods conference

# Call to action: A roadmap for the international financial architecture

We call on each of the institutions within the international financial architecture to:

- 1 Create a Roadmap or Transition Plan to place the supervision of the just transition to net zero on or before 2050 on a science-based pathway at the centre of its purpose and work programmes.
- 2 Review its mandate and constitution and request relevant stakeholders suggest any changes necessary to support the reorienting of the institution towards putting climate at its heart.
- 3 Report annually on the progress of the institution and those it supervises, regulates, coordinates and oversees, towards delivery of the net-zero ambition.
- 4 Collaborate with the other elements of the architecture to create and collectively steward a global net-zero transition plan for finance, reporting annually on global progress and making recommendations to governments for the policy action needed to deliver the enabling environment for the successful transition of the global finance system.
- 5 Convene a summit to agree and implement necessary reforms, celebrating 80 years since the original Bretton Woods Conference and plotting a pathway for the global financial system to be harnessed to tackle the pre-eminent challenge of the next 80 years – the climate emergency.

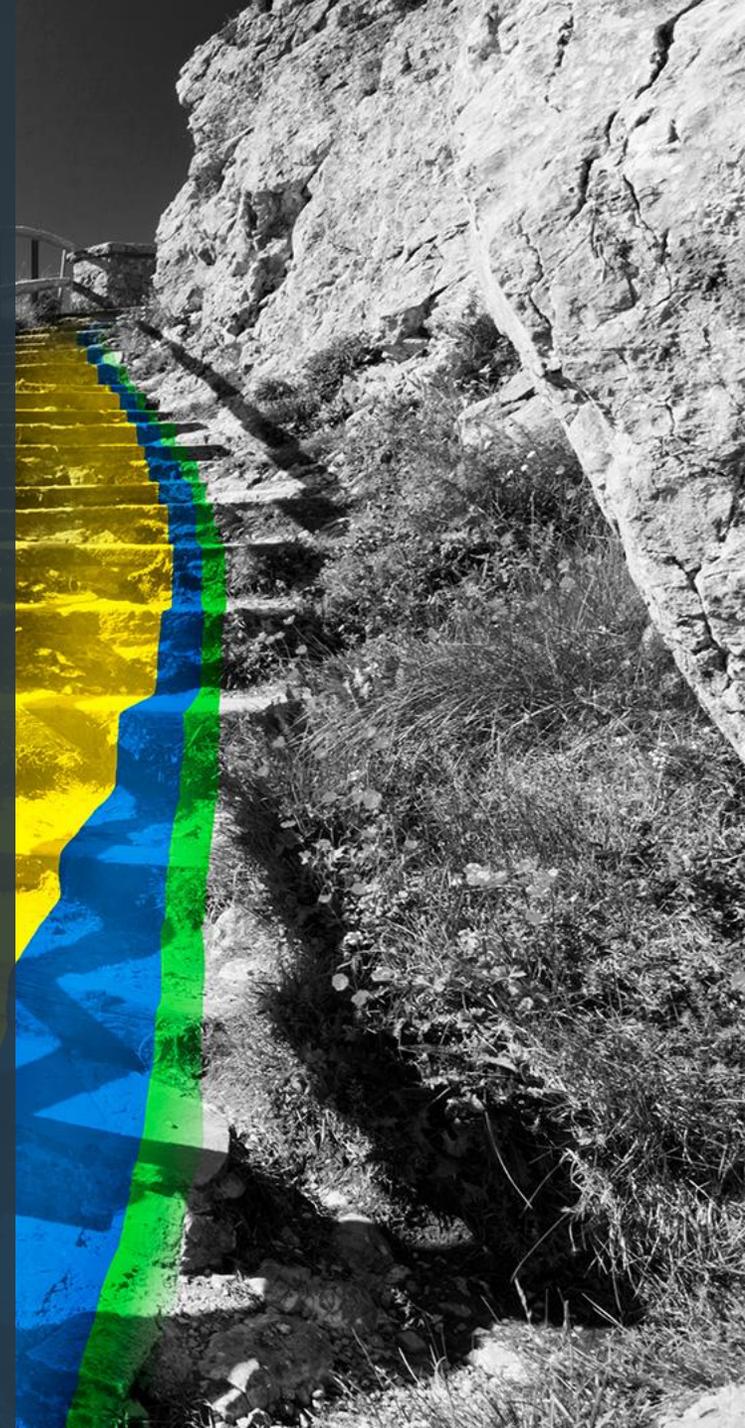


Thank you

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@stevewaygood



# Hard Architecture

## Concrete Foundations For Green Finance

Professor Michael Mainelli  
Chairman, Z/Yen Group  
23 May 2023

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# Agenda

- Green So Far
- Luxury viewpoints
- Roadmaps
- What will finance do in the great climate war?



**"Get a detailed grip on the big picture."  
Chao Li Ning**

# The 'City' Story So Far

City of London Corporation passes local Clean Air directive in 1953 leading to Clean Air Act of 1956.

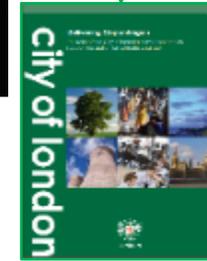


"The London Principles: The Role Of The UK Financial Services In Sustainable Development", Johannesburg Earth Summit.

2002



2007



2009

London Accord – Sharing Investment Research For The Sake Of The Planet

Policy Performance Bonds



2017



2019



1991



World Business Council for Sustainable Development

1992



2000

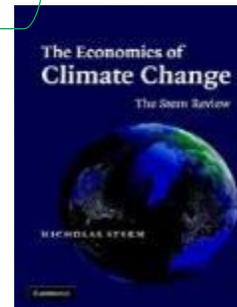
2005



2007



2008



2006

Following COP3 Kyoto (1997), City of London Corporation publishes – "Trading Emission Permits – A Business Opportunity For The City?" (January 1999). COLC sets up shadow trading scheme, works with DTI, EU Emissions Trading System (ETS) adopts UK framework, launches April 2005.

Carbon - Burn It All?!, stranded assets, unburnable carbon



2018



2020

# Winning Portfolios In 2007

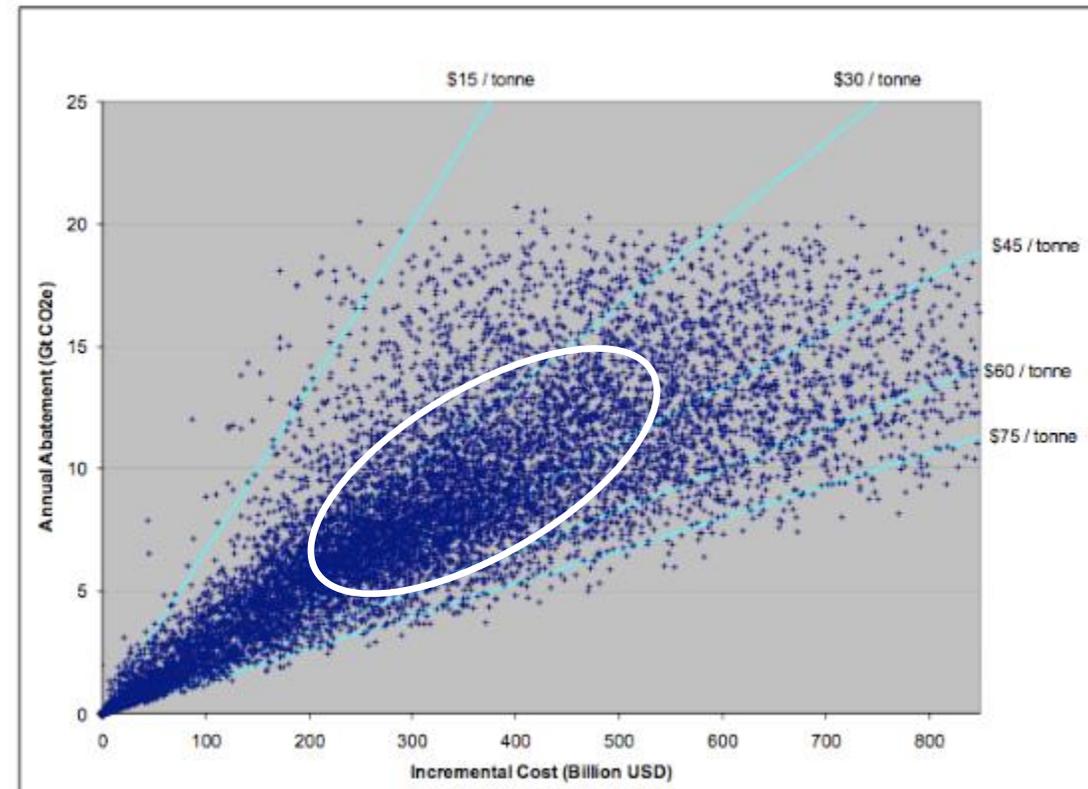
Successful model portfolios exist – though concentrated at \$30 to \$60 per tonne, and based upon IPCC/UNFCCC data

Focus on the carbon market - business investment follows the carbon price

Avoid carbon-dumping wars – duties on carbon ‘at the borders’ could be worse than anti-dumping trade wars



A mix of sectors and technologies is essential; no single technology suffices

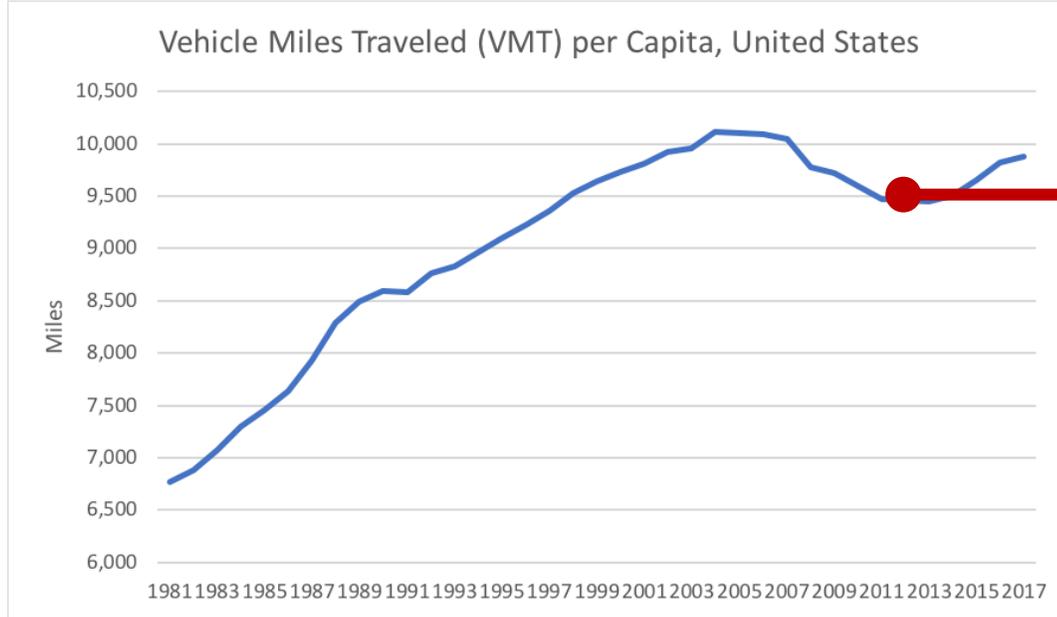


## ESG Works?

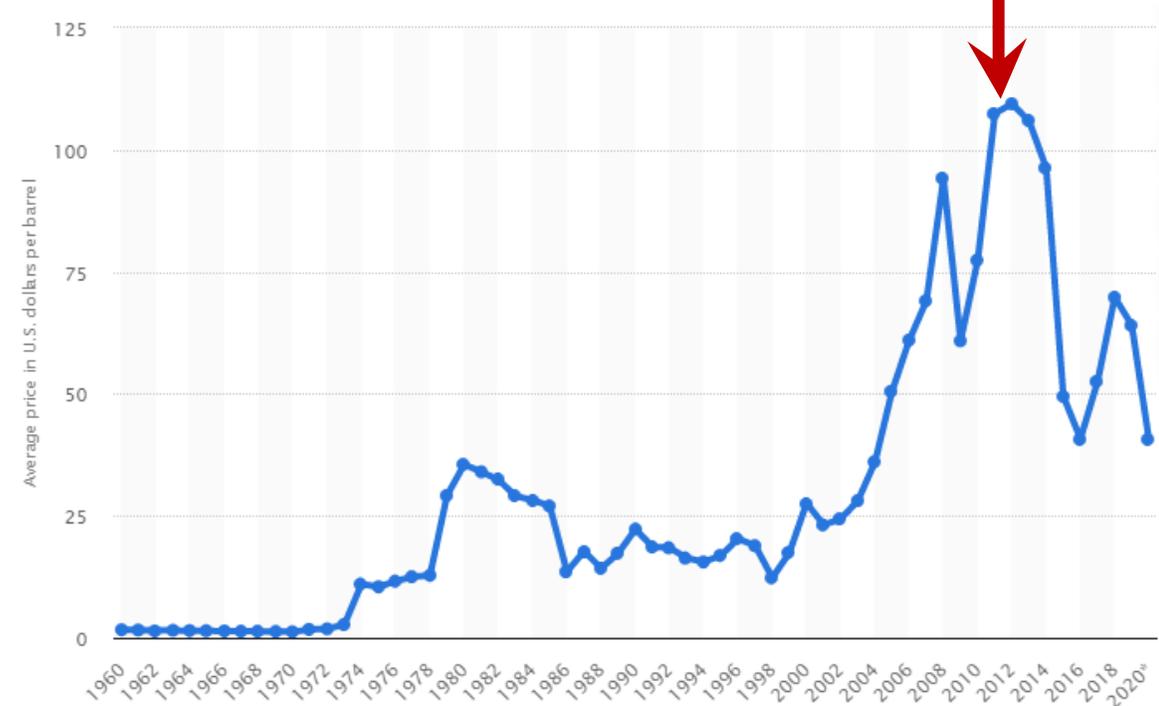
- ESG has had 25 years+ already
- MIT 'Aggregate Confusion' project found companies could be in the top 5% on one ESG rating algorithm and the bottom 20% on another - reputable firms like Shell find their ratings to be A from one rating agency and C+ from another - <https://mitsloan.mit.edu/sustainability-initiative/aggregate-confusion-project>
- Creating separate 'currency'
- Out of time



# Awareness Works?



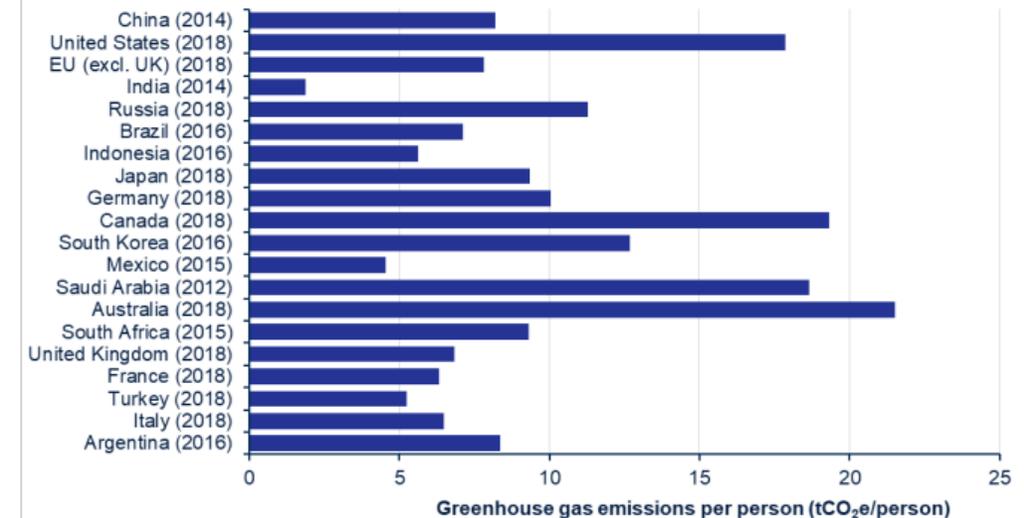
- Covid-19? 6% temporarily
- Miles driven in America dropped 4% in 2011 due to a 32% increase in oil prices, not due to an outbreak of environmental awareness



# Meet The Numbers, Price x Quantity or Macro-economics

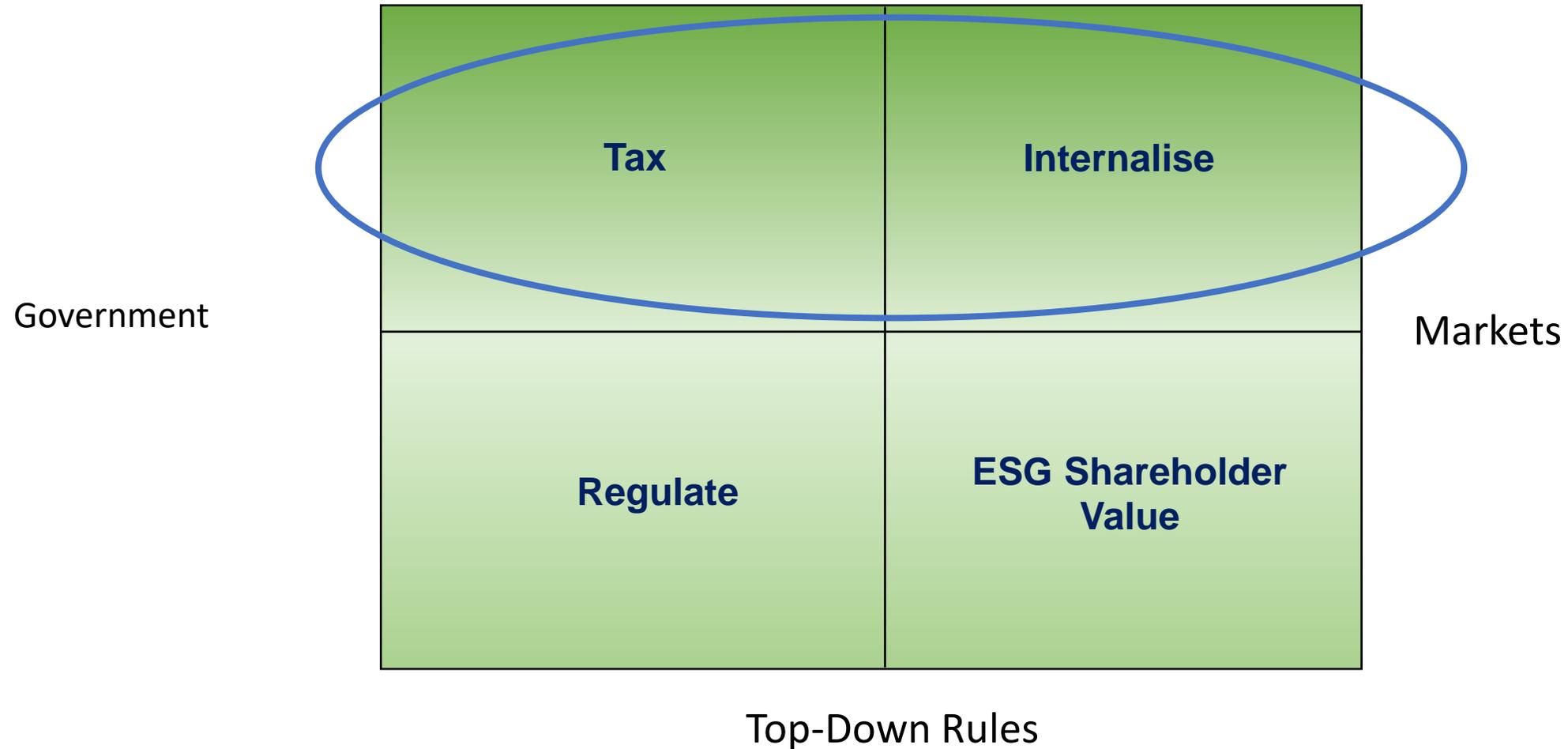
- UK CO<sub>2</sub>e emissions = 7 tonnes/UK citizen, or 12.7 tonnes ‘carbon footprint’ – say 10 tonnes = £80 tonne/UK citizen = £800/year
- Stern Review (2006) = 1%, then 2% of GDP = £400 to £800/UK citizen

Figure 17: Territorial greenhouse gas emissions per person: G20 countries (tCO<sub>2</sub>e)



# Policies Need Pricing

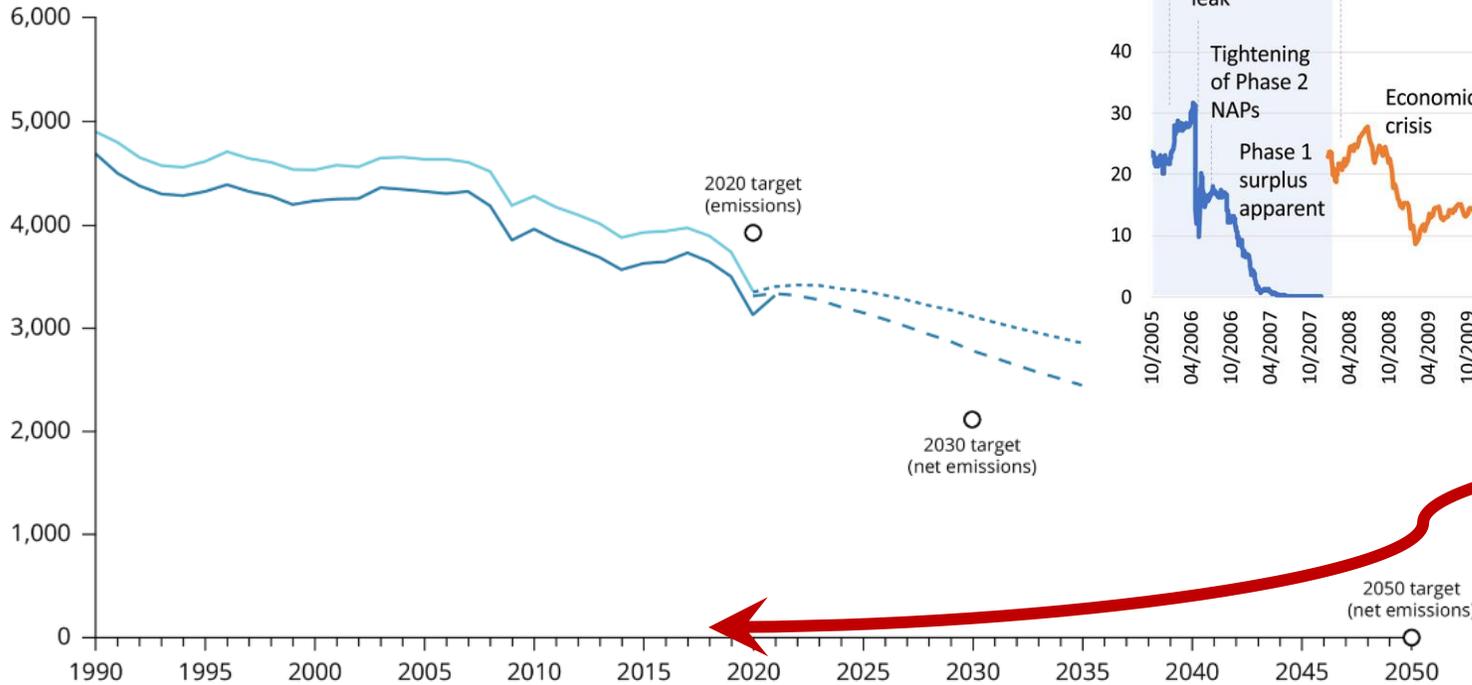
## In 1997 (COP3), 2007 (London Accord), Or 2021 (COP26)



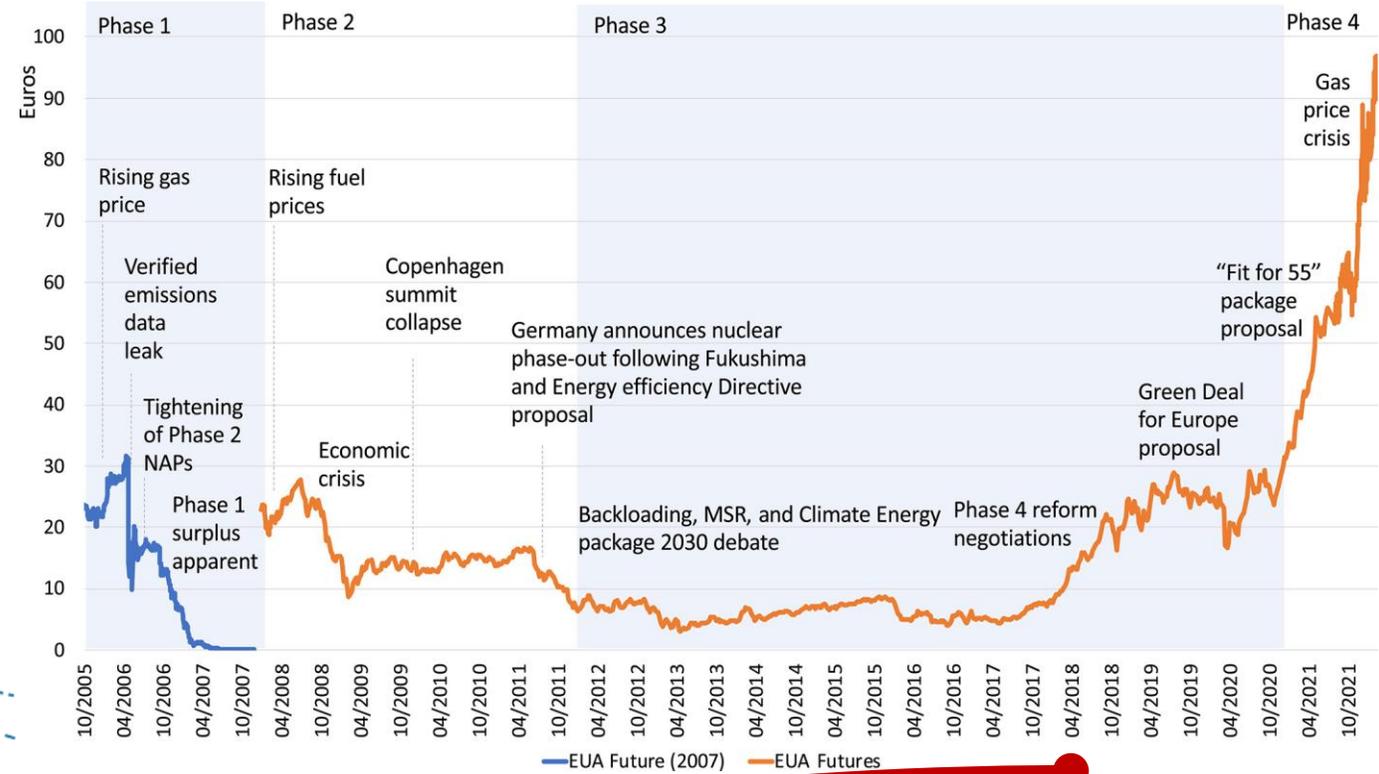
Need Economics - Plandemics Are Insufficient

# Markets Work!

**Figure 1. Historical trends and future projections of EU greenhouse gas emissions**  
 Million tonnes of CO<sub>2</sub> equivalent (Mt CO<sub>2</sub>e)



- Historical greenhouse gas emissions without land use, land use change and forestry (LULUCF)
- Historical greenhouse gas emissions with LULUCF
- Projections with existing measures (WEM) with LULUCF
- - - Projections with additional measures (WAM) with LULUCF



— EUA Future (2007) — EUA Futures

## The Environment – A Luxury Good?

- Awareness – limited without market choices
- Divestment – not working (& accompanying ESG, taxonomies)
- Voluntary carbon credits - unproven
- Use of proceeds sovereign green bonds - gimmick
- Use of proceeds corporate green bonds – clumsy
- Bans – CFCs, **working**
- Emission Trading Schemes – ‘Acid Rain’, SOX & NOX, **working**
- Emission Trading Schemes – Carbon, 23% of global emissions, **working**
- Outcome-based corporate green bonds (policy performance, sustainability-linked) - **working**
- Outcome-based sovereign green bonds (policy performance, sustainability-linked) - **working**



“Take the ‘C’ out of ESG”

# Politicians' Promises

Politicians promise all sorts of things, sometimes they even mean them ... at the time



# Policy Risk

Governments claim commitment to ending climate change, but long term existential risks are trumped by short term issues. Result? Policy U-turns.

For investors in a low-carbon future, uncertainty about government commitment manifests itself in three specific risks:

- government carbon emission targets being missed
- fossil fuel prices remaining low
- carbon (emissions) prices remaining low

Conclusion? Hedge using fossil fuel investments.



# Policy ‘Bond-Cuffs’

Policy performance bonds - (aka ‘ESG linked’, ‘sustainability linked’, ‘performance incentive’)

Education:

2017 - Khazanah

Sustainability:

2018 – Danone, Wilmar

2019 - Louis Dreyfus, Nokia, Enel, Bunge, MásMóvil, COFCO

2020 – WSP, Schneider Electric

2021 – TRIG (UK), Bank of China

Sustainability market:

2020 - \$11bn

2021 - \$110bn

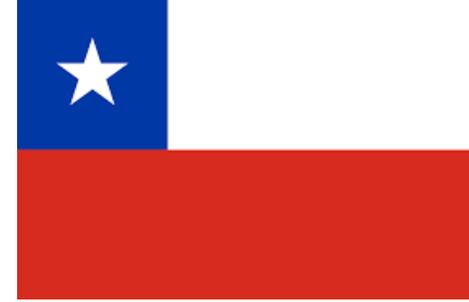


# Summary - Policy Performance Bonds



- Policy Performance Bonds (PPBs) or Sustainability-Linked Bonds (SLBs) are issued with specific sustainability performance targets (SPTs), which contain key performance indicators (KPIs), for example: “A 10% reduction in scope 1 and 2 emissions by 2032”.
- If the SPT is missed the bond is subject to a ‘step-up’ clause, meaning the bond interest increases.
- This type of financial instrument provides a hedge against the issuer not delivering on commitments or targets - if the low-carbon future fails to arrive, due to changes in policy (such as subsidies or tax breaks) the government bears some of the direct costs by having to pay higher interest rates on government debt.
- Policy performance bonds can be issued against a range of social or environmental issues which are policy dependent, including education, deforestation, and housing.
- Major advantage of PPBs/SLBs is that they are tied to **outcomes** rather than **application** – this means that an organisation or country can use a wide range of means to achieve outcome – such as education and training, the recruitment of specialist staff, or grants and subsidies.

# Cool Chile



- March 2022 - the Republic of Chile priced the first-ever Sovereign Sustainability-Linked Bond (SSLB).
- This \$2 billion 20 year SSLB has generated a strong appetite from more than 230 investors, more than four times oversubscribed.
- The sustainability performance targets were pretty stringent
  - an absolute reduction in greenhouse gas emissions (from 112.3mt/pa in 2018 to 95mt/pa) by 2030
  - an increase in renewable energy generation (from 43% to 60% renewables by 2032)
- Because the SSLB is not tied to a specific project, Chile is free to use any means it can to achieve them



# Even Cooler Uruguay



October 2022

\$1.5 bn issue, subscription \$3.96 bn

In connection with the Bonds, Uruguay has determined two sustainability performance targets (“SPTs”) for each KPI.

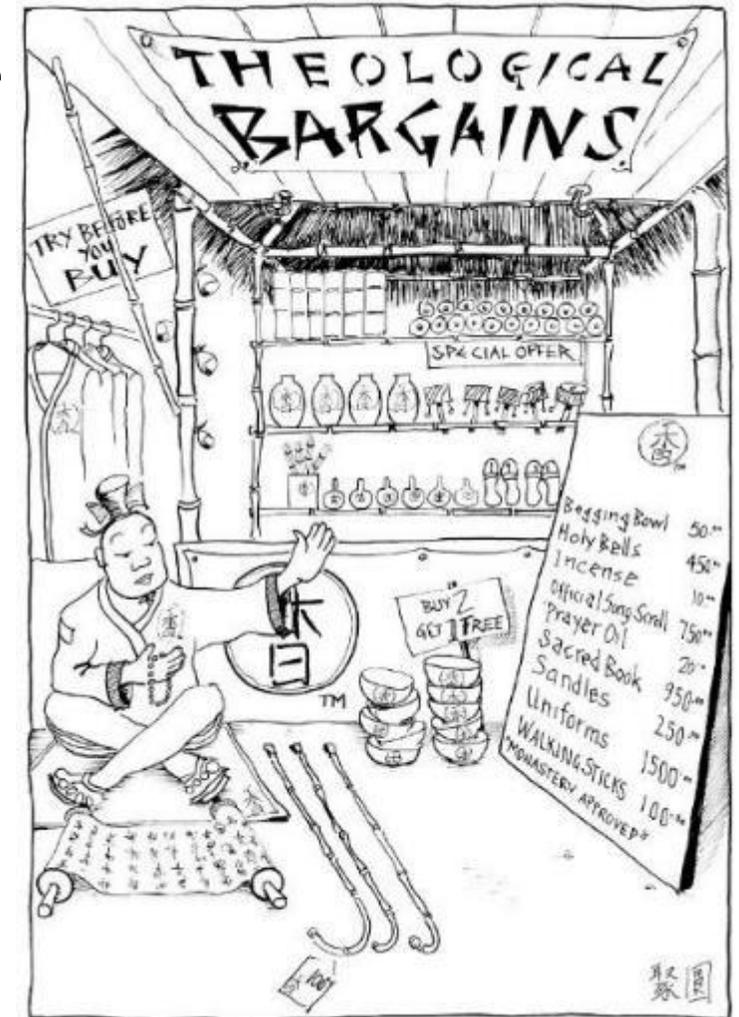
- The SPTs for KPI-1 are:
  - achieving a reduction of at least 50% in Aggregate Gross GHG Emissions (as defined herein), expressed in CO<sub>2</sub>eq per real GDP unit, by 2025 (the “Observation Year”) compared to 1990 (“SPT-1.1”), and
  - achieving a reduction of more than 52% in Aggregate Gross GHG Emissions, expressed in CO<sub>2</sub>eq per real GDP unit by the Observation Year compared to 1990 (“SPT-1.2”).
- The SPTs for KPI-2 are:
  - maintaining at least 100% of the Native Forest Area (as defined herein) covering Uruguay’s territory by the Observation Year compared to 2012 (“SPT-2.1”), and
  - achieving an increase of more than 3% in the Native Forest Area (i.e., the Native Forest Area covering Uruguay’s territory should be more than 103%) by the Observation Year compared to 2012 (“SPT-2.2”).

## USE OF PROCEEDS

The net proceeds to Uruguay from the sale of the Bonds will be approximately US\$1,475,871,000, after deduction of the underwriting discount and of certain expenses payable by Uruguay estimated at US\$1,950,000 in the aggregate. Uruguay is offering the Bonds concurrently with the Offer to Purchase Old Bonds. Uruguay intends to use the net proceeds of the sale of the Bonds for general purposes of the government, including investments to advance environmental goals, among other investments, and the refinancing, repurchase or retiring of domestic and external indebtedness, such as any of the Old Bonds validly tendered and accepted in the Offer to Purchase.

# We've Known The Answer Since Cop3 – Time To Learn To Like It

- Carbon Transition - fundamental changes required to move society and the global economy to a low carbon pathway
  - Price carbon
  - Enforce offsets, insurance
  - Research sequestration
- Gaps:
  - **Implementation** – achieving agreed goals
  - **Ambition** – not making enough difference
- Financial Centres are part of the solution
  - Promoting market solution to the carbon pollutant
  - Lobbying for regulations and standards on carbon accounting to ensure that carbon costs are properly factored into valuations, risk assessments, and emission permits
  - Bond-cuffing governments to targets

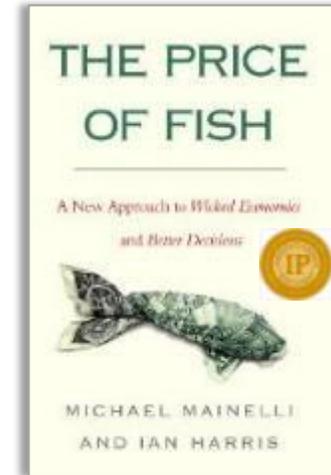


**"Get a detailed grip on the big picture."**  
*Chao Kli Ning*

# When Would We Know Commerce Is Working?



**“Get a big picture grip on the details.”**  
*Chao Kli Ning*



**Thank you!**





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