

Volcker memorial lecture  
NABE Spring Conference

## **Climate Policy is Macro Policy**

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22 MARCH 2022

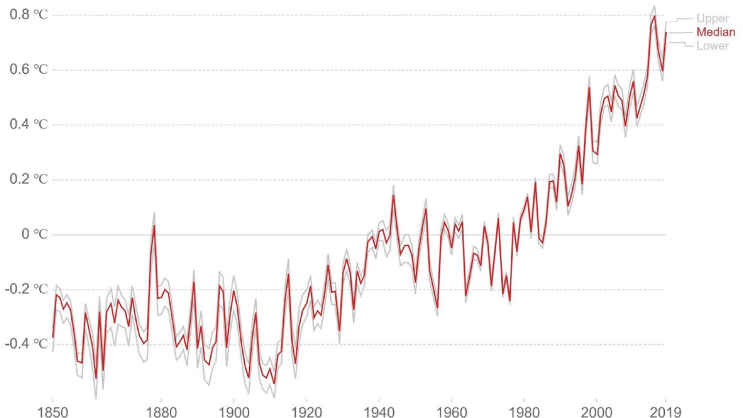
- Climate change is macro critical
- One of several major supply shocks
- Climate policy becoming the third pillar of macro policy
- Policy coordination can yield superior outcomes
- Net zero financial sector poised for investment boom
- But we're caught in a Timidity Trap
- WWVD?

# CO<sub>2</sub> emissions driving global temperature rises, rising sea levels & polar ice loss

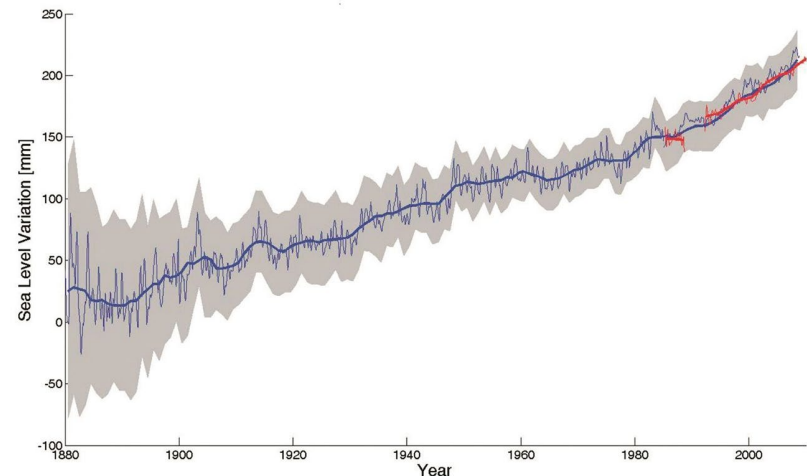
Global CO<sub>2</sub> Concentrations highest in 800,000 years



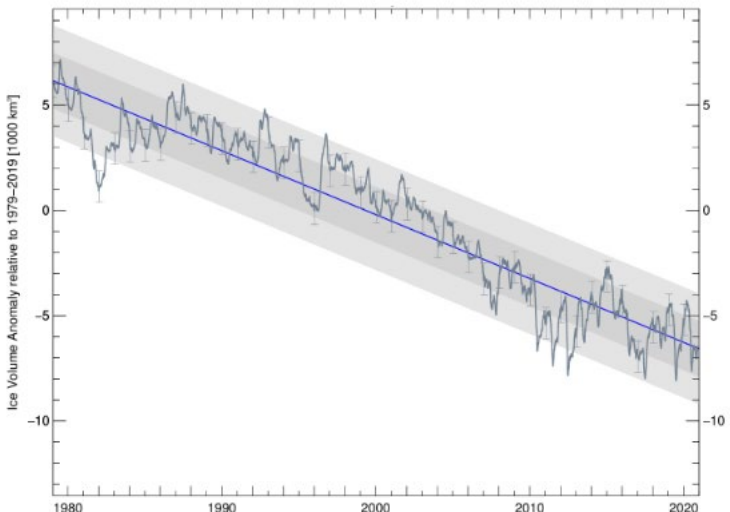
Global temperatures 1.1°C warmer than pre-industrial levels



Sea levels risen by 20cm in past century



Polar ice loss tripled in last decade

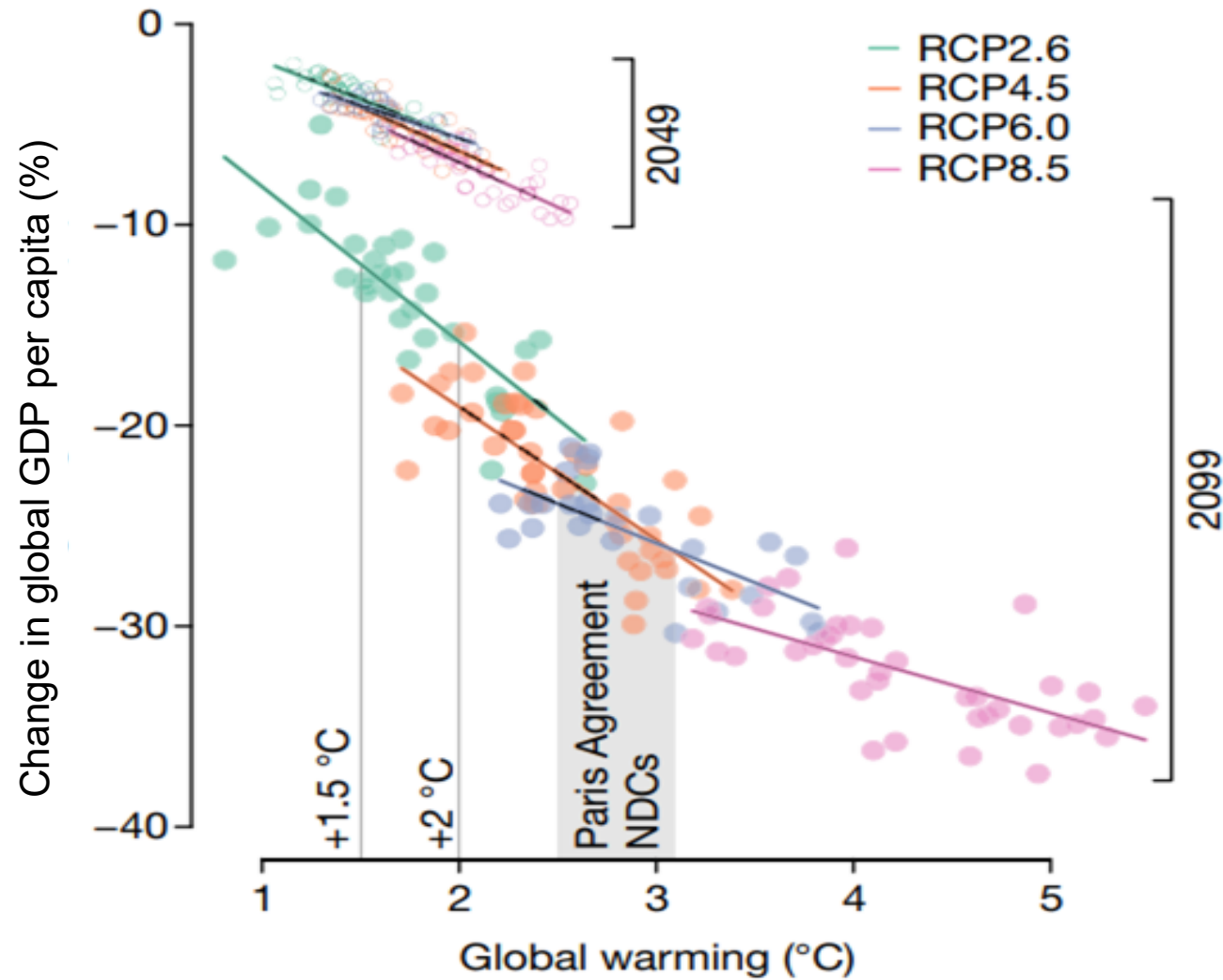


## ...with widespread Impacts

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- **Extinction rates** 100 x higher than over past several million years
- **Population** of mammals, birds, fish, reptiles and amphibians fallen by 70% over past 50 years
- By 2100 over **a billion people** could live under lethal climatic conditions
- Since the 1980s, tripling of extreme weather events causing **eight-fold increase in property destruction**
- Coastal flooding projected to rise by 50% by 2100, threatening **assets worth 20-25 per cent of global GDP**

# Temperature impacts alone could drive a lost decade of growth



Under different RCP forcing scenarios, relative to a no-warming baseline (SSP1). The three vertical black lines denote the 1.5°C target, the 2°C target and the median-estimated warming expected under current Paris commitments (2.9°C).

Source: Burke et al (2018) *Large potential reduction in economic damages under UN mitigation targets*

## Current modelling is partial, underestimating likely effects

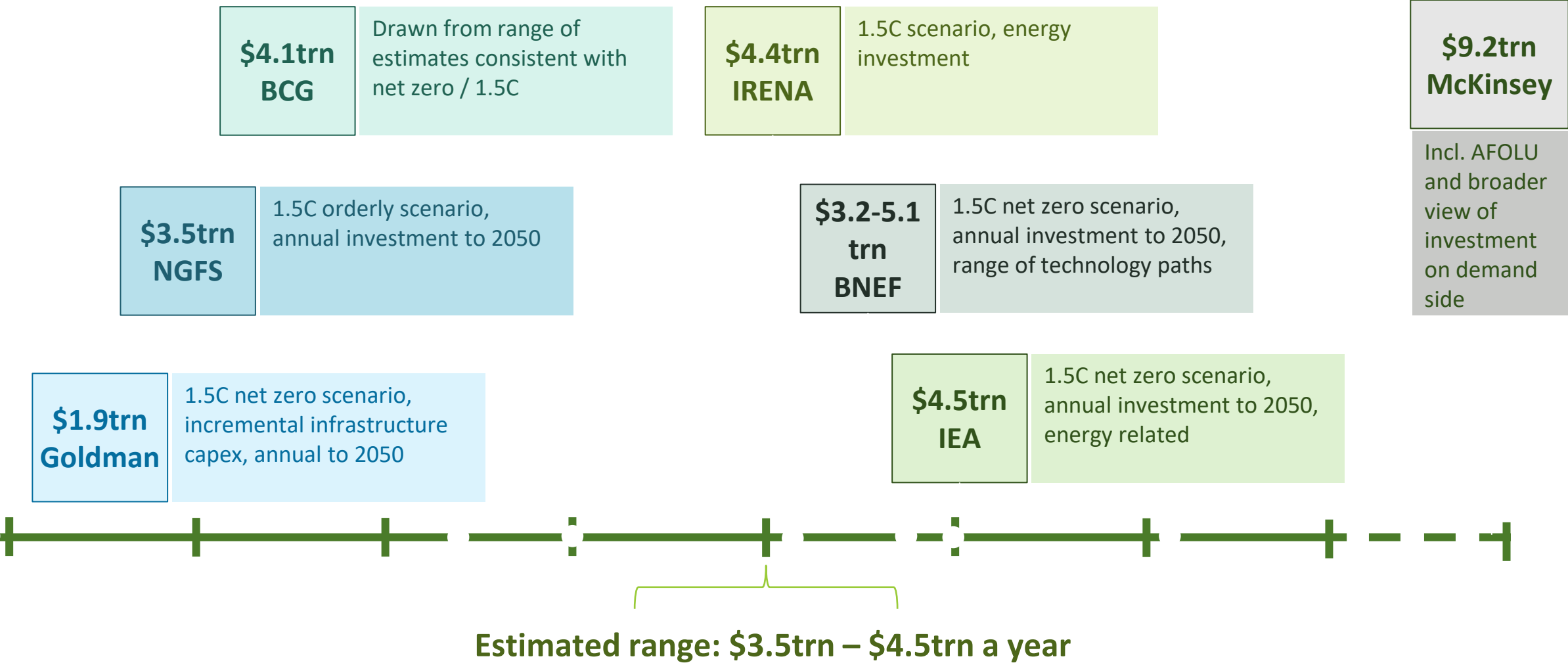
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Estimates typically only capture impacts from temperature changes, and do not include GDP impacts from:

- Higher frequency and severity of **extreme weather** on property, prices and supply chains
- Losses from **sea level rise and water scarcity**
- Costs of **adaptation**
- Wider societal impacts from **climate migration** and **conflict**

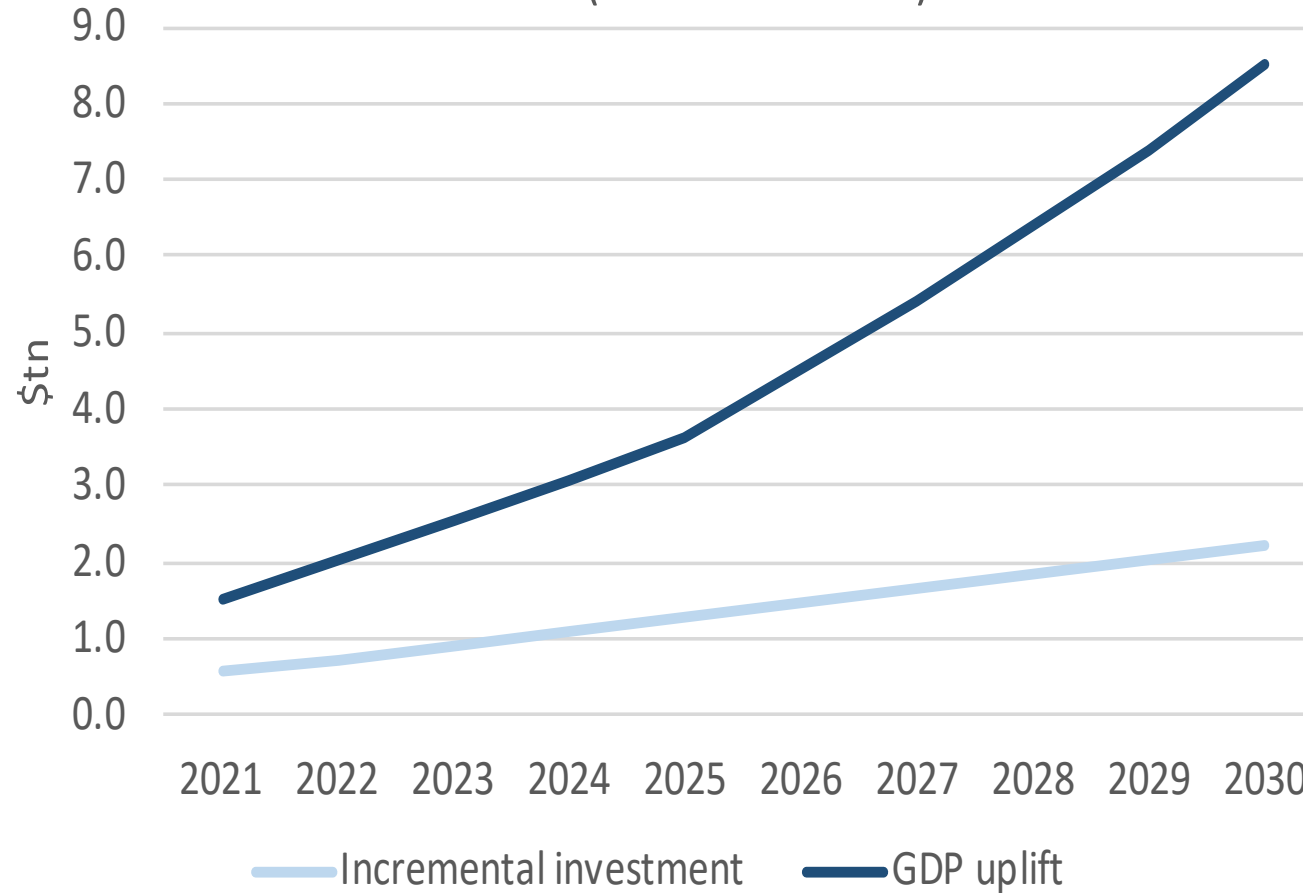
Moreover, modelling **assumes** monetary and financial stability

# Annual investment for net zero transition needs to double to ~\$4trn...



## ... bringing significant GDP multipliers

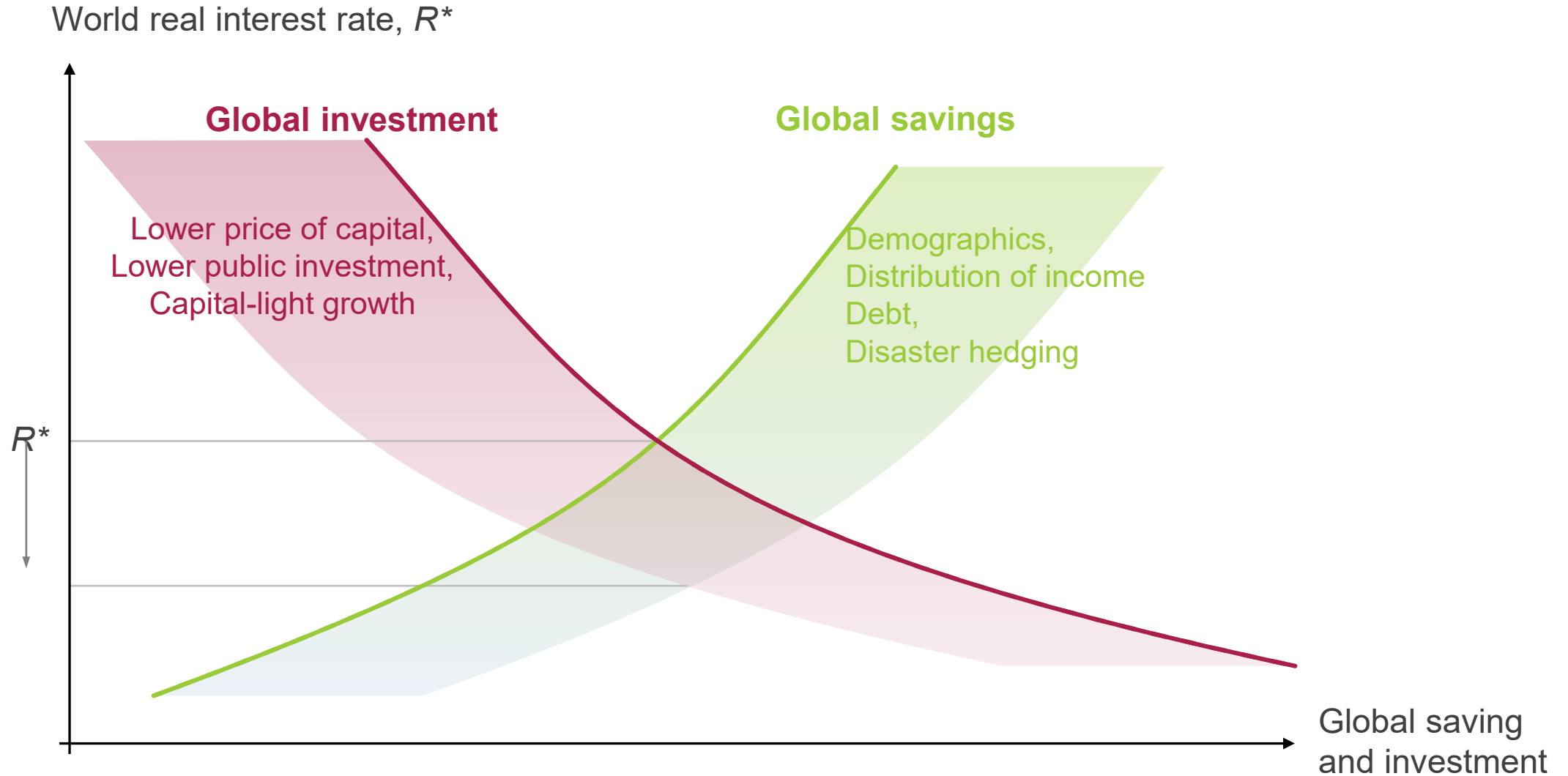
**GDP uplift from incremental investment in the net-zero transition (IEA, IMF)**



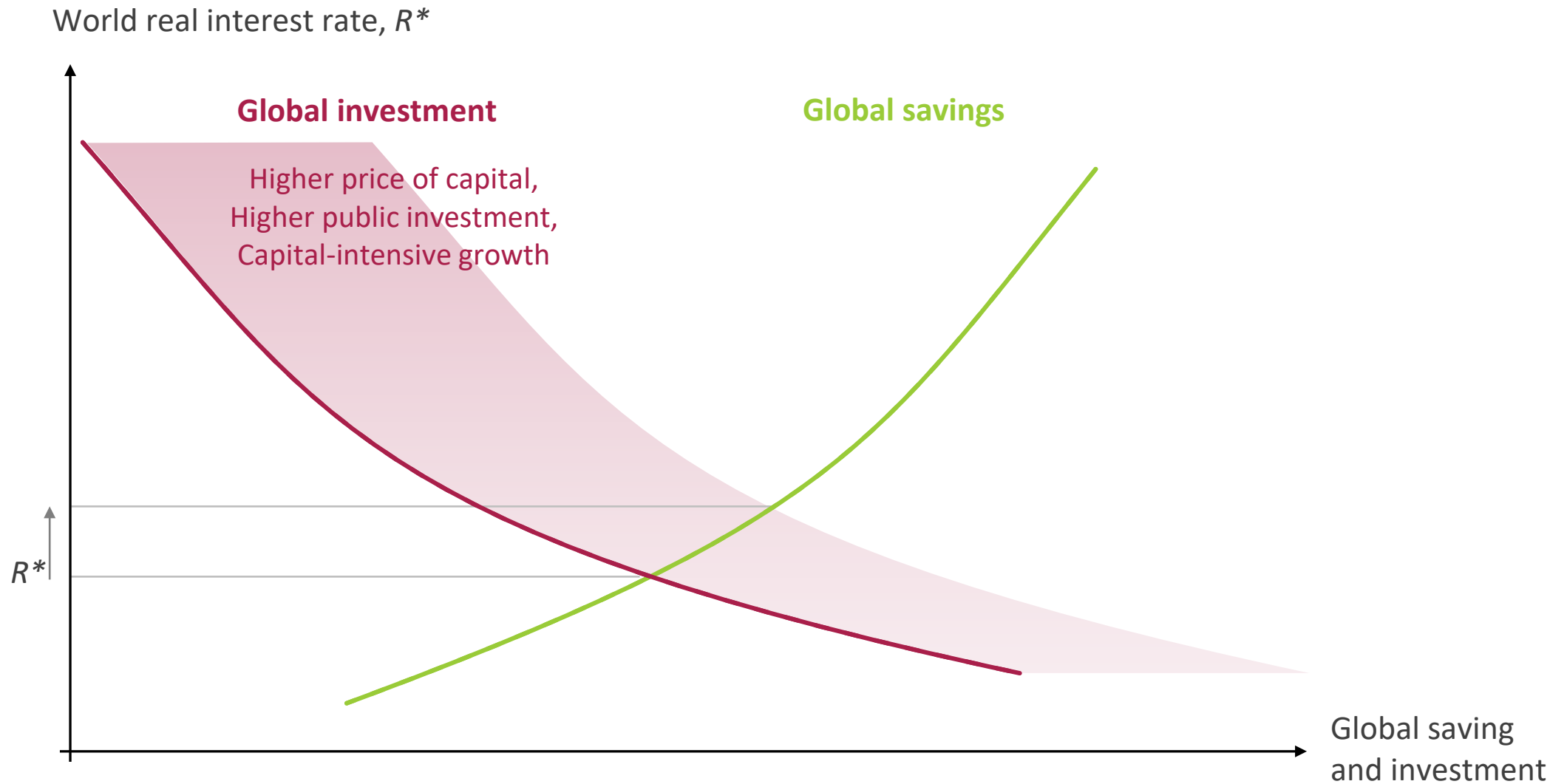
**Under IEA net-zero scenario every \$1 of Net Zero investment results in over \$3 dollars of additional GDP**



# And offsetting some of the structural changes that have lowered $r^*$



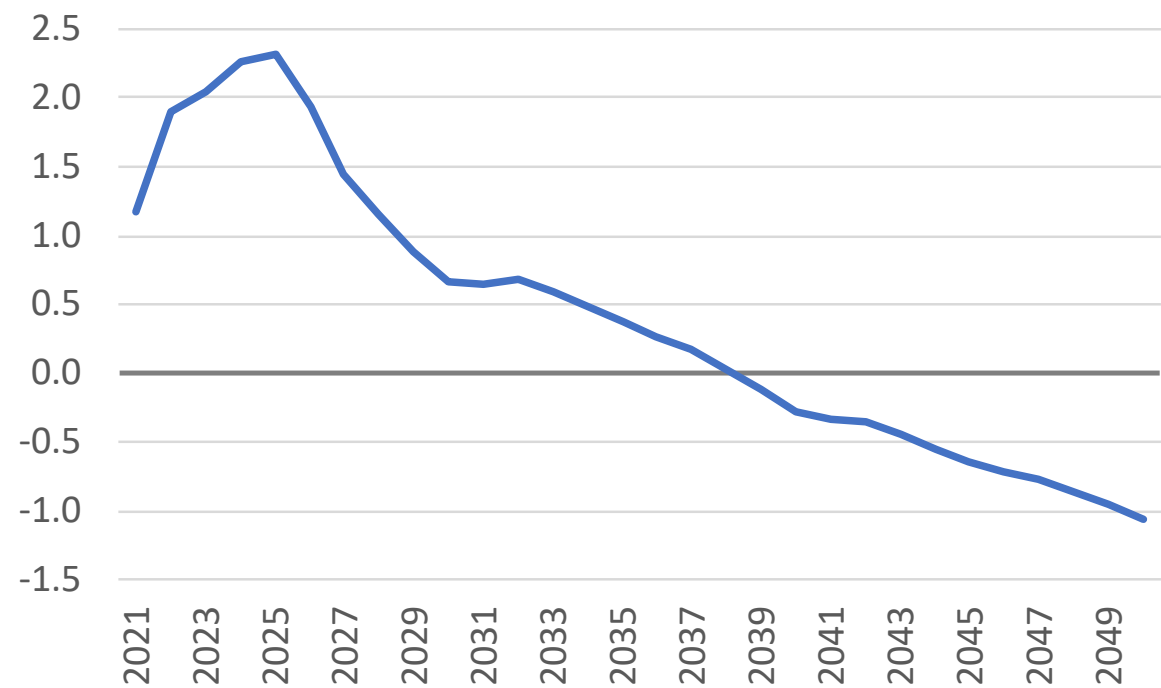
# Transition investment reverses investment drought, raises $r^*$



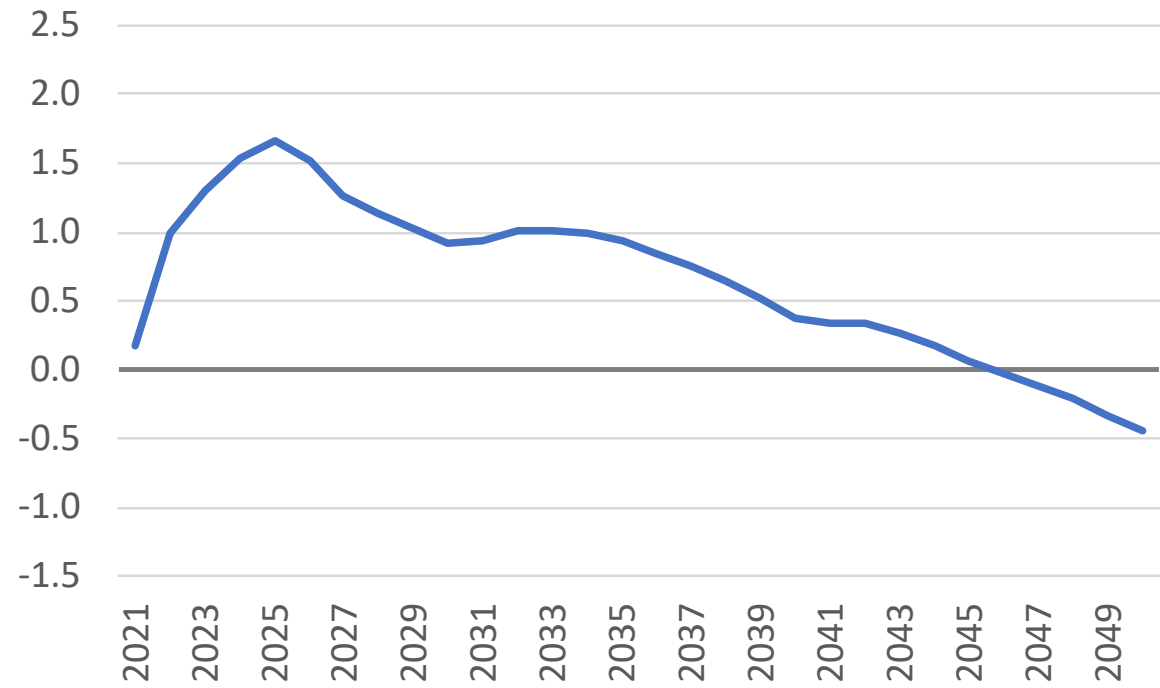
# Net Zero transition is likely inflationary near-term / deflationary long term

*‘Shadow’ carbon pricing creates near-term upward pressure on inflation*

Incremental inflation – United States

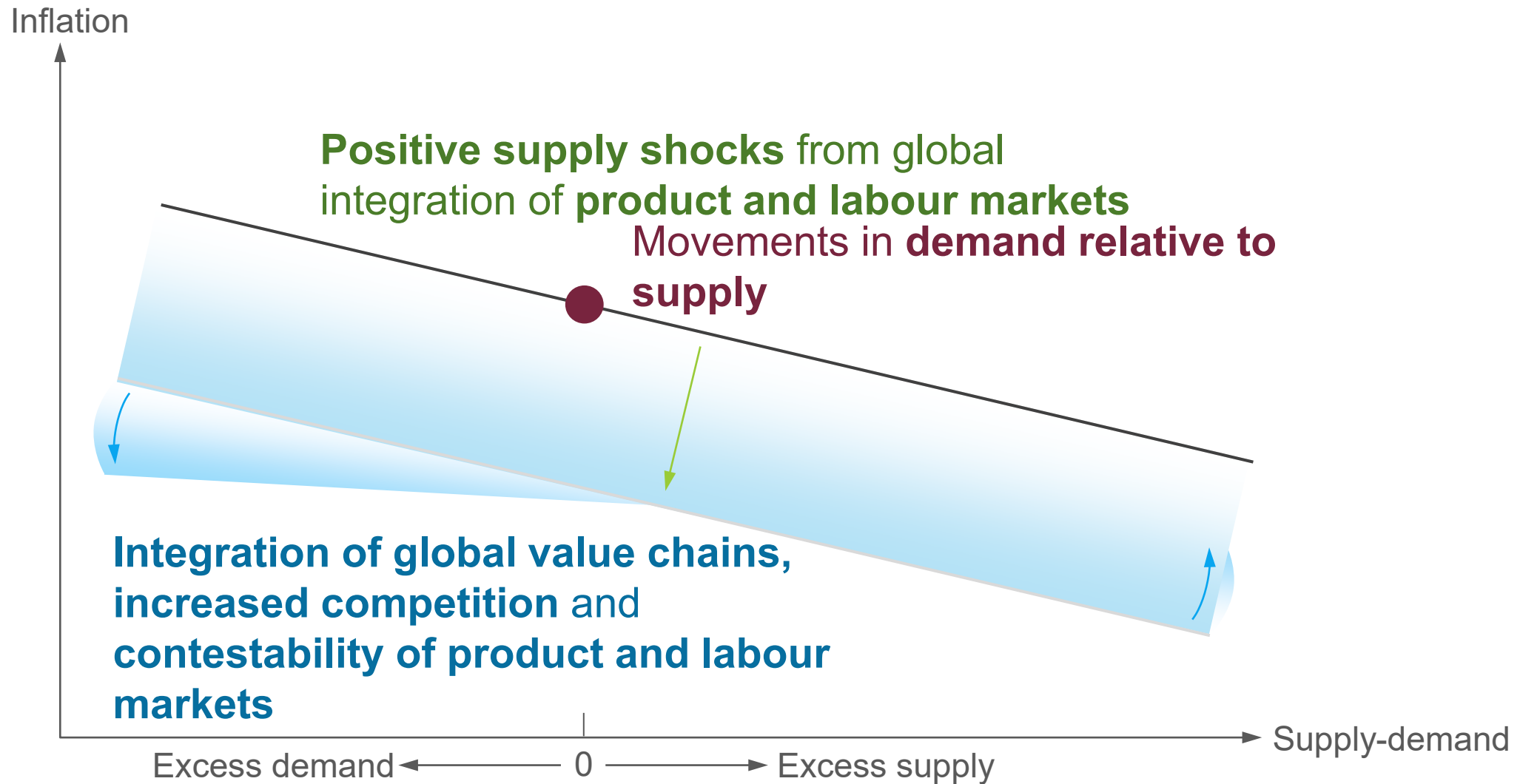


Incremental inflation – Europe

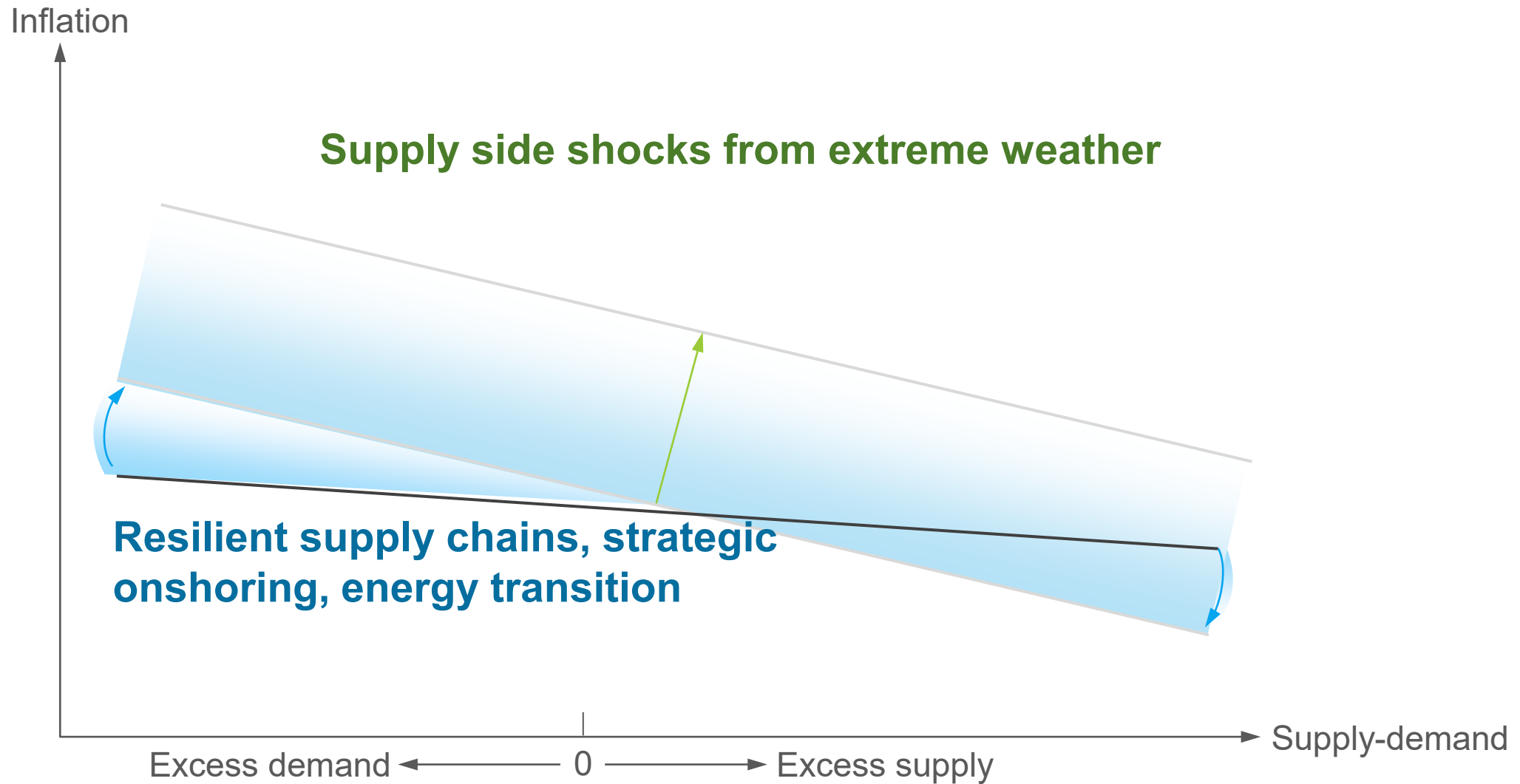


Source: NGFS Scenario Explorer using Net Zero 2050 (with REMIND-MAgPIE 2.1-4.2 inputs)

# Globalisation has delivered a persistent, positive supply shocks

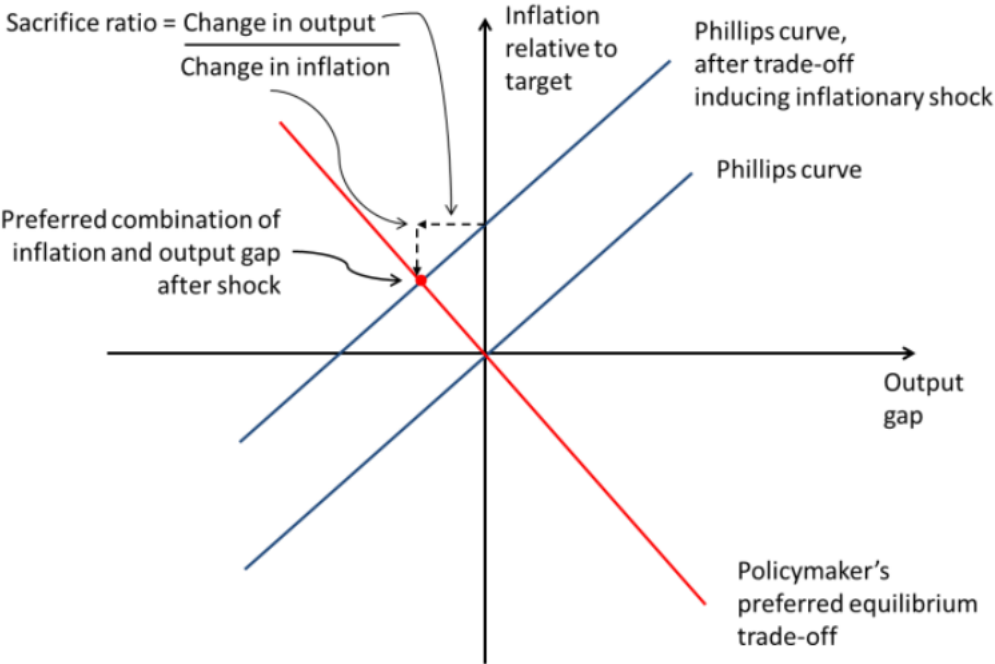


# De-globalisation and climate will reverse this trend

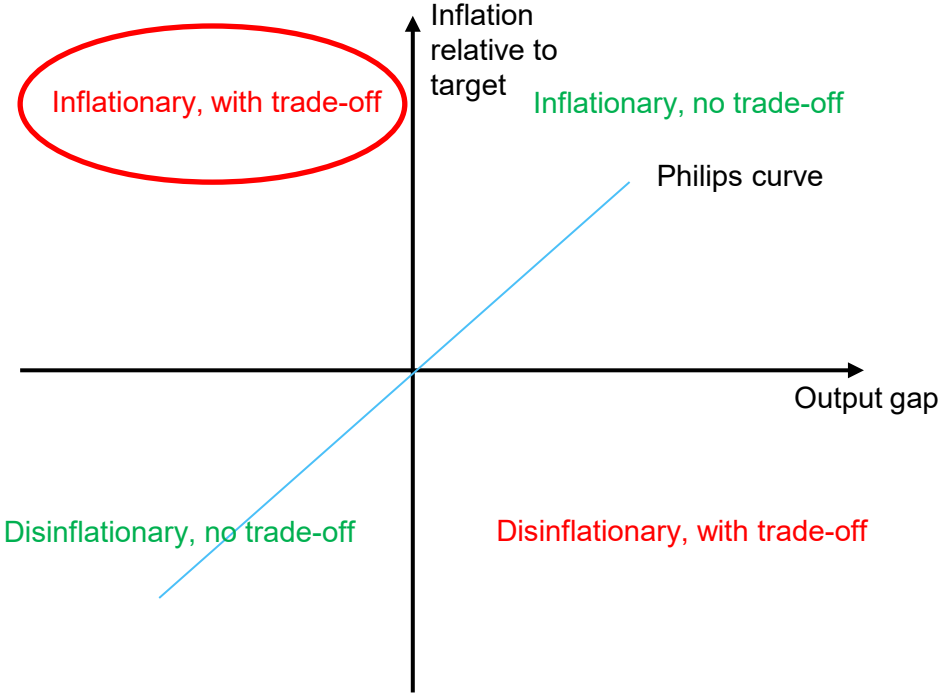


# From Divine Coincidence to Tough Trade-offs

## Monetary policy trade off

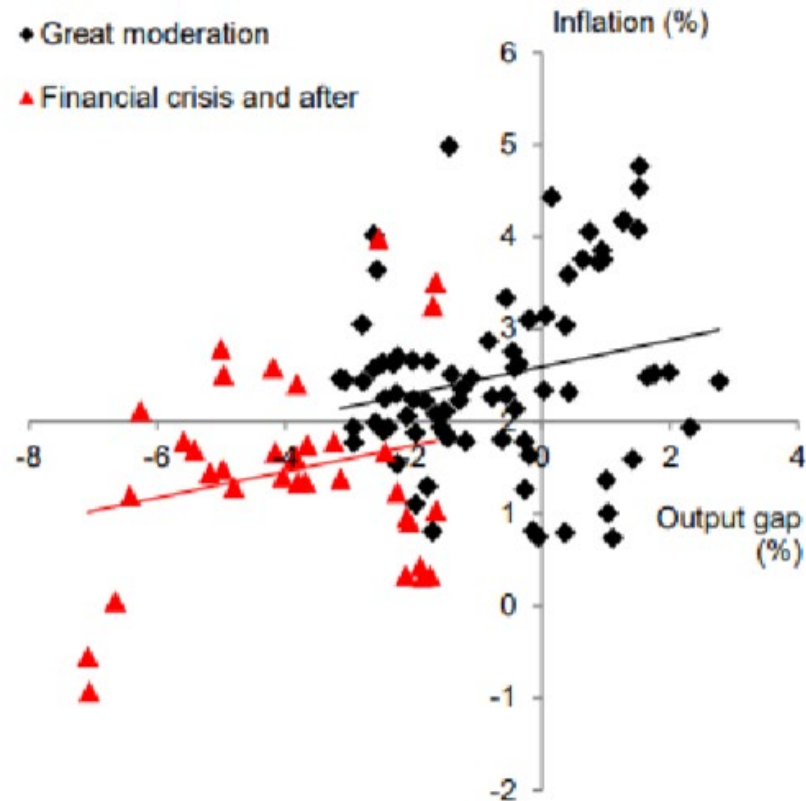


## Policy responses

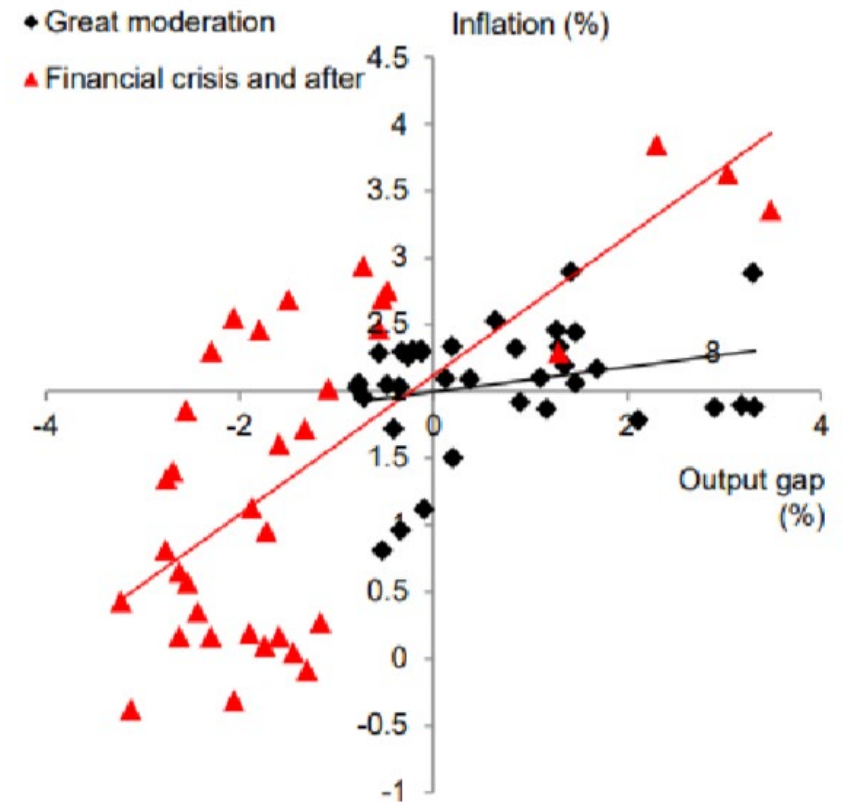


# US and Euro area haven't had to grapple with this shift...until now

Pre-covid, the US continued to experience predominantly demand shocks ...

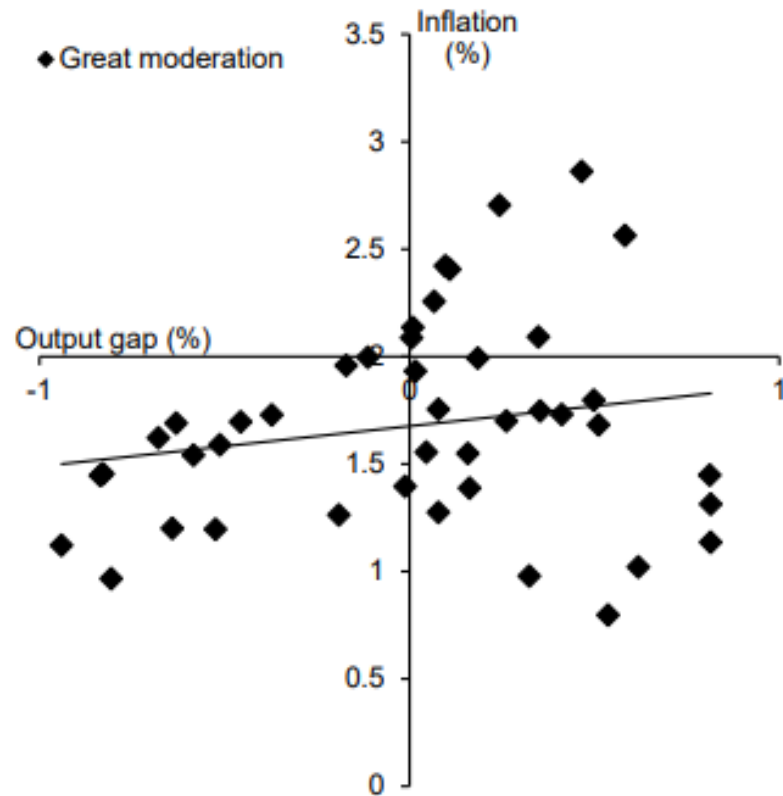


...as did the Euro area

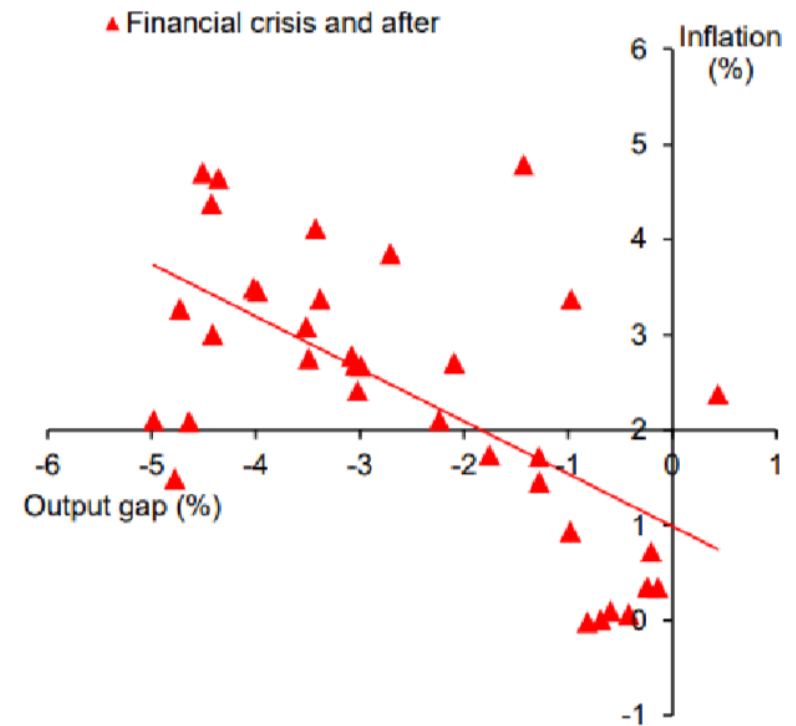


# UK policymaking challenged by supply side shocks since Global Financial Crisis

During the great moderation period, demand shocks dominated in Divine Coincidence....



...whereas after the financial crisis, the UK economy experienced a series of challenging monetary trade-offs

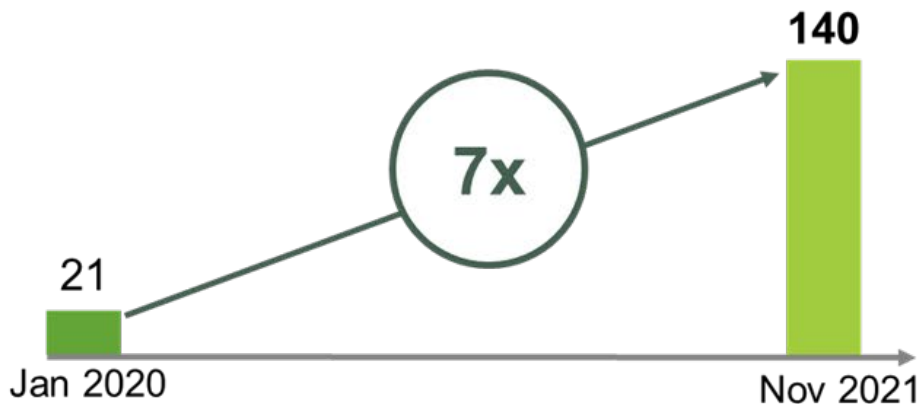


Source: Bank of England



# Net-zero transition accelerating

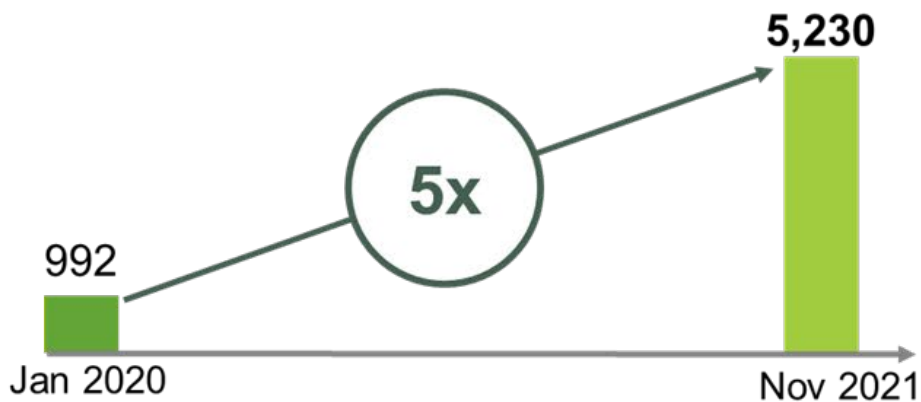
Countries with net-zero commitments



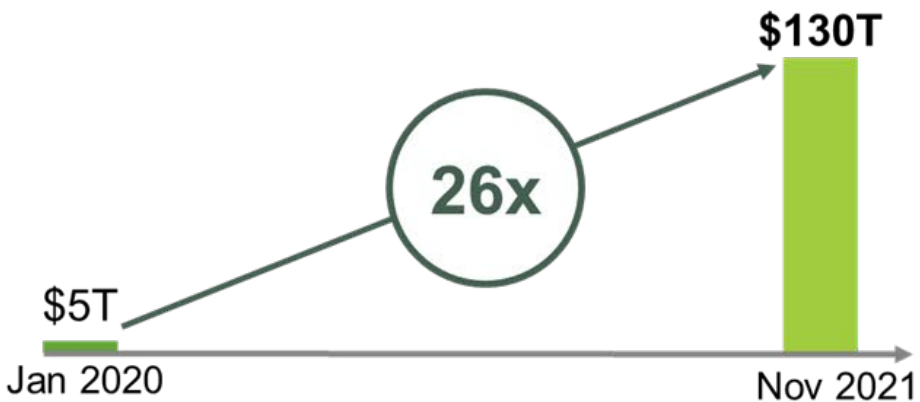
Emissions covered by country net-zero commitments



Companies with net-zero commitments

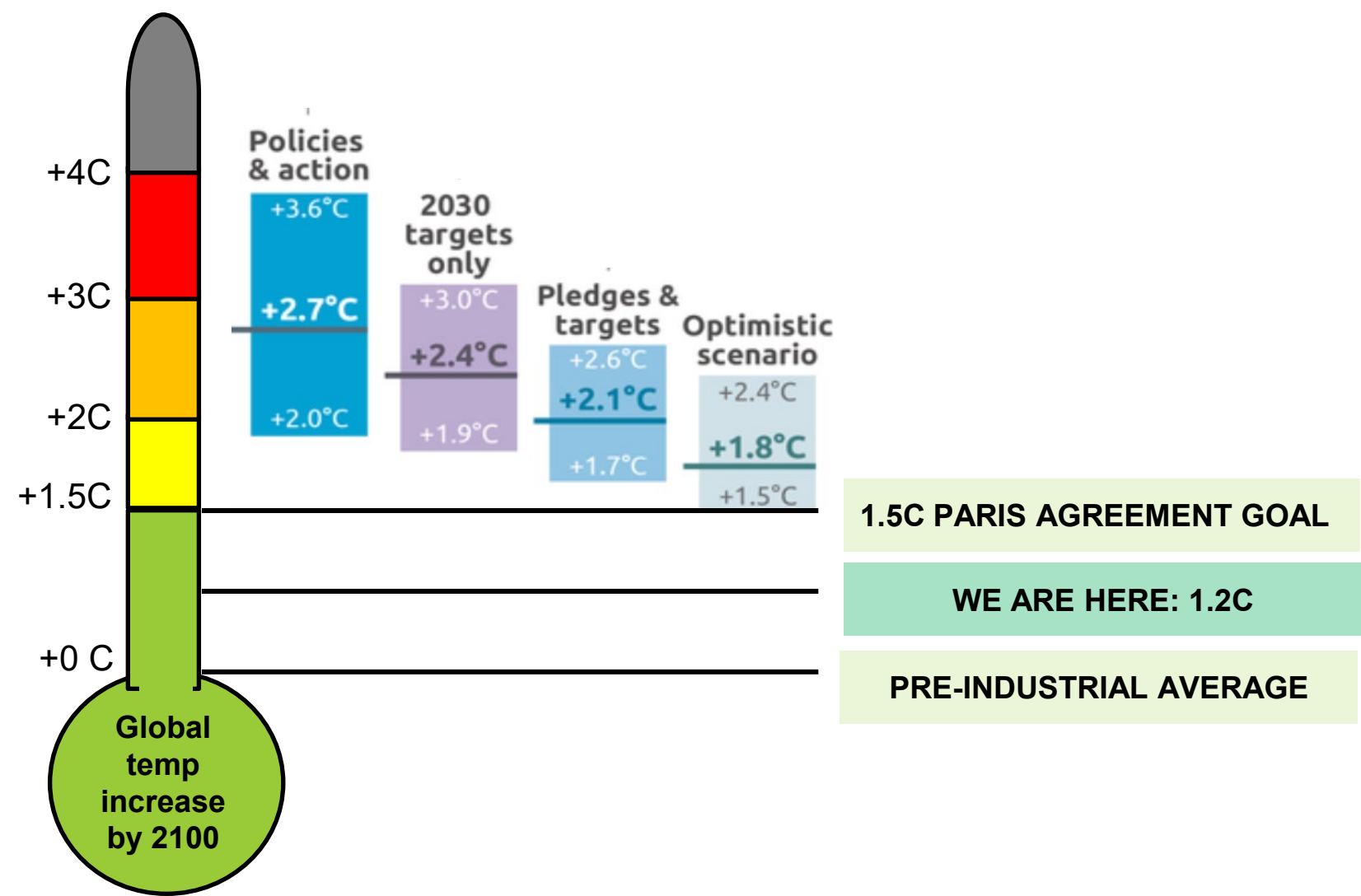


Financial commitments to net zero

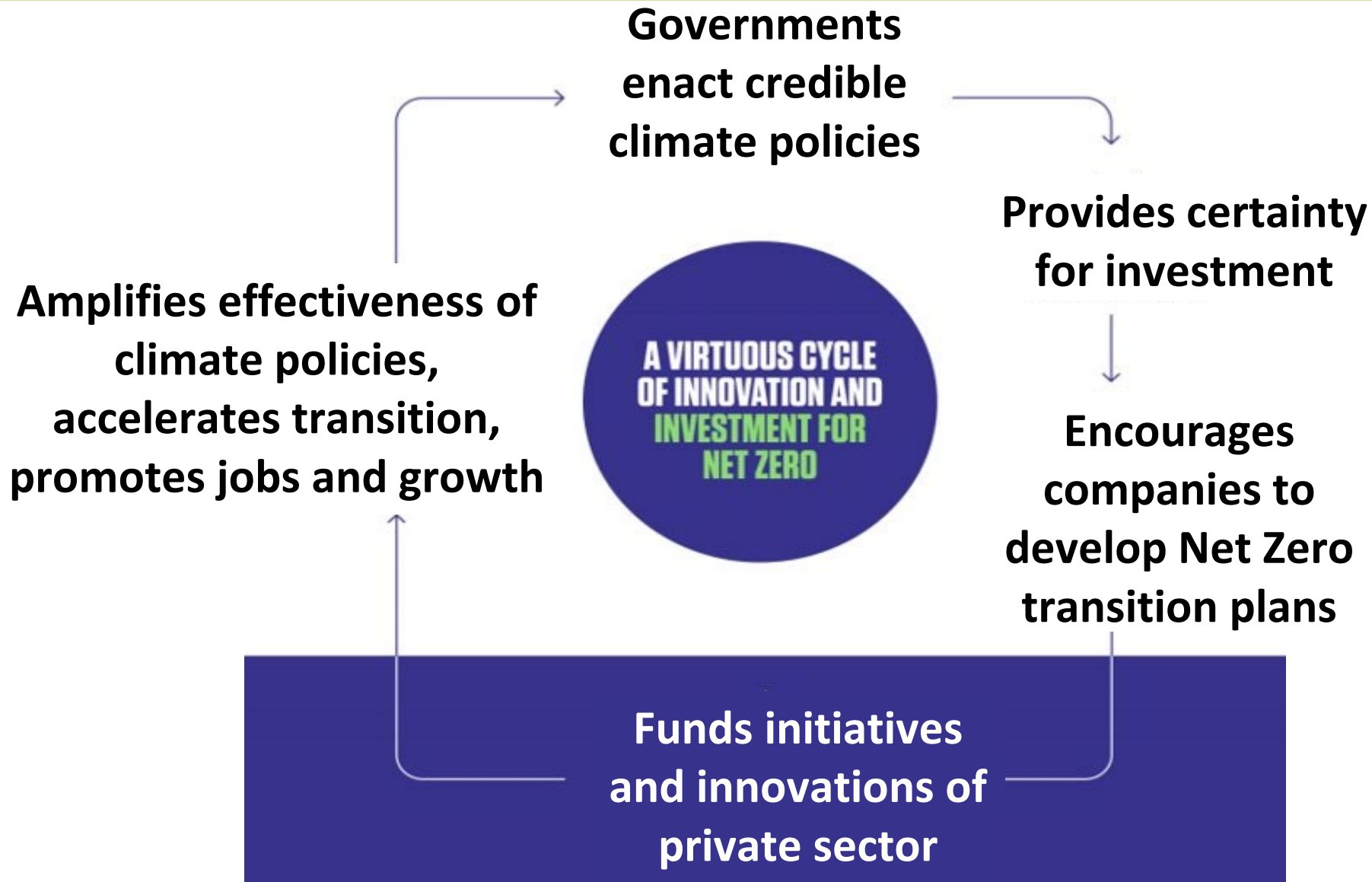


Sources: Climate Action Tracker, United Nations Climate Change, Race to Zero, United Nations Climate Change Race to Zero, Glasgow Financial Alliance for Net Zero (GFANZ).

# Global emissions covered by net zero targets rising but action still lagging

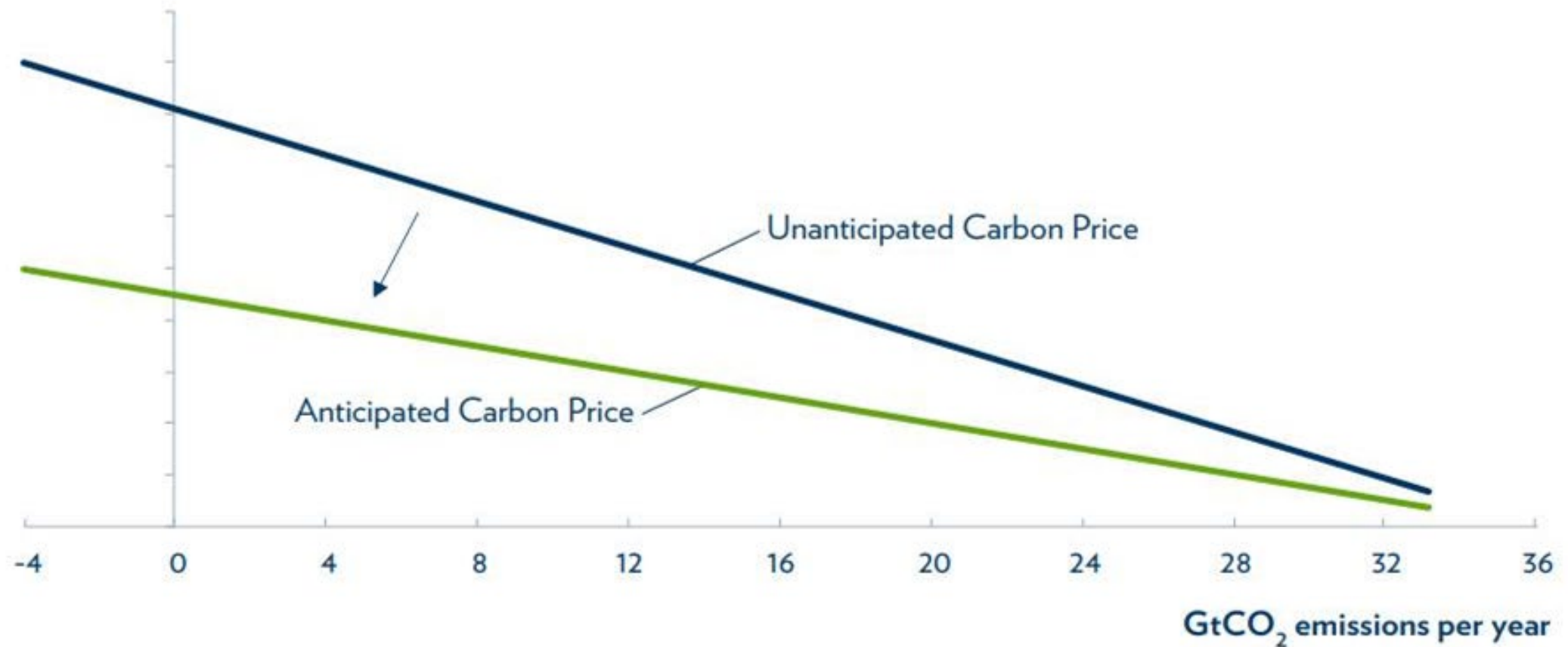


# Credible & predictable climate policy will amplify & accelerate investment



# Credible climate policy catalyses the financial sector to finance emissions reduction, driving stronger and smoother macro-economic outcomes

*Credible policy frameworks can reduce the carbon prices necessary to achieve a given goal*



# Core elements supporting transition in mainstream markets

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**Mandatory Climate disclosure (SEC & ISSB)**

**Climate stress testing**

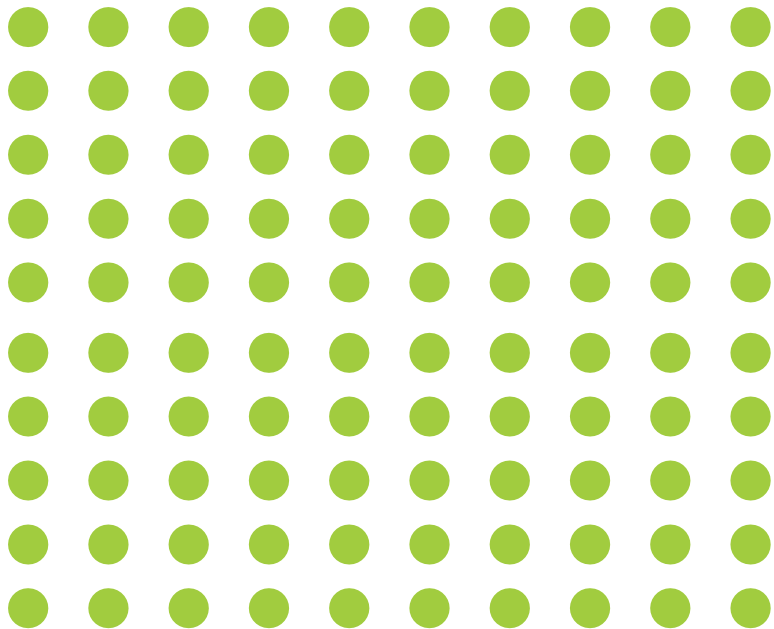
**Net Zero transition plans**

**Portfolio alignment**

**Frameworks to phase out stranded assets**

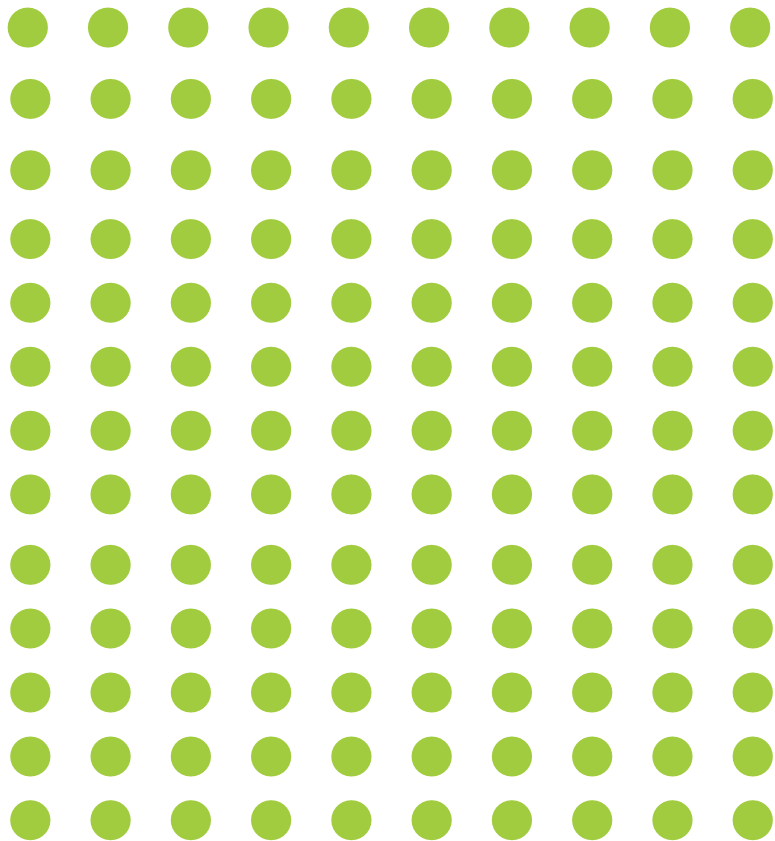
# 40% of the world's financial assets are now pledged to net zero

\$100 TRILLION



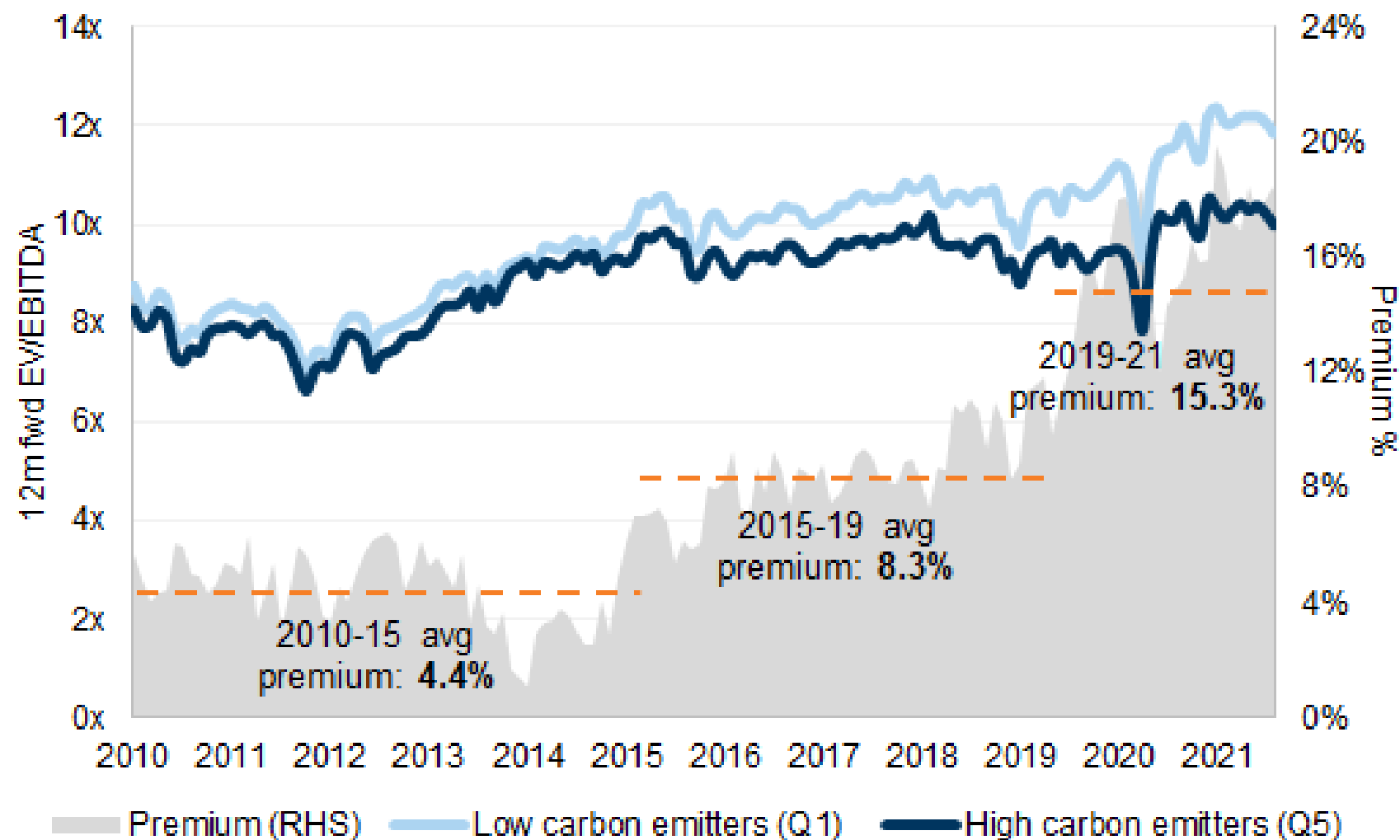
FINANCE NEED FOR NET  
ZERO THROUGH 2050

\$130 TRILLION



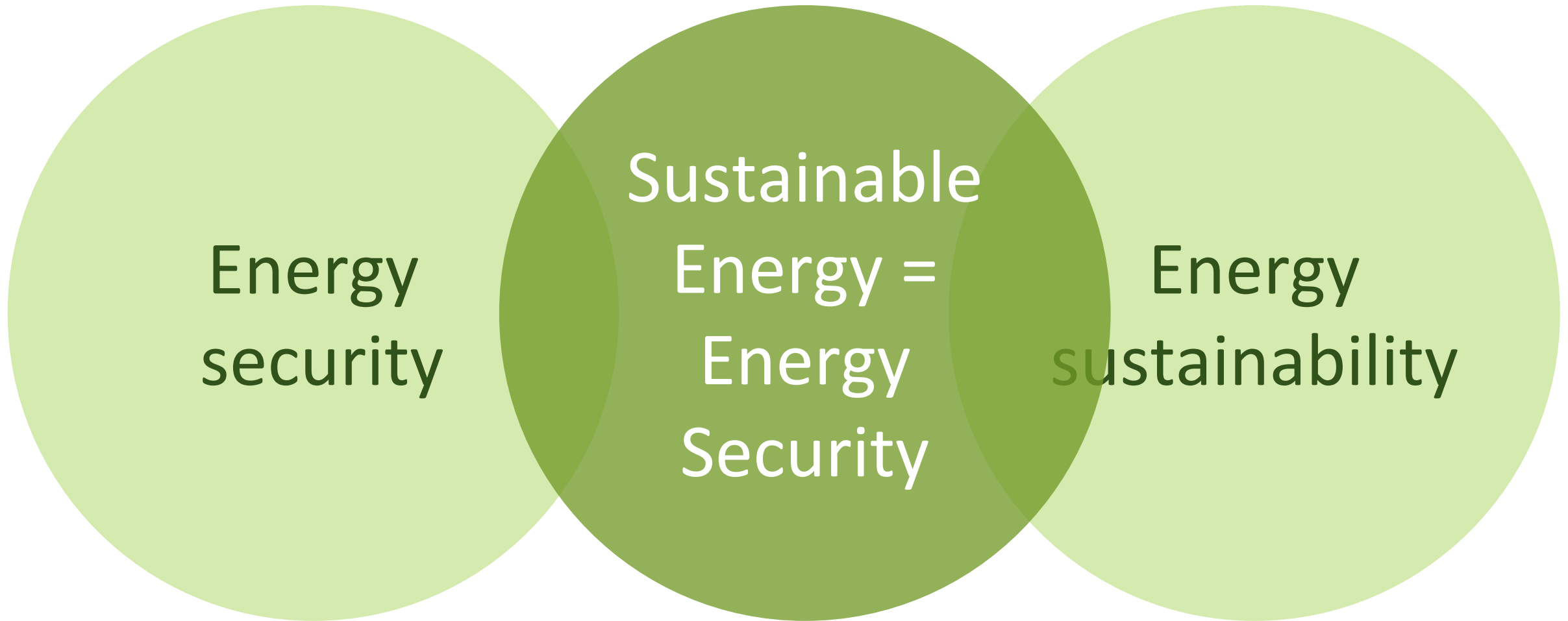
FINANCE COMMITTED TO  
NET ZERO THROUGH GFANZ

# Lower emitting companies across industries trade at premiums



## Net Zero Transition improves Energy Security

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# Escaping the Timidity Trap:

## Climate change is a Choice

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