

Volcker memorial lecture
NABE Spring Conference

Climate Policy is Macro Policy

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22 MARCH 2022

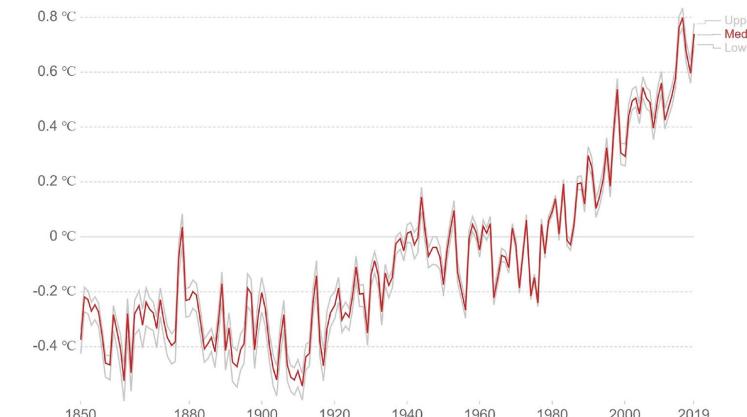
- Climate change is macro critical
- One of several major supply shocks
- Climate policy becoming the third pillar of macro policy
- Policy coordination can yield superior outcomes
- Net zero financial sector poised for investment boom
- But we're caught in a Timidity Trap
- WWVD?

CO₂ emissions driving global temperature rises, rising sea levels & polar ice loss

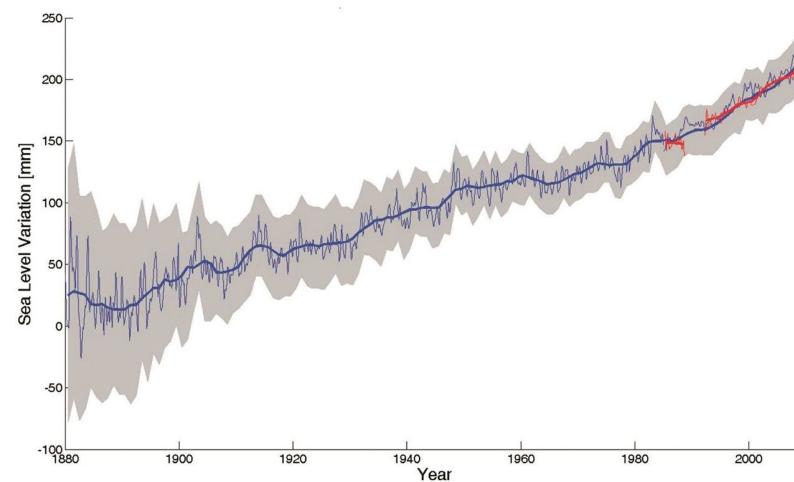
Global CO₂ Concentrations highest in 800,000 years



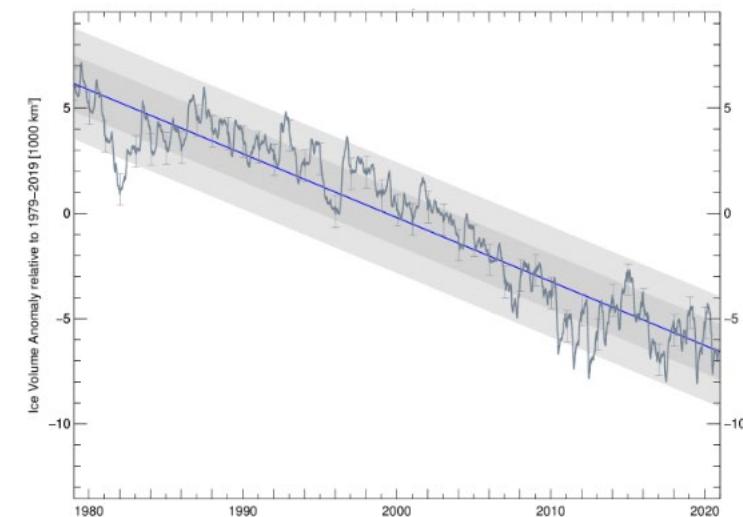
Global temperatures 1.1°C warmer than pre-industrial levels



Sea levels risen by 20cm in past century



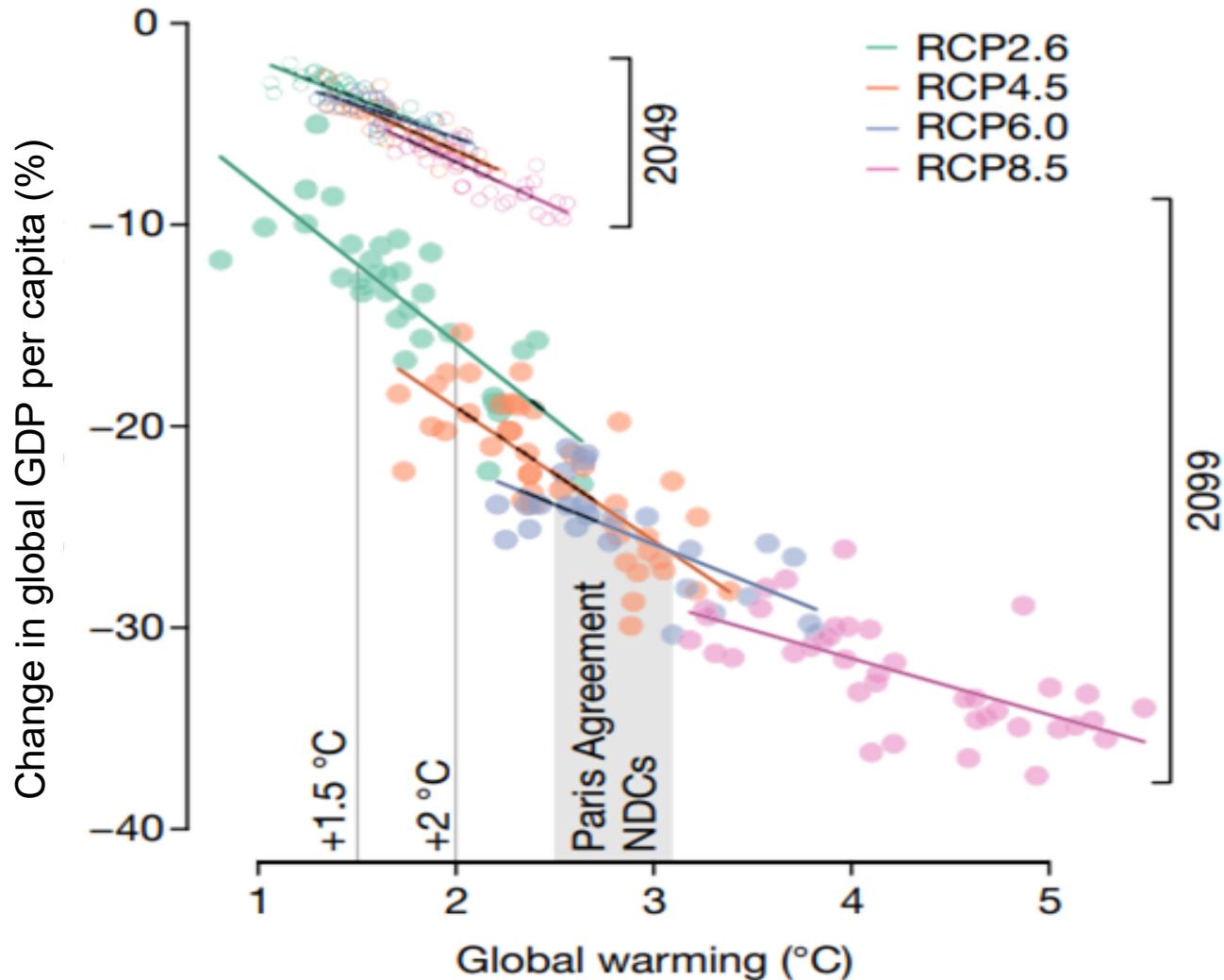
Polar ice loss tripled in last decade



...with widespread Impacts

- **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*

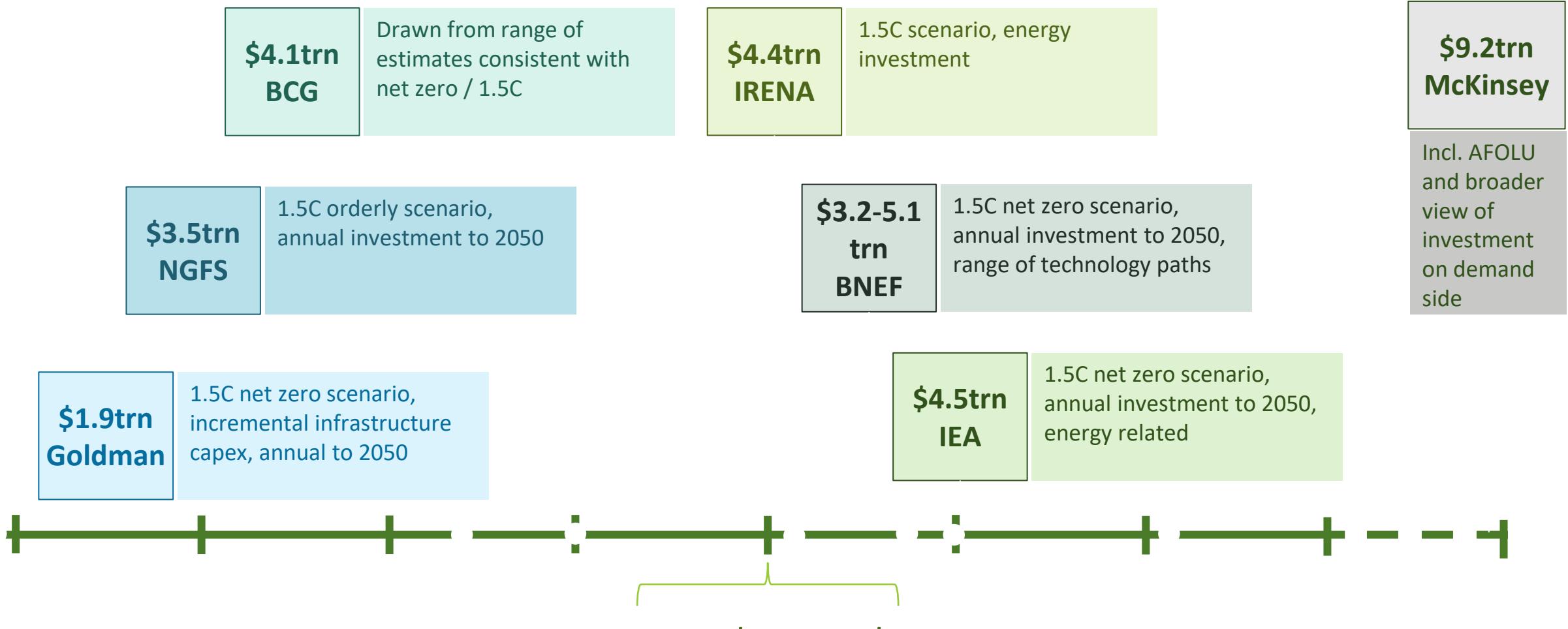
Current modelling is partial, underestimating likely effects

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**

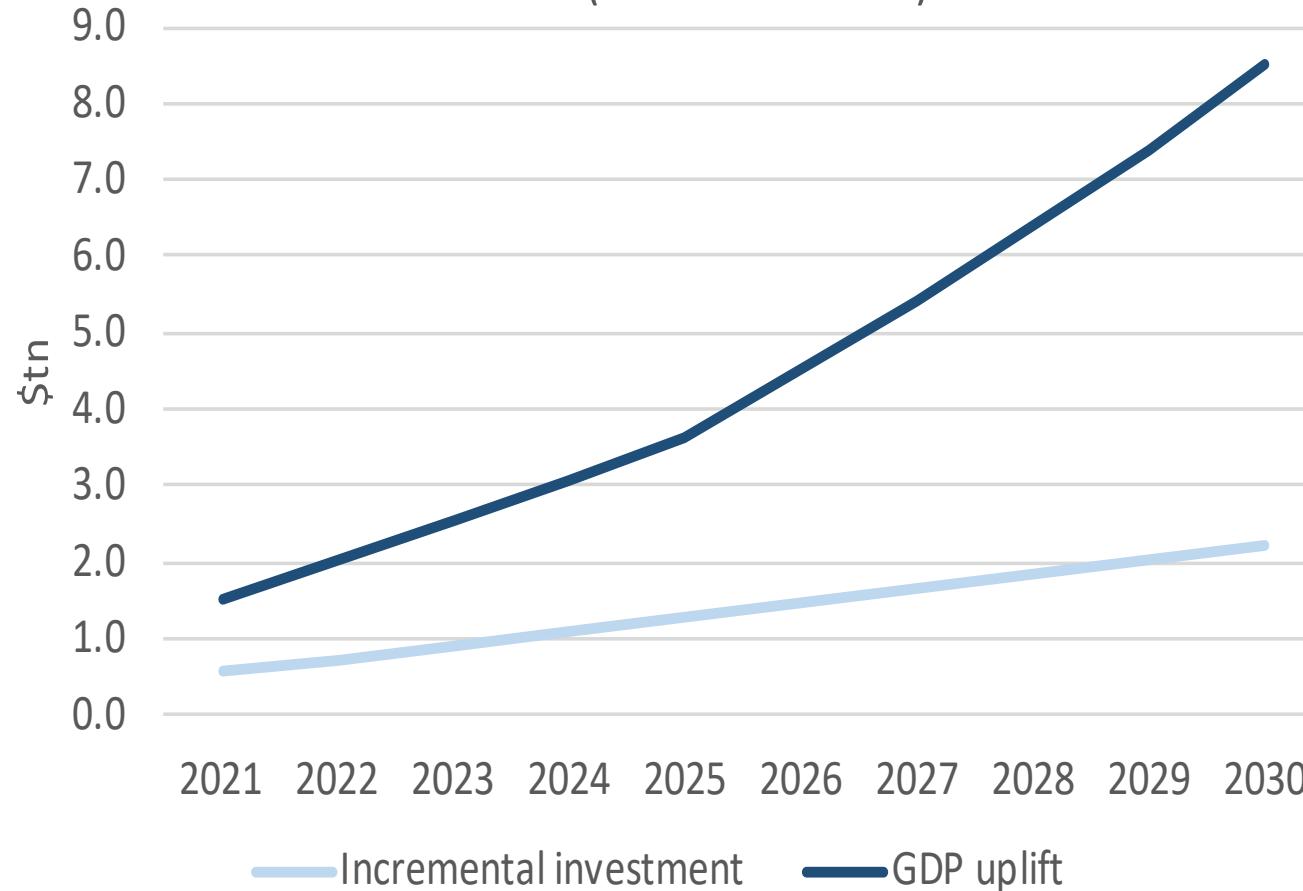
Moreover, modelling **assumes** monetary and financial stability

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



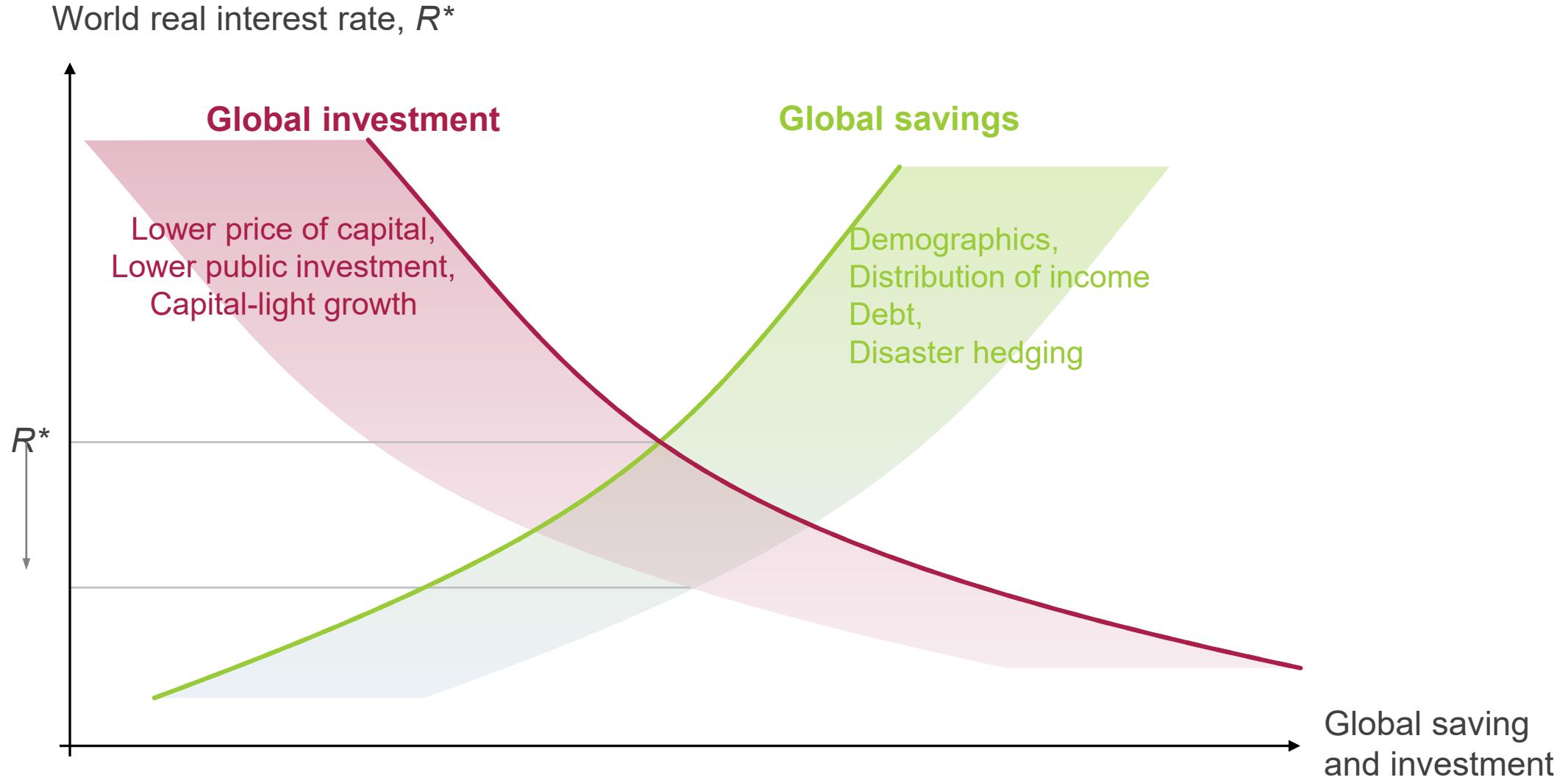
... bringing significant GDP multipliers

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

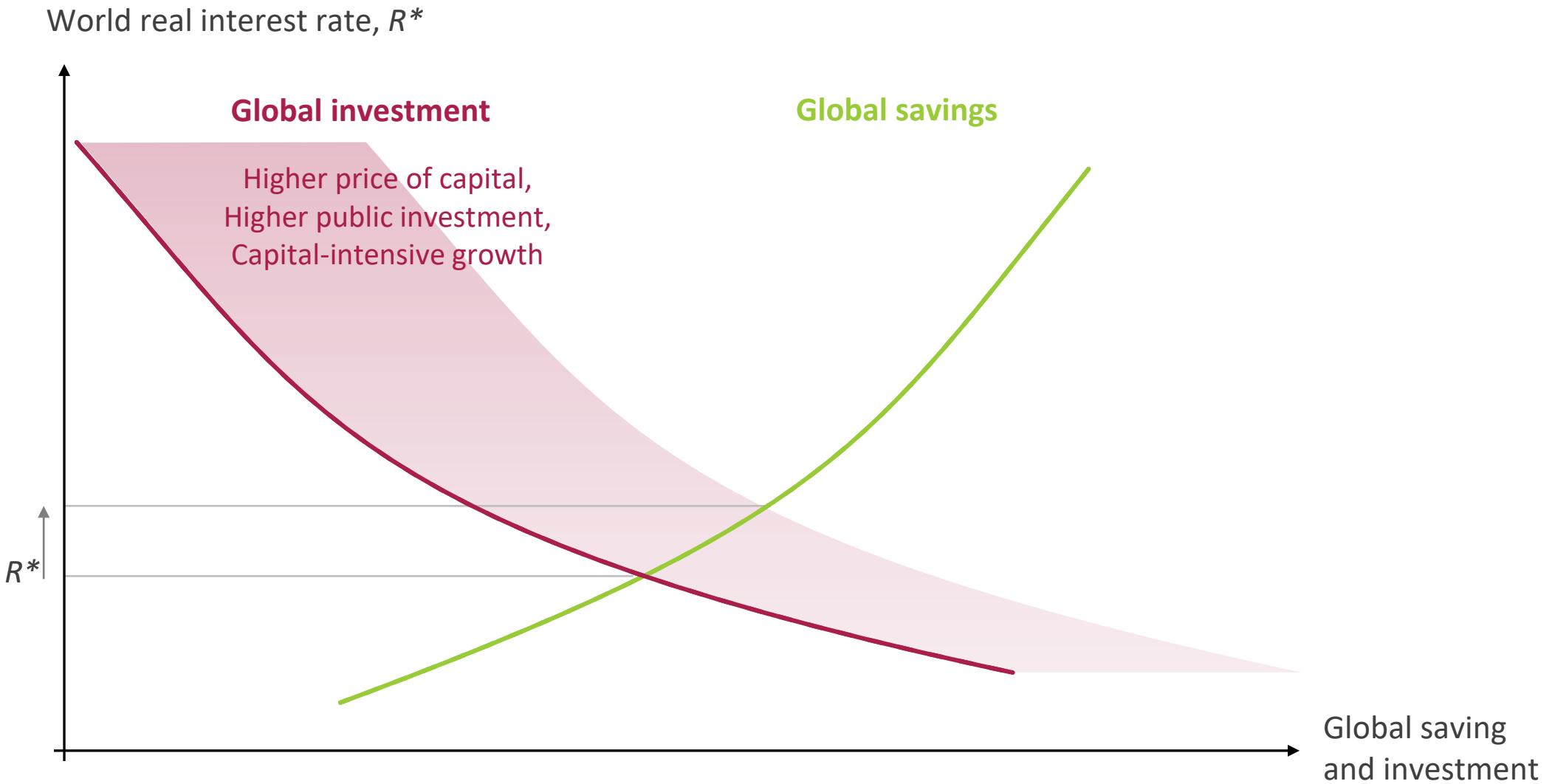


Under IEA net-zero scenario every \$1 of Net Zero investment results in over \$3 dollars of additional GDP

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



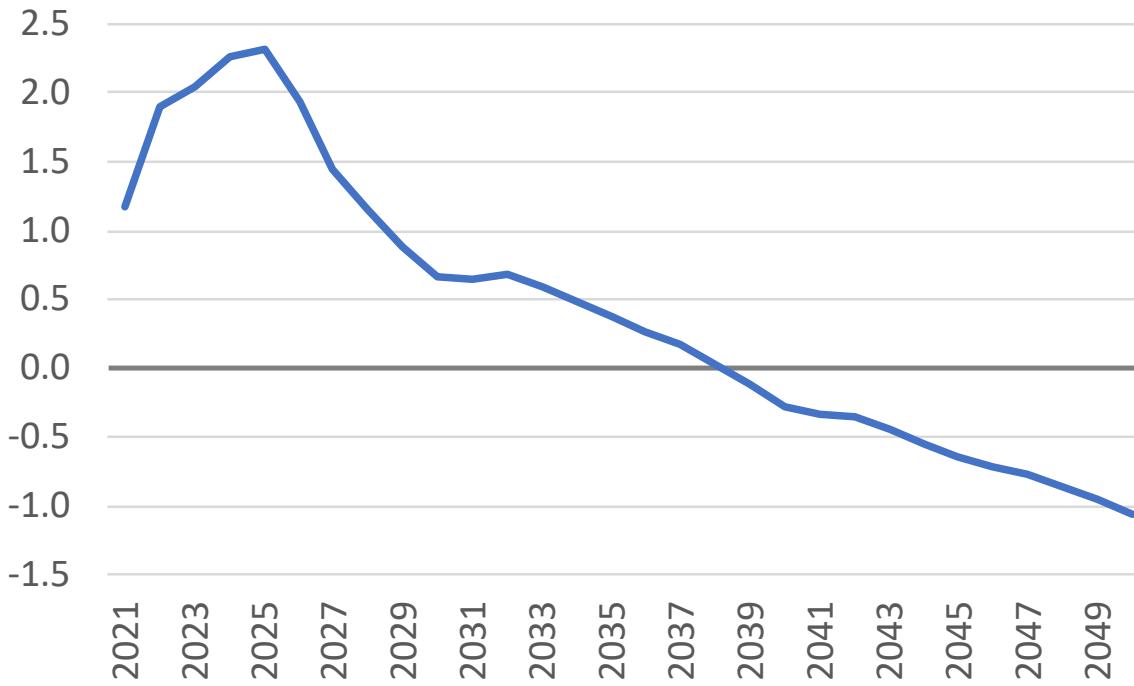
Transition investment reverses investment drought, raises r^*



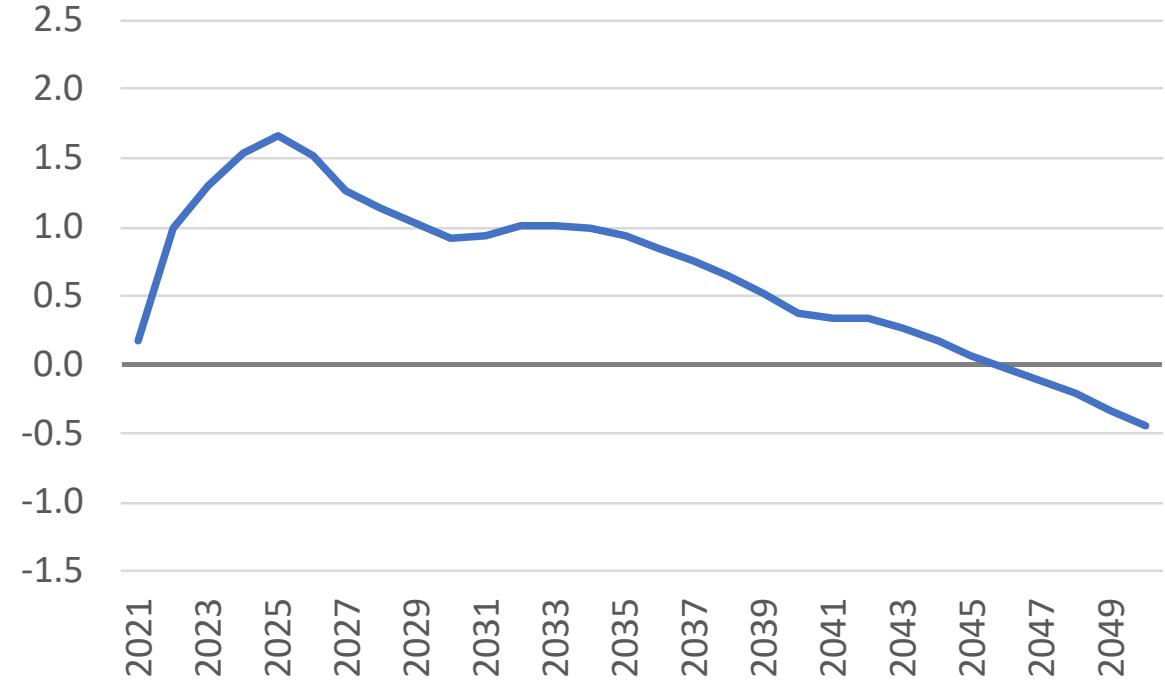
Net Zero transition is likely inflationary near-term / deflationary long term

'Shadow' carbon pricing creates near-term upward pressure on inflation

Incremental inflation – United States

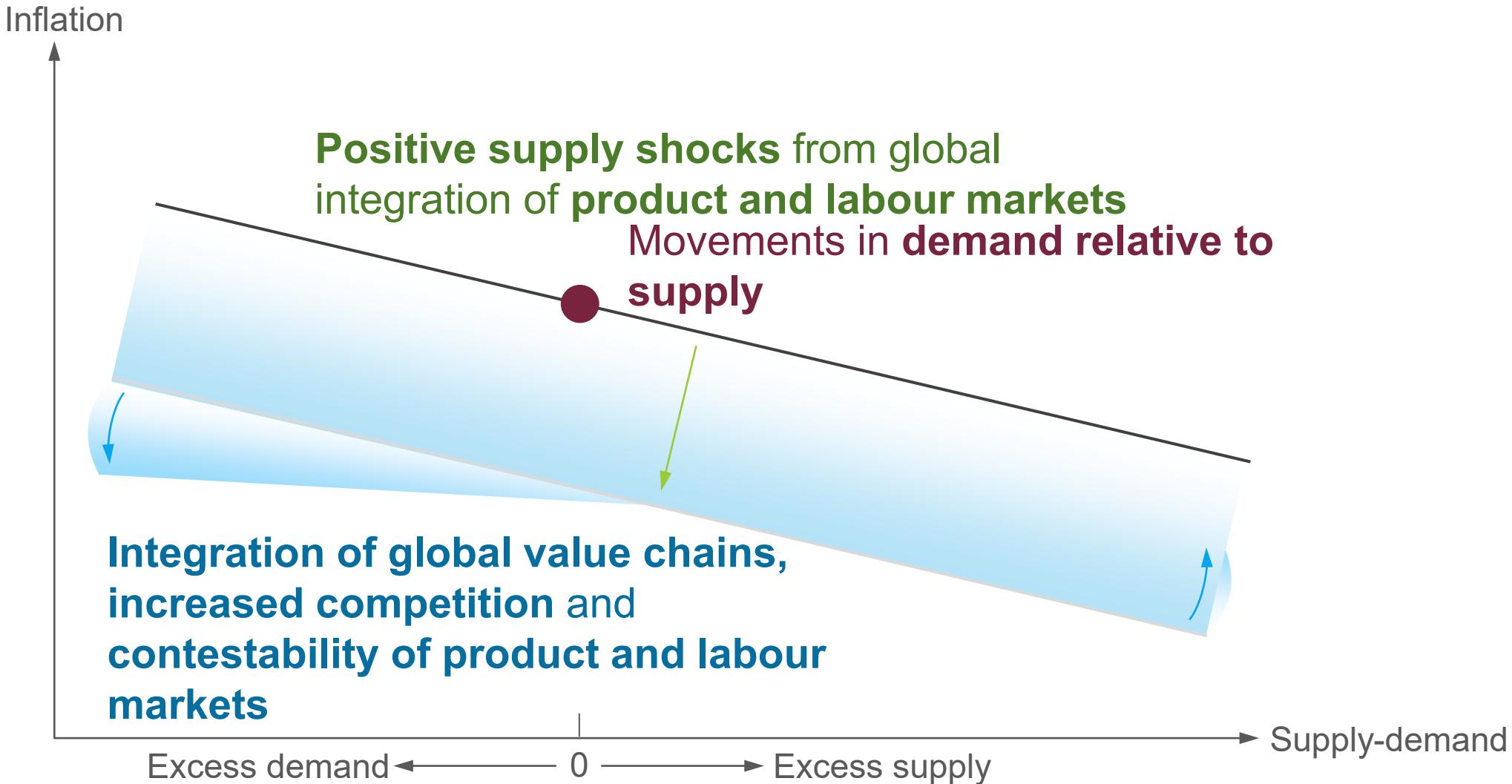


Incremental inflation – Europe

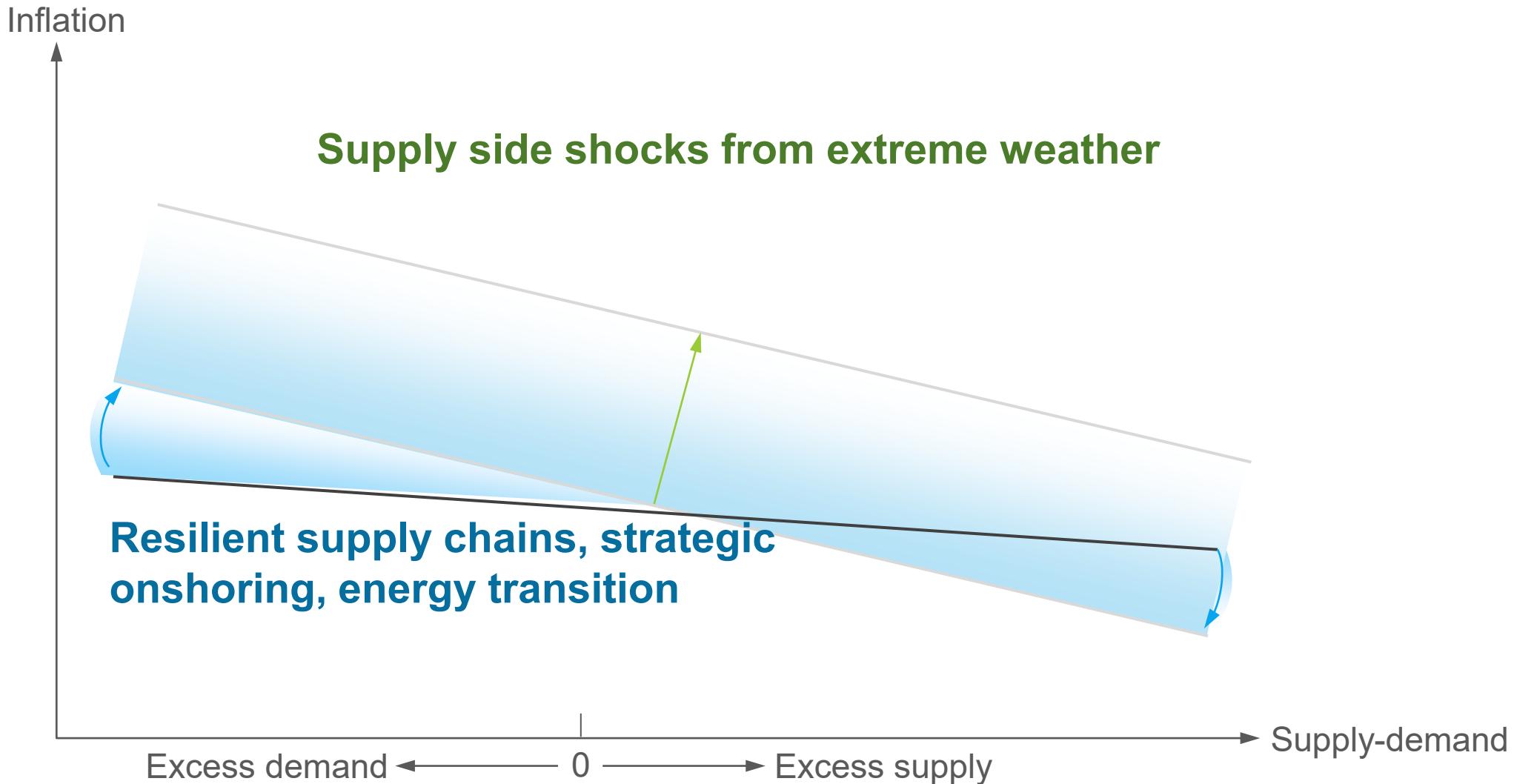


Source: NGFS Scenario Explorer using Net Zero 2050 (with REMIND-MAgPIE 2.1-4.2 inputs)

Globalisation has delivered a persistent, positive supply shocks

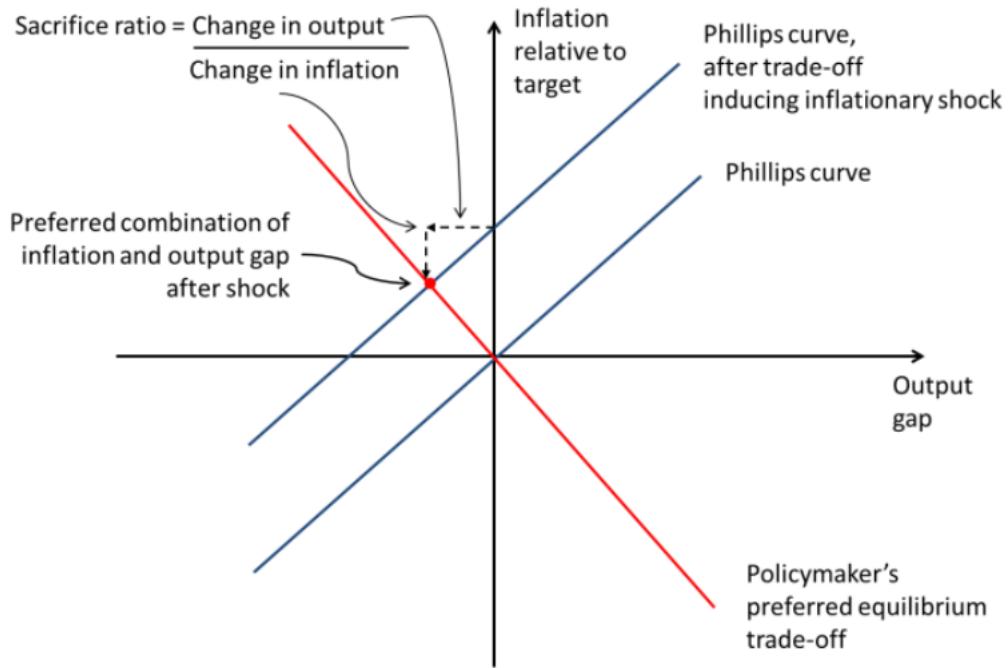


De-globalisation and climate will reverse this trend

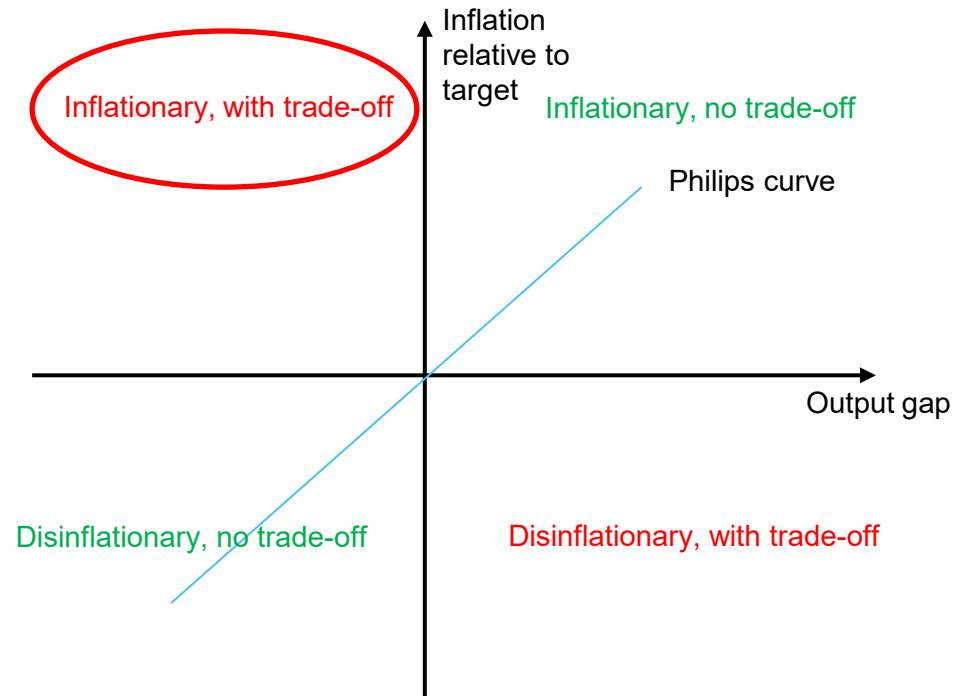


From Divine Coincidence to Tough Trade-offs

Monetary policy trade off

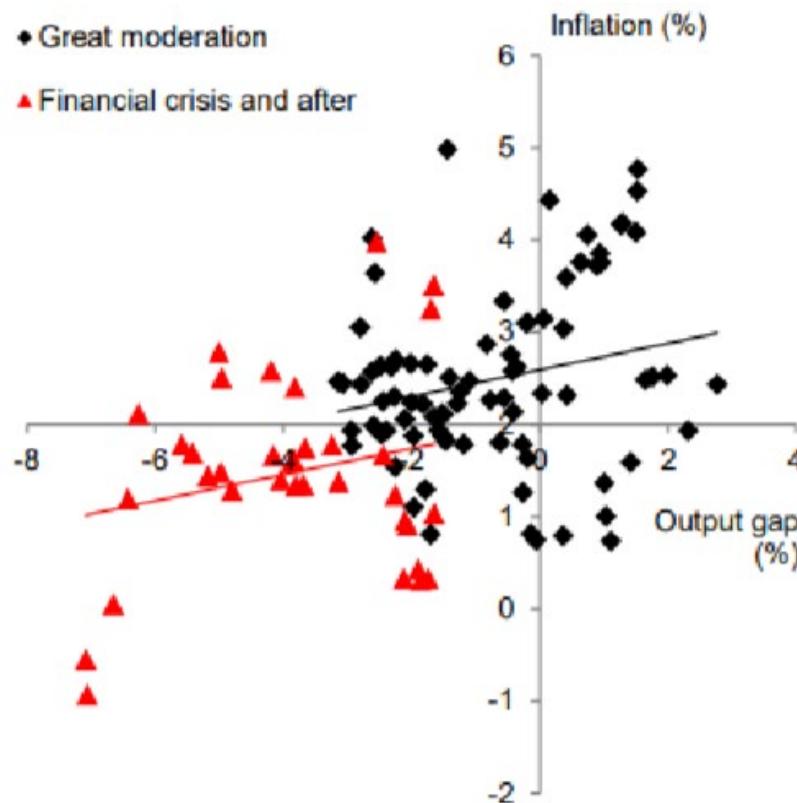


Policy responses

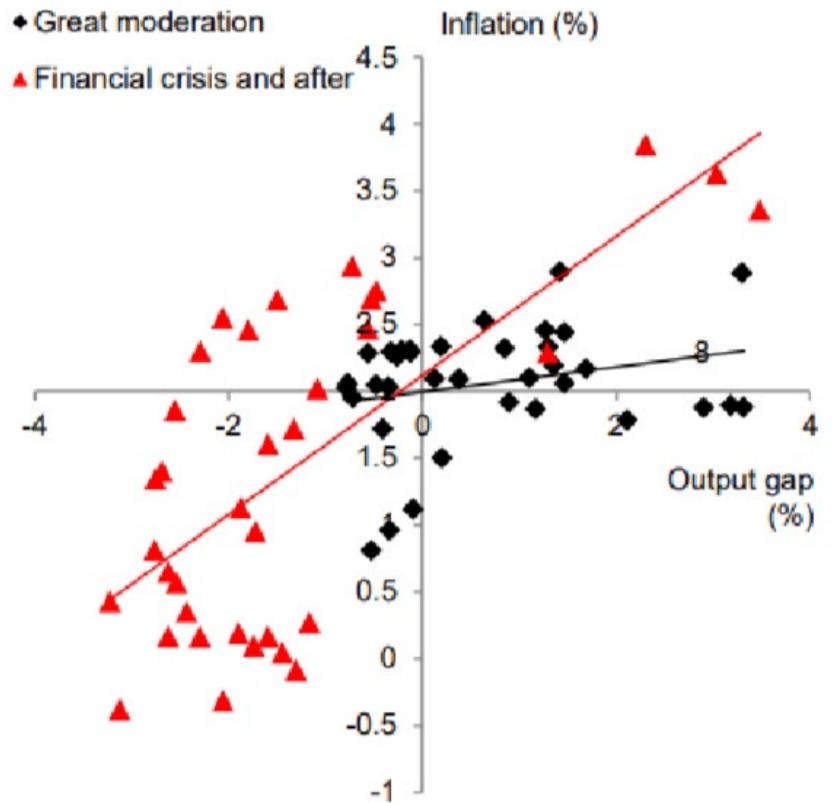


US and Euro area haven't had to grapple with this shift...until now

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



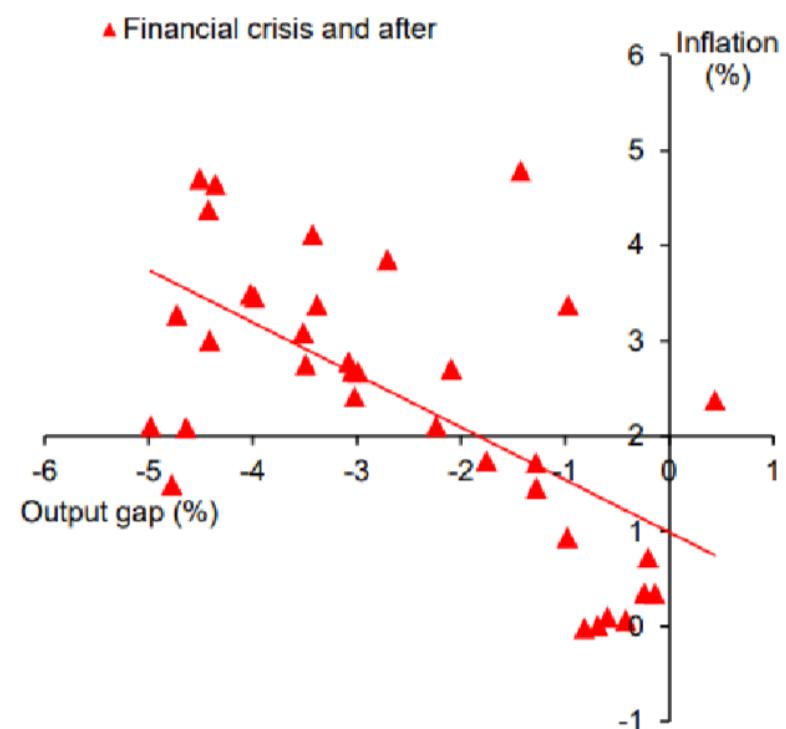
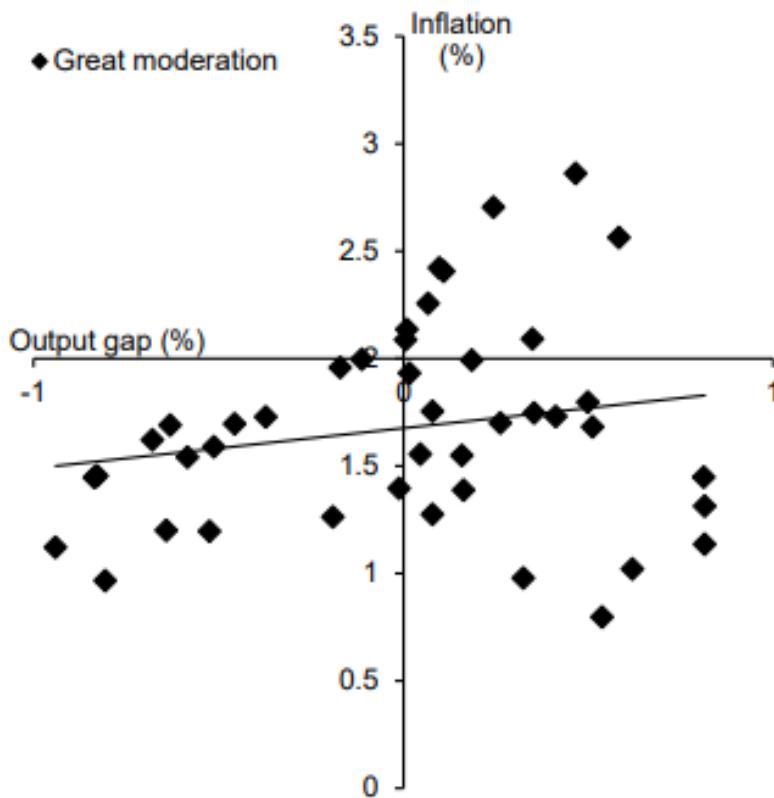
...as did the Euro area



UK policymaking challenged by supply side shocks since Global Financial Crisis

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

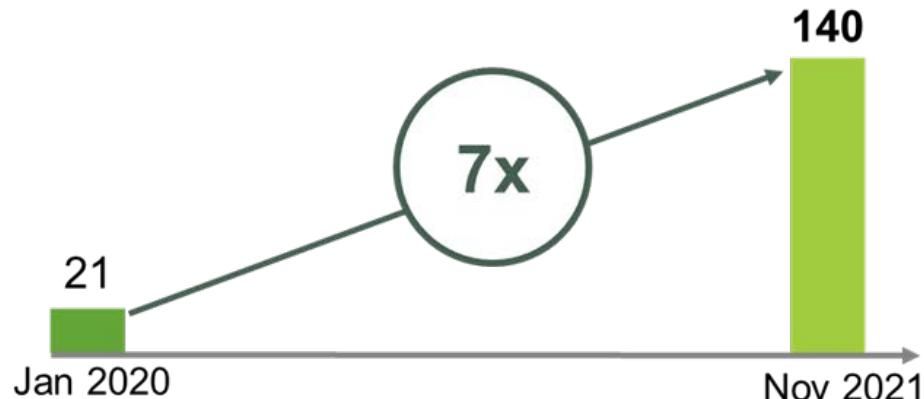
...whereas after the financial crisis, the UK economy experienced a series of challenging monetary trade-offs



Source: Bank of England

Net-zero transition accelerating

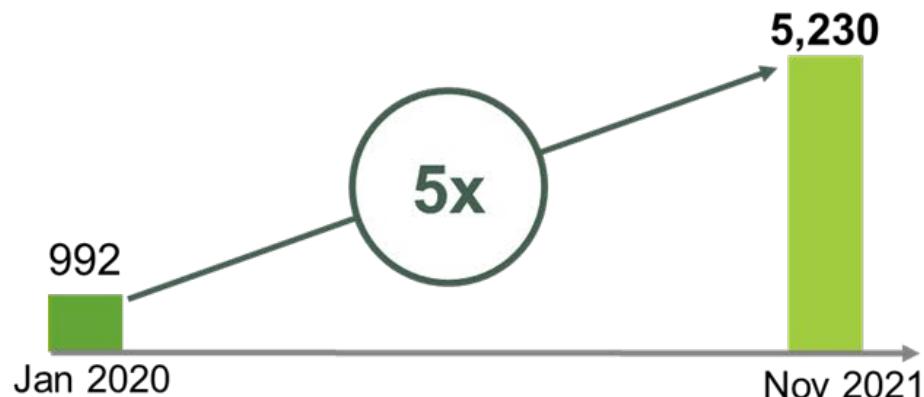
Countries with net-zero commitments



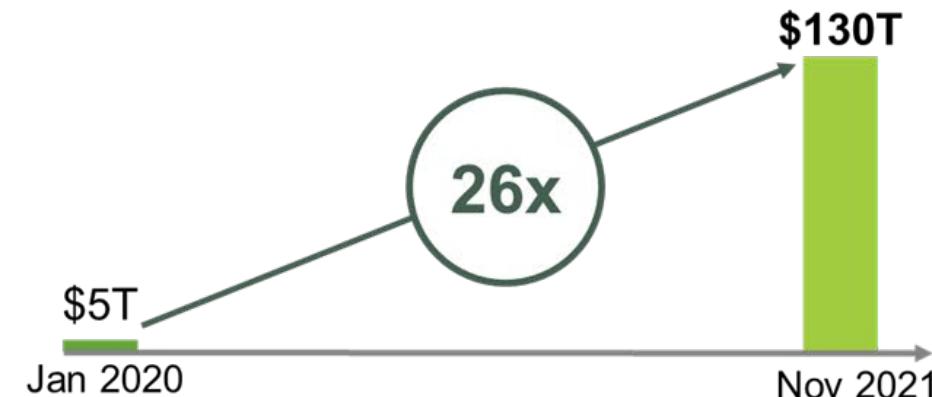
Emissions covered by country net-zero commitments



Companies with net-zero commitments



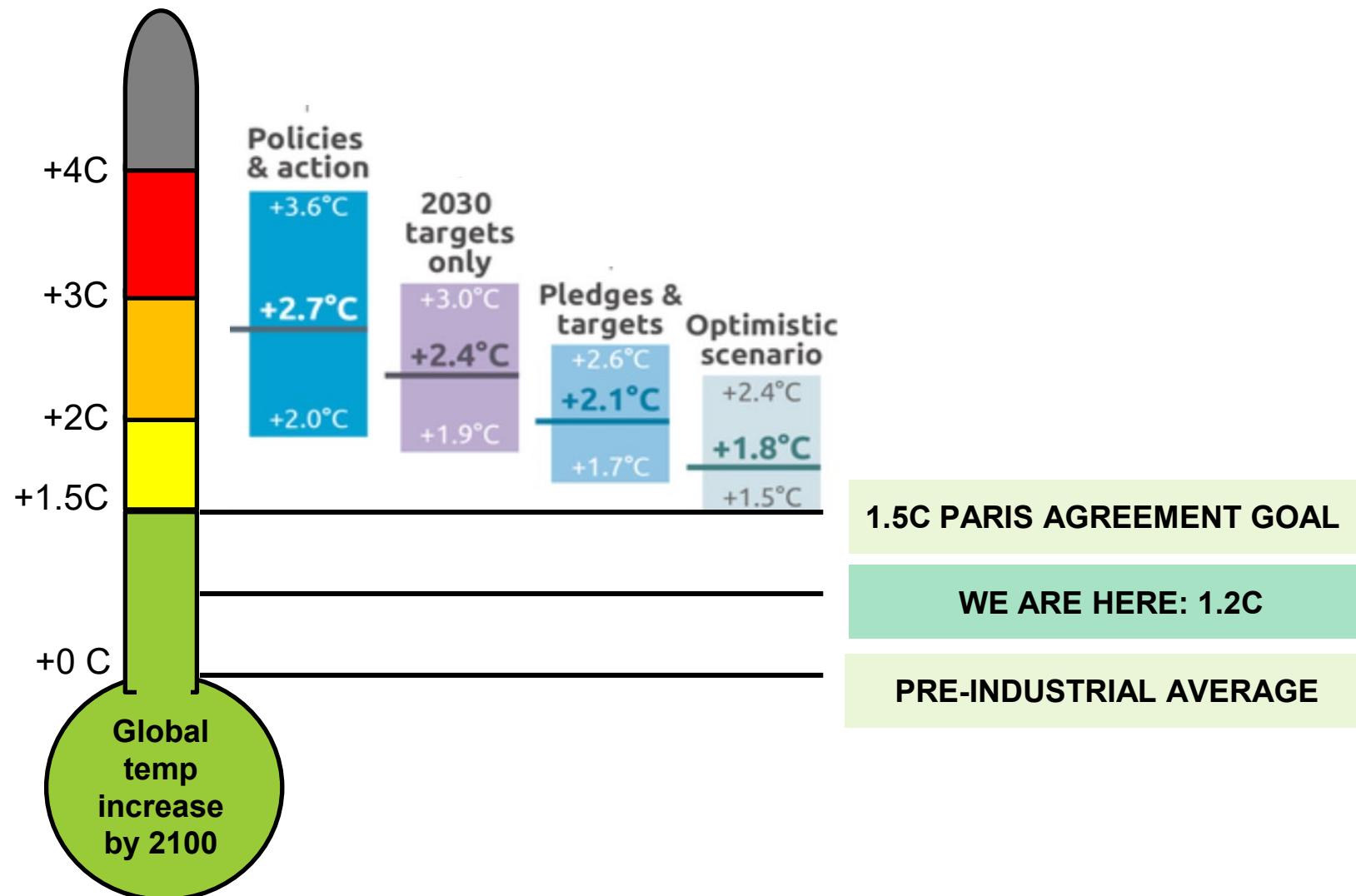
Financial commitments to net zero



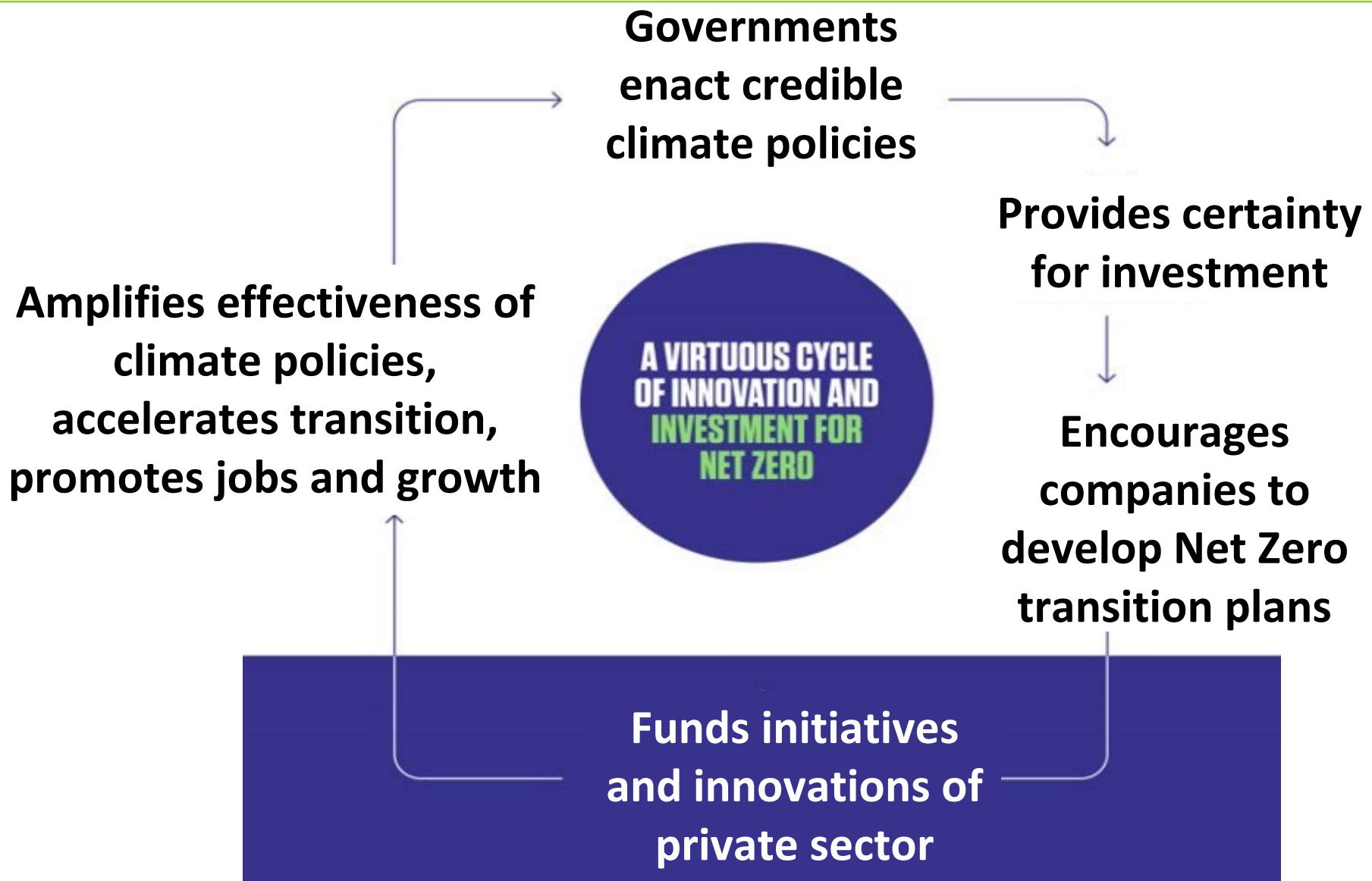
Sources: Climate Action Tracker, United Nations Climate Change, Race to Zero, United Nations Climate Change Race to Zero, Glasgow Financial Alliance for Net Zero (GFANZ).

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

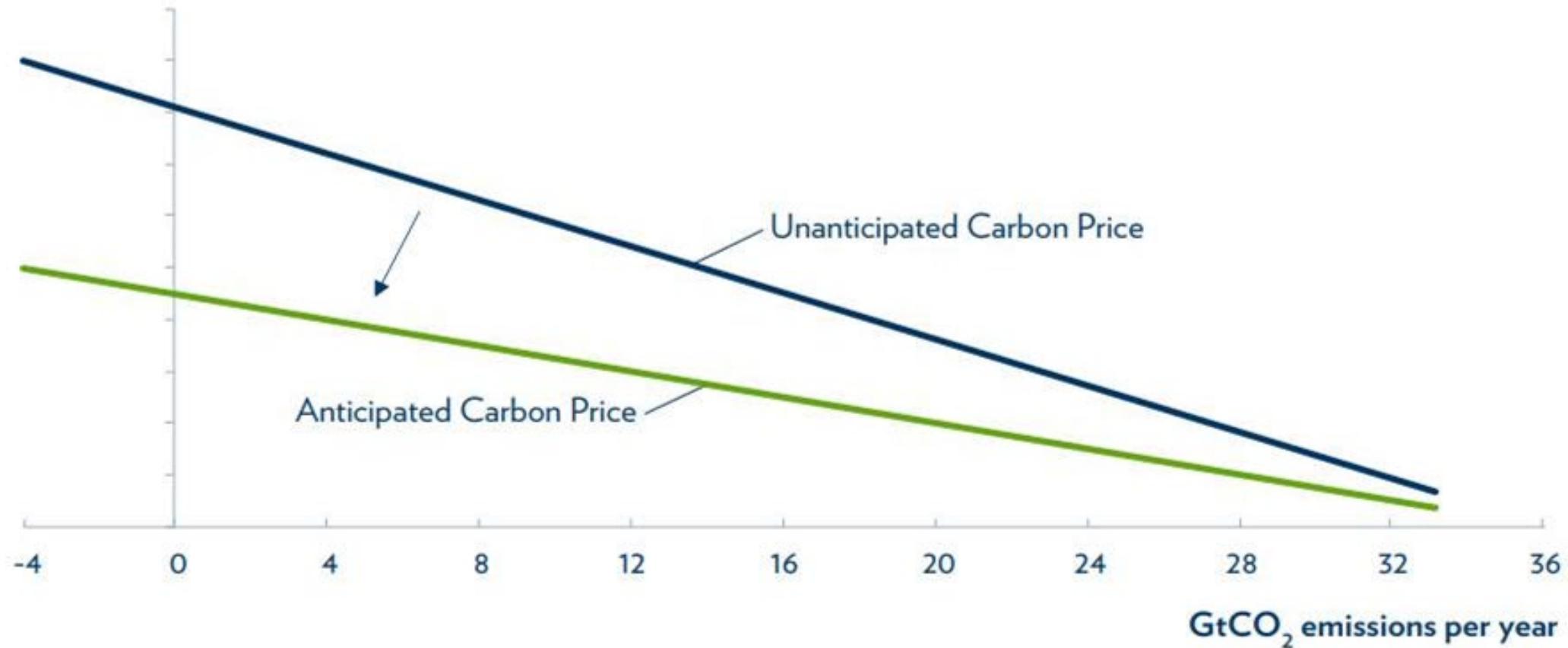


Credible & predictable climate policy will amplify & accelerate investment



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

Mandatory Climate disclosure (SEC & ISSB)

Climate stress testing

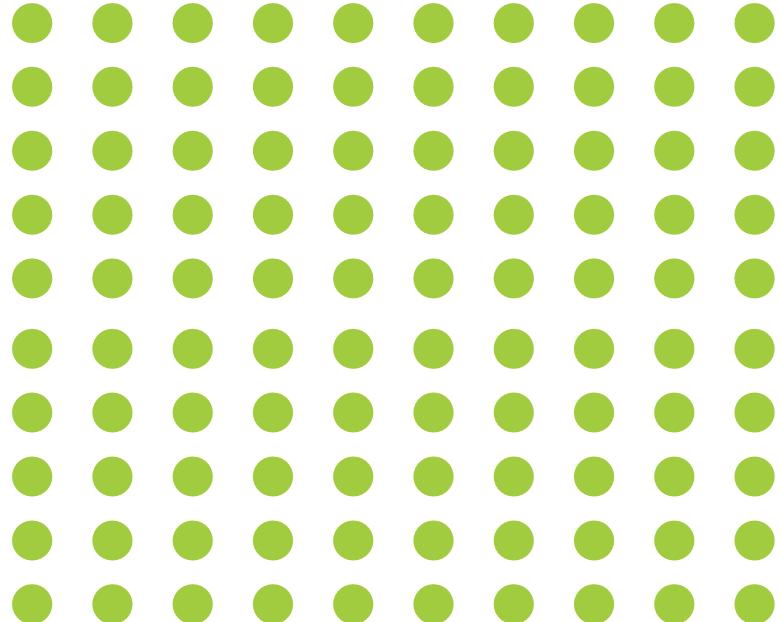
Net Zero transition plans

Portfolio alignment

Frameworks to phase out stranded assets

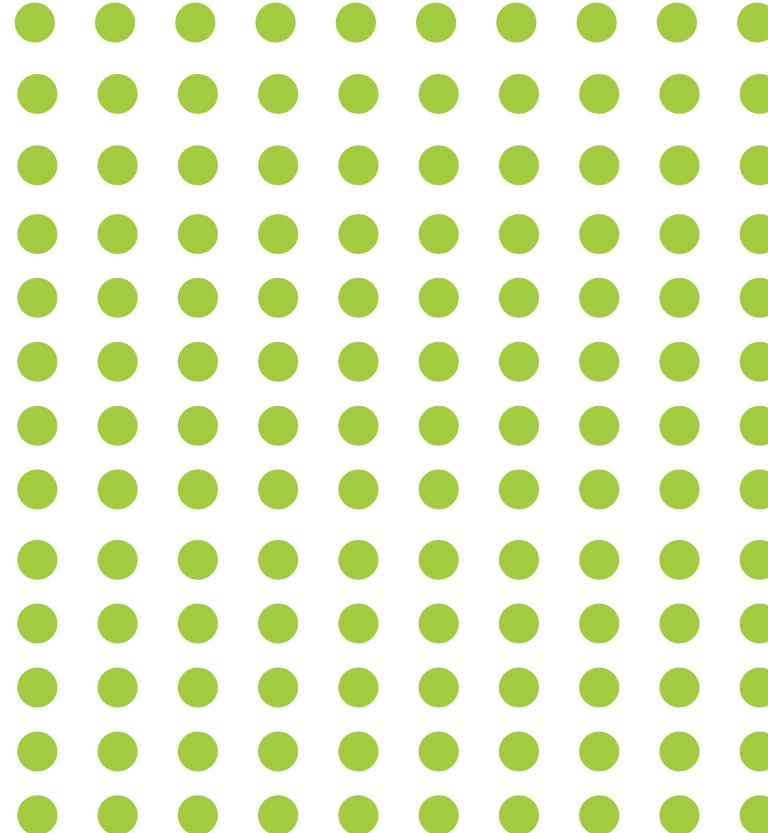
40% of the world's financial assets are now pledged to net zero

\$100 TRILLION



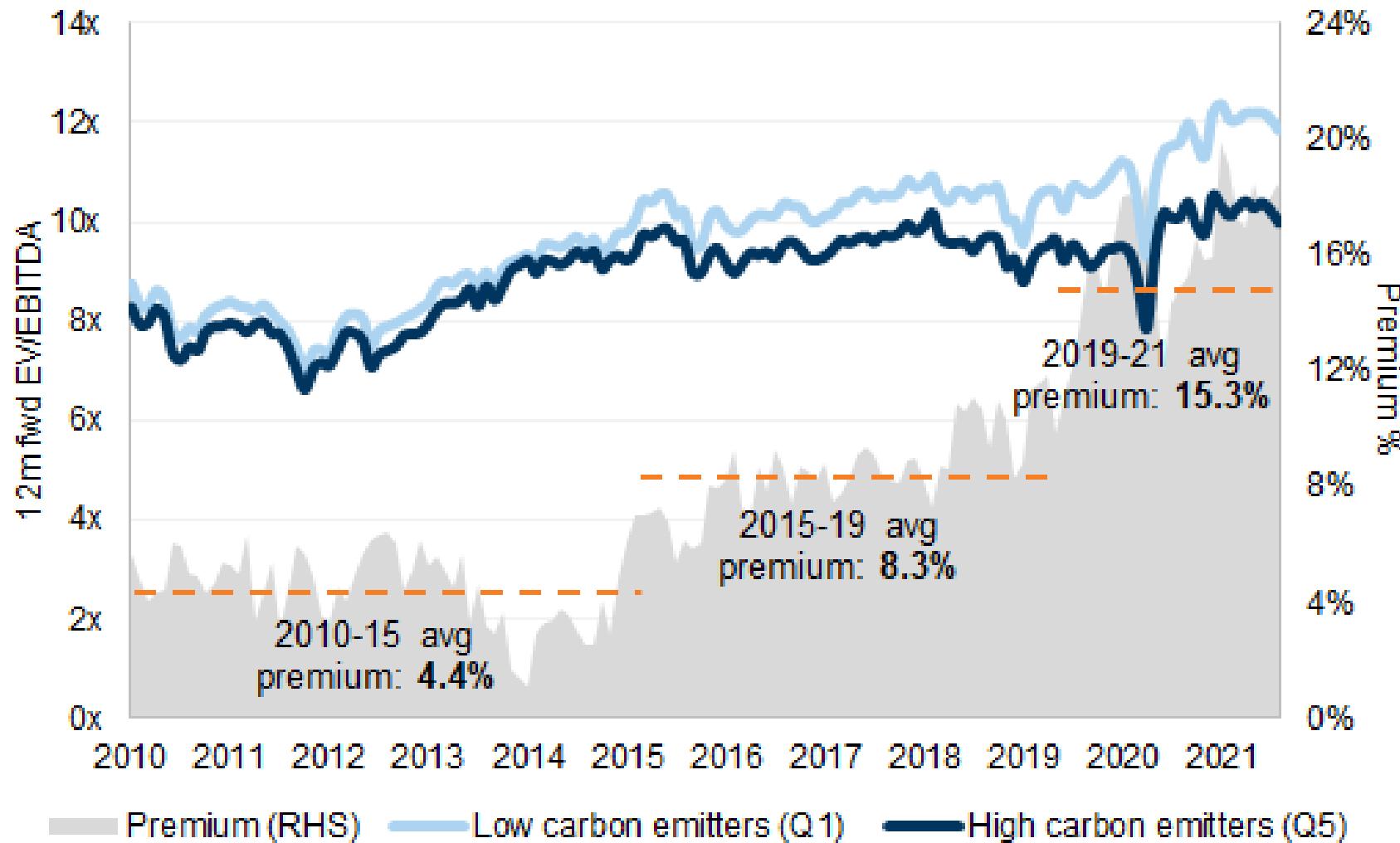
FINANCE NEED FOR NET
ZERO THROUGH 2050

\$130 TRILLION

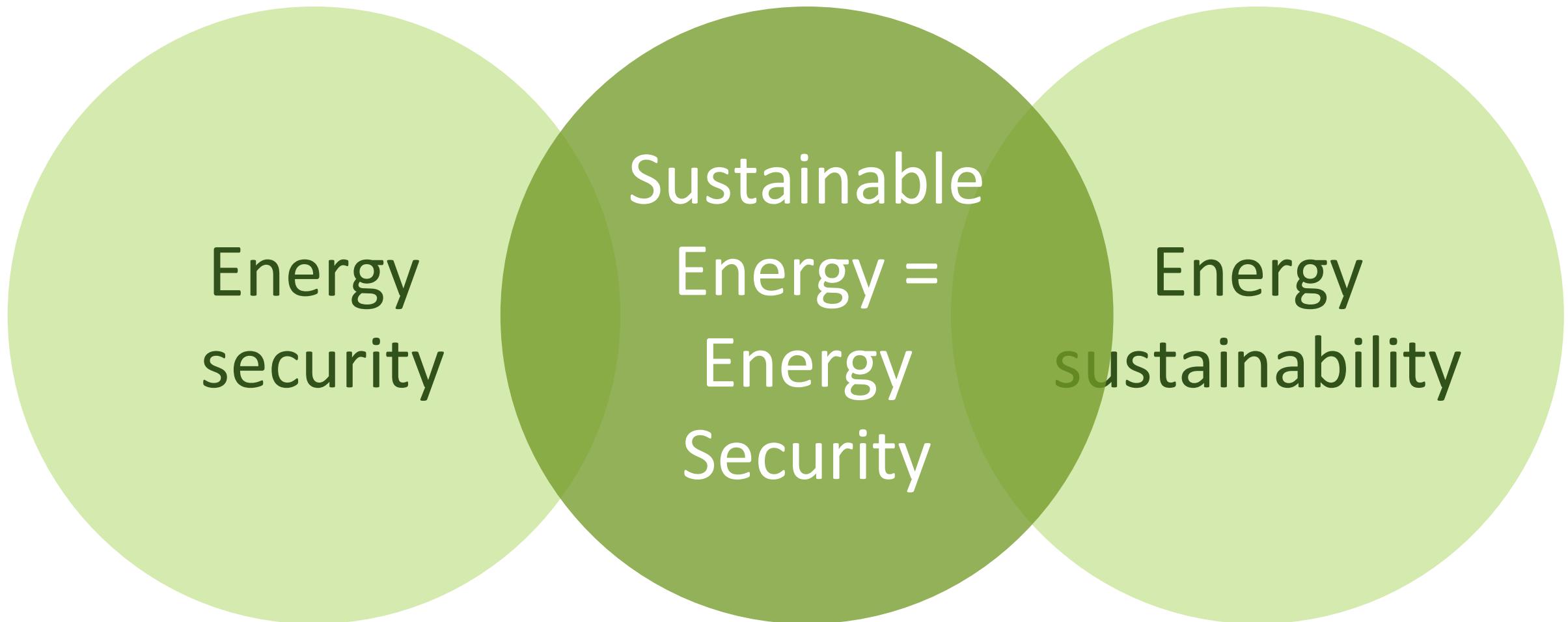


FINANCE COMMITTED TO
NET ZERO THROUGH GFANZ

Lower emitting companies across industries trade at premiums



Net Zero Transition improves Energy Security



Escaping the Timidity Trap: Climate change is a Choice
