1972 - 2022

Society of Actuaries in Ireland

Finance and Investment Forum

Kieran McQuinn, Research Professor in the ESRI
Malcolm Melville, Commodities Fund Manager - Sentiment and Chart Analyst, Schroders – London
Hannah Daly, Professor in Sustainable Energy and Energy Systems Modelling at UCC

October 11th 2022

Disclaimer

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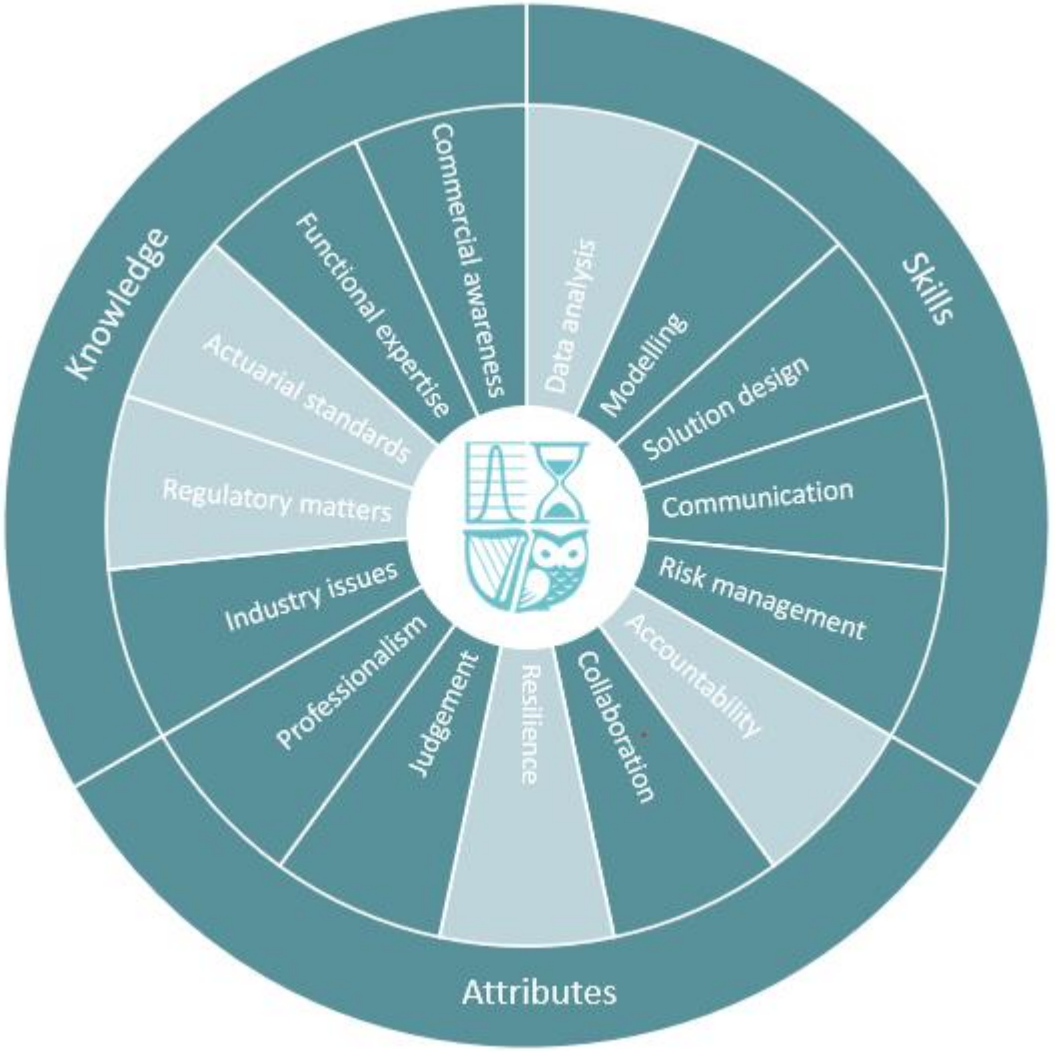
Competency Framework Wheel



1972 - 2022

Society of Actuaries in Ireland

The Irish Macro-economic Outlook

Kieran McQuinn (he/him) and Wendy Disch (she/her)

October 11th 2022

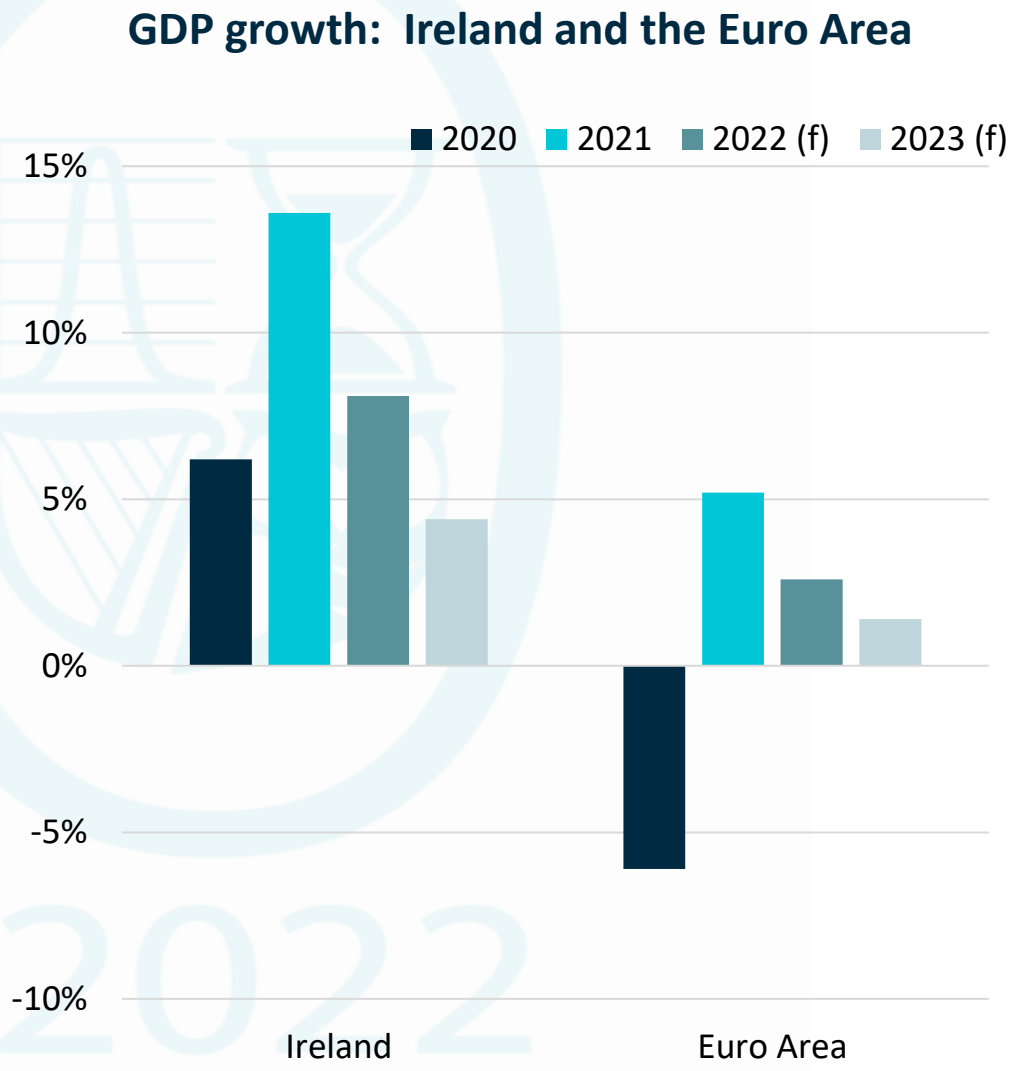
Introduction

- Irish economy set to perform in robust manner for remainder of 2022 with some moderation expected in 2023. Factors contributing to growth:
  - Rapid recovery in the labour market;
  - Export activity amongst ICT and pharmaceuticals largely unaffected by global conditions;
  - Strong investment activity on non-construction activity;
  - Continued increase in taxation receipts
  - Elevated savings likely to smooth consumption although growth expected to be subdued;

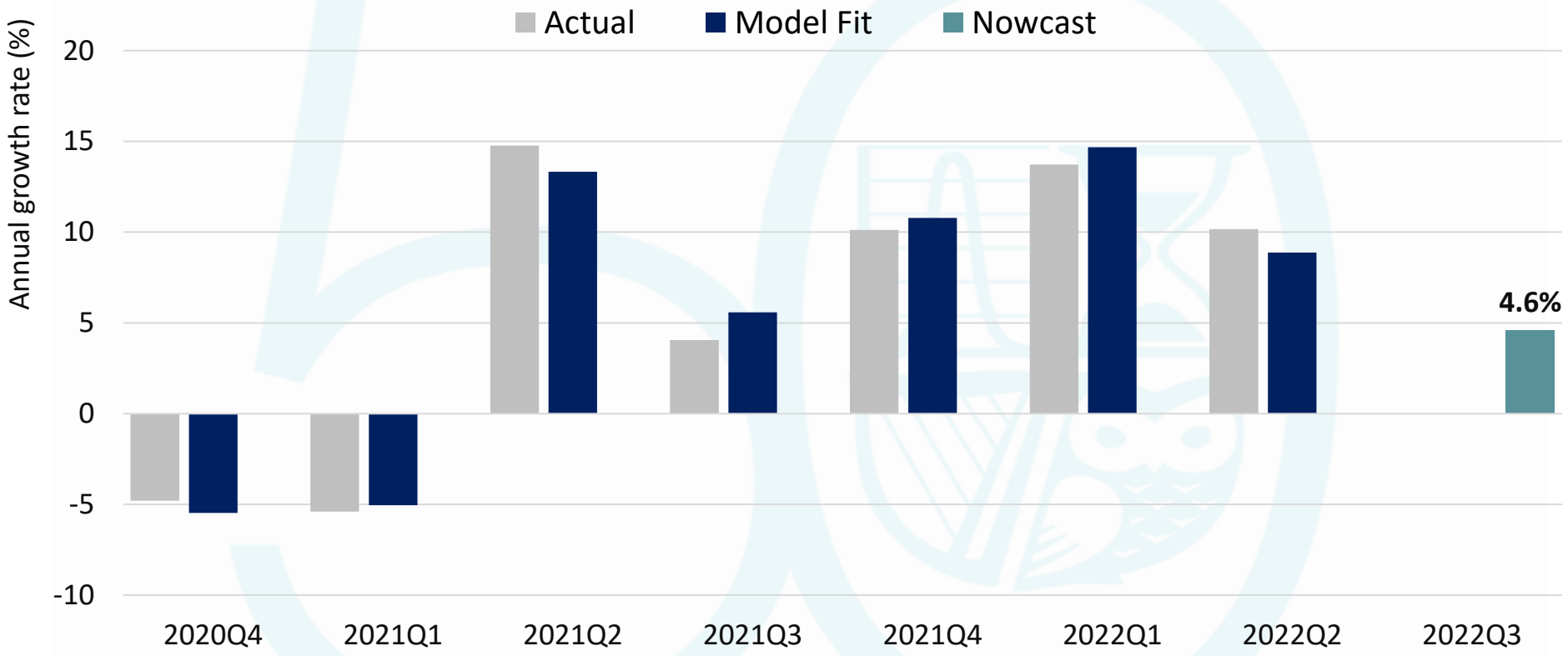
- Global conditions, challenges in the energy market and the path of inflation pose significant threats to our outlook.

Robust economic performance continues

- Despite significant global challenges, Irish economy continues to exhibit strong growth.
- GDP forecast of 8.1 and 4.4 per cent expected in 2022 and 2023; modified domestic demand (MDD) forecast of 7.5 and 2.5 per cent



Nowcast of Modified Domestic Demand



- Modified domestic demand rebounded significantly in Q1 2022 and is expected to continue growing at a moderate pace.
- The significant growth in modified investment is driving much of the growth in MDD.

Drivers of Growth

- Key factors are contributing to growth:
  - Dramatic increase in the **savings ratio** during the pandemic led to strong consumption this year & a rebound in imports.
  - Swift recovery in the labour market; full employment
  - **Exports** continue to grow, particularly in ICT and pharma.
  - Modified **investment** grew considerably in 2022, contributing to growth in MDD

	2021	2022	2023
Private Consumer Expenditure	4.6	3.2	2.5
Public Net Current Expenditure	6.5	2.6	-0.1
Modified Investment	8.2	23.4	4.7
Exports	14.1	10.5	6.2
Imports	-8.3	9.0	6.4
Unemployment Rate	16.1	4.8	4.1

Trade: exports remain strong

- Strong export activity and the continued trade surplus with the UK are contributing to an upward revision in our trade outlook
  - Trade surplus with UK increased to **€3.8 billion** in Q2 2022

- ICT & pharmaceutical-related sectors account for an increasingly large share of growth:
    - medicinal/pharmaceutical products ↑ **40.9%** y-on-y
    - organic chemicals ↑ **31.4%** y-on-y
    - computer services ↑ **16.1%** y-on-y

- Moderation in trade expected in 2023.

Labour Market: a rapid recovery

- Unemployment rate in August 2022 was 4.3 per cent, below its pre-pandemic rate in Feb 2020.
- Number of people on the Live Register is below pre-pandemic levels
- Upward pressure on wages likely.

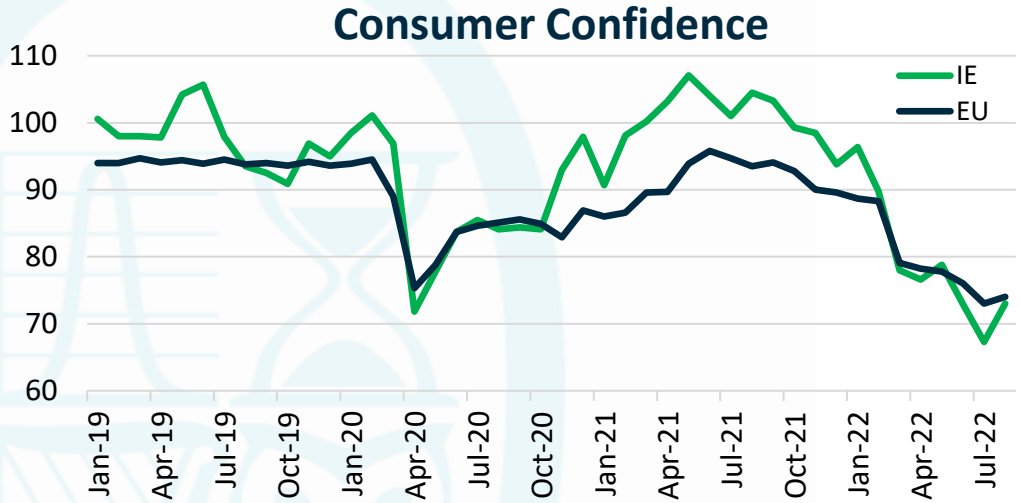
Unemployment Rate	
2021	16.1
2022	4.8
2023	4.1

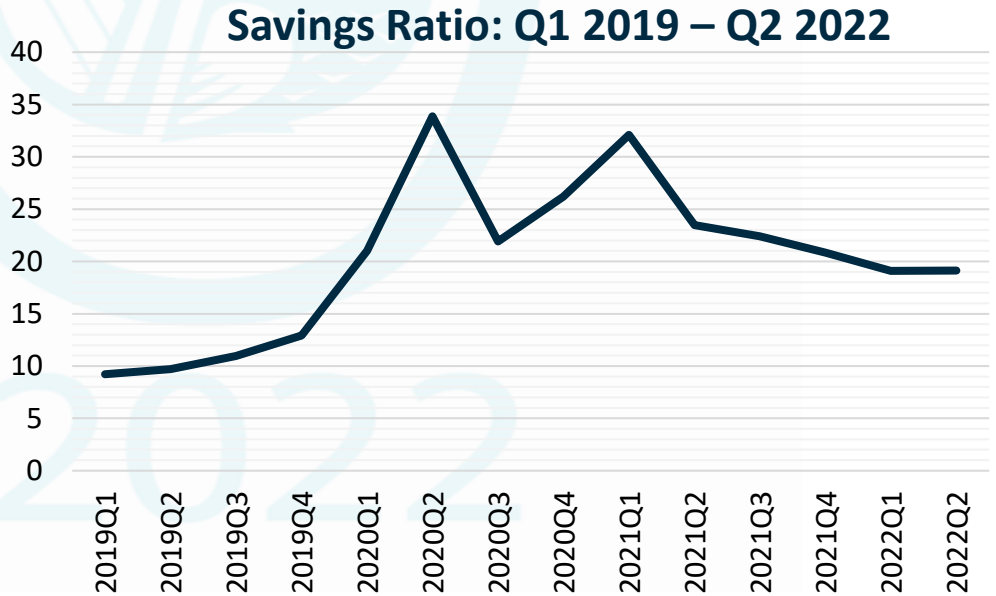
Note: The unemployment rate through February 2022 is based on the COVID-adjusted monthly unemployment series published by the CSO.

- By 2023, we expect the Irish economy to be operating at full employment with the unemployment rate set to be 4.8 and 4.1 per cent in 2022 and 2023, respectively.

Global uncertainty & rising costs impact sentiment

- Consumer confidence and retail sales have declined in recent months
- Developments in the savings ratio, which remain elevated on a historical basis, will be a key determinant of consumption in 2022 and 2023.
- We forecast growth in consumption of 3.2 and 2.5 per cent in 2022 and 2023.

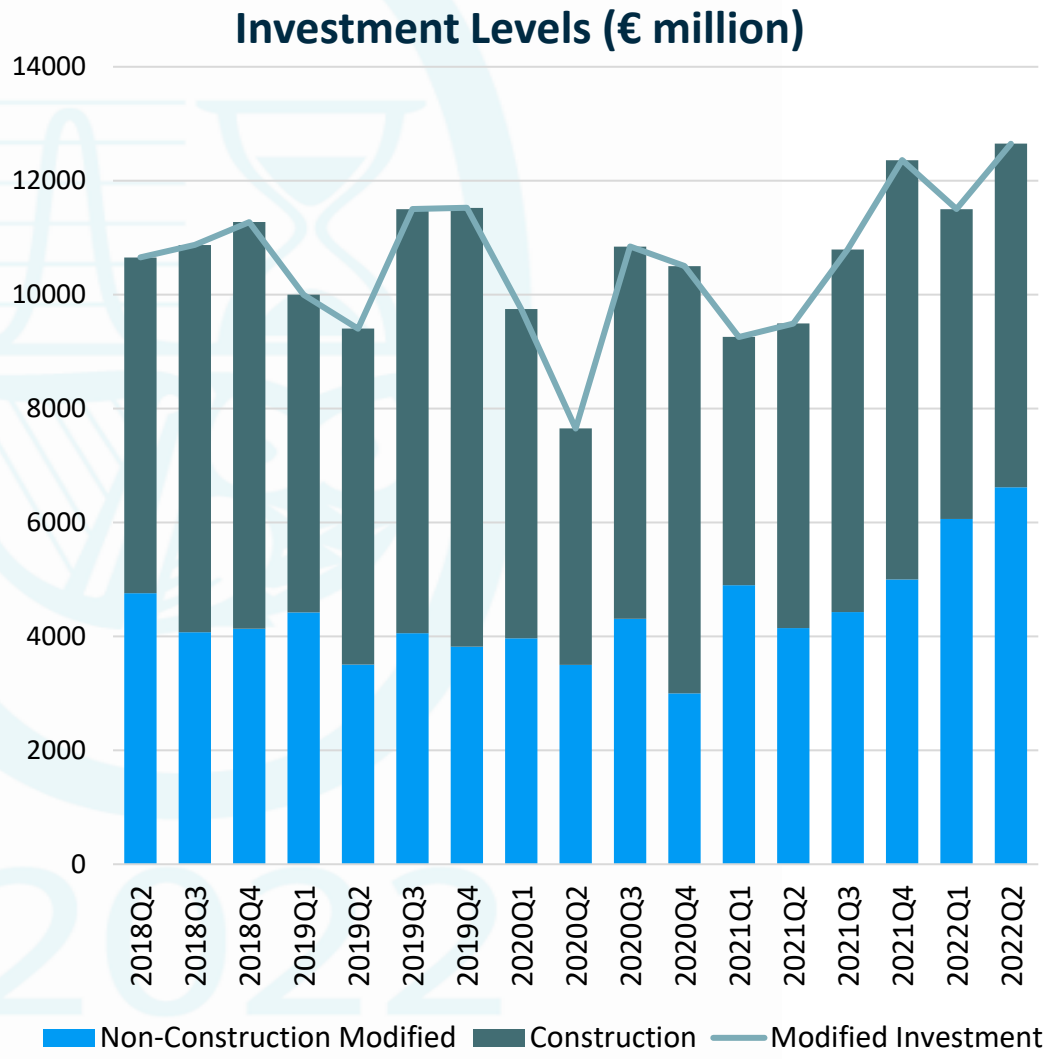




Sources: Consumer confidence - European Commission; Savings Ratio - Central Statistics Office.

Investment

- Increased capital investment in the first half of 2022 has been the main driver of domestic demand.
- Rising inflationary pressures and a deterioration in economic conditions globally are set to exert downward pressure on investment rates in 2023 and have contributed to deteriorating business sentiment across sectors.
- We forecast growth in modified investment of 23.4 and 4.7 per cent in 2022 and 2023.



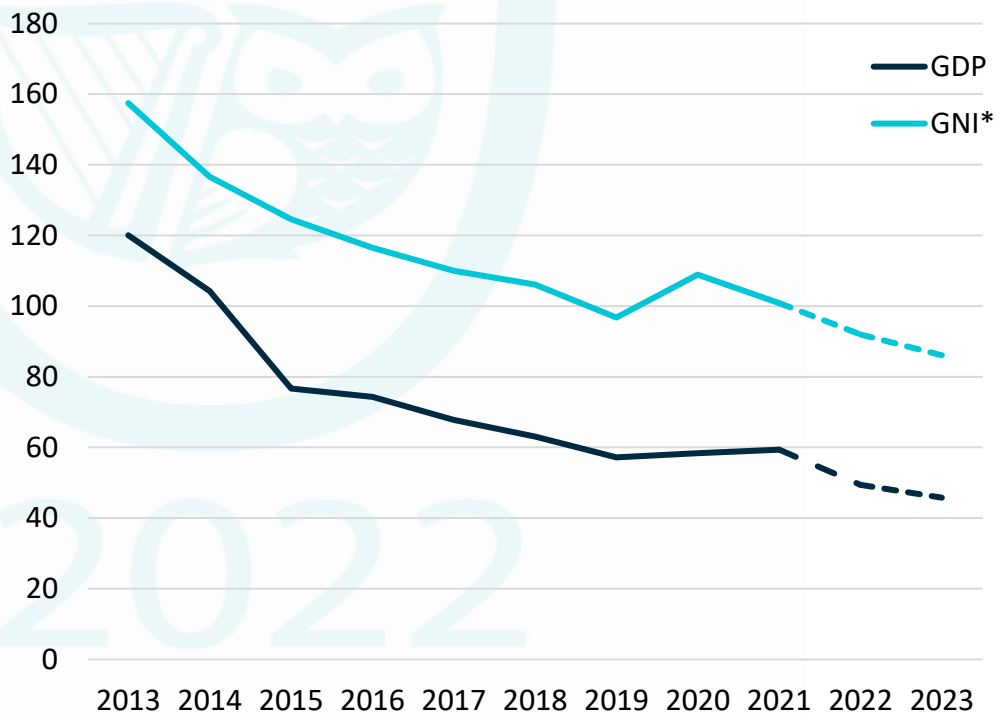
Source: Central Statistics Office

Strong tax receipts drive improvements in GGB

- For the period January-August, tax receipts have continued to grow strongly.
  - Income tax (+16% Y-on-Y)
  - Corporation tax (+**68%** Y-on-Y)
  - VAT (+24% Y-on-Y)
  - Excise Duties (-1% Y-on-Y)

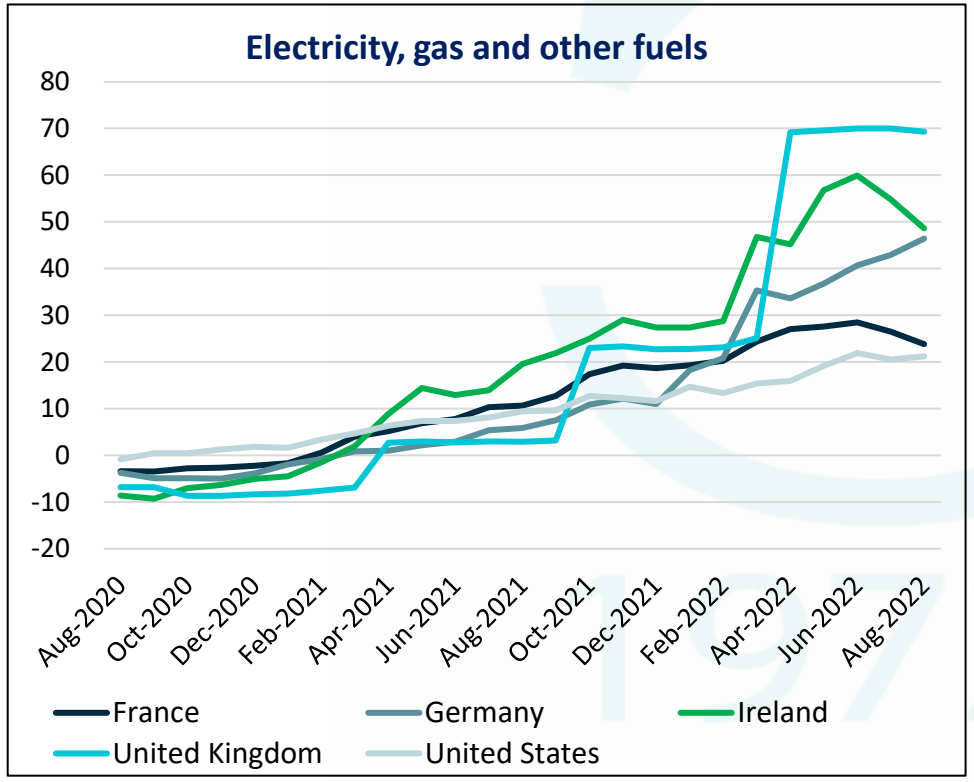
- Tax revenue overall is expected to continue to grow for the rest of 2022 and 2023, and hence public debt ratios are expected to continue to decline.

	2021	2022	2023
GGB	-€8.1bn	€1.4bn	€5.8bn
(% of GDP)	-1.9%	0.3%	1.2%



Inflation Outlook

Forecast			
	2021	2022	2023
Inflation	2.4	8.1	6.8



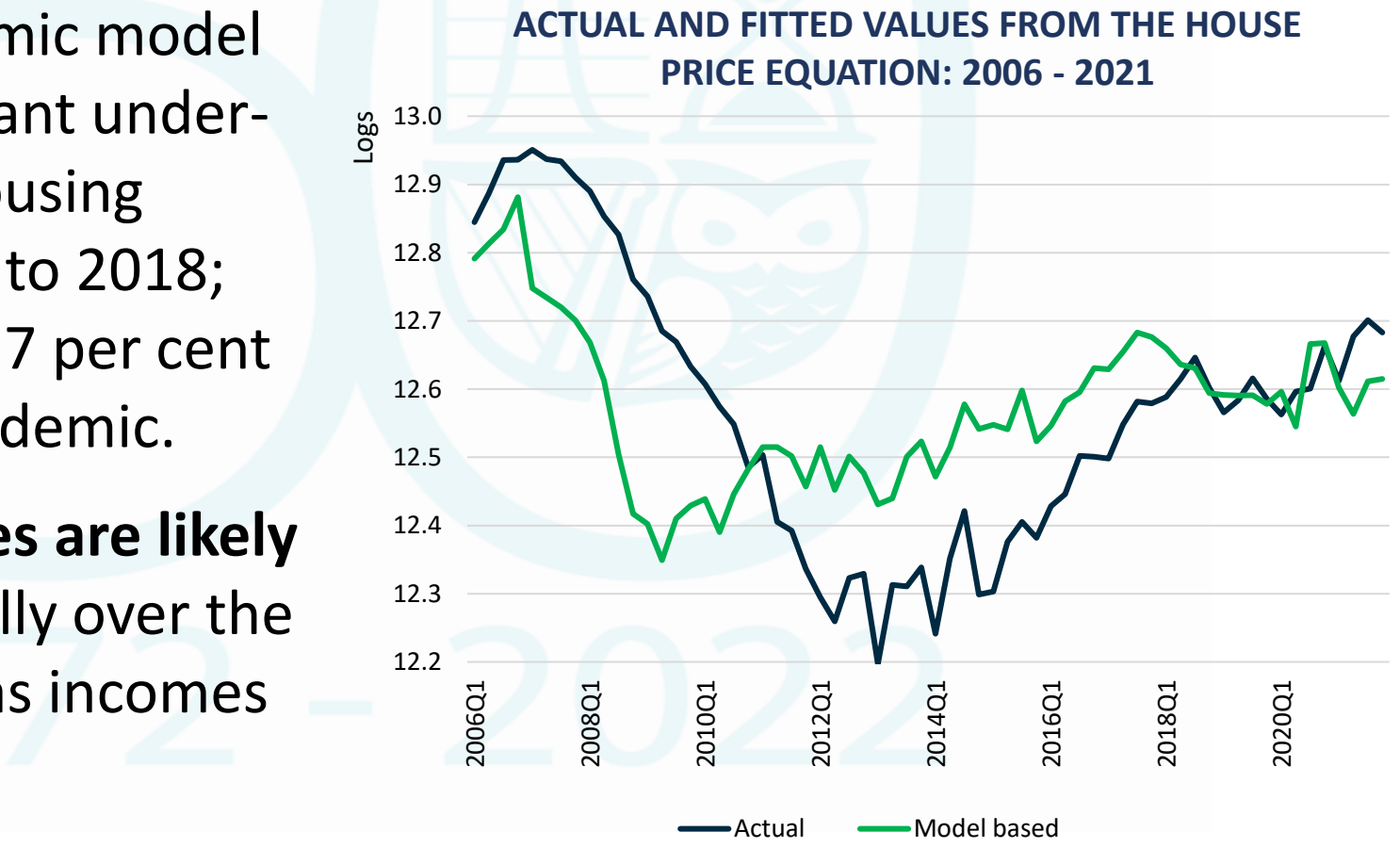
Source: OECD

- Price increases in electricity, gas and other fuels continues to be the largest contributor to inflationary pressures.
- Households are experiencing different rates of inflation, with low-income and older HHs experiencing higher rates.
- CPI increased 8.7% and 9.1% on an annual basis in Ireland and the euro area, respectively.

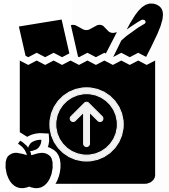
Dis-Equilibrium in the Irish housing market

- Swift pick up in the nominal growth in house prices as a result of growing demand and disruptions to supply during the pandemic

- Using a long-run economic model of house prices, significant under-valuation of the Irish housing market seen from 2011 to 2018; **over-valuation** close to 7 per cent is present since the pandemic.
- Increases in **house prices are likely to moderate** substantially over the short to medium term as incomes and savings moderate.

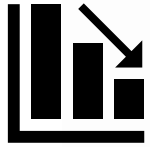


Risks to Growth

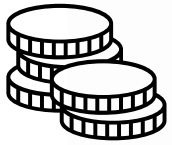


- Inflationary pressures and supply chain bottlenecks continue

- Energy markets severely stained



- Slowdowns in global economic activity, particularly deteriorating conditions in the UK



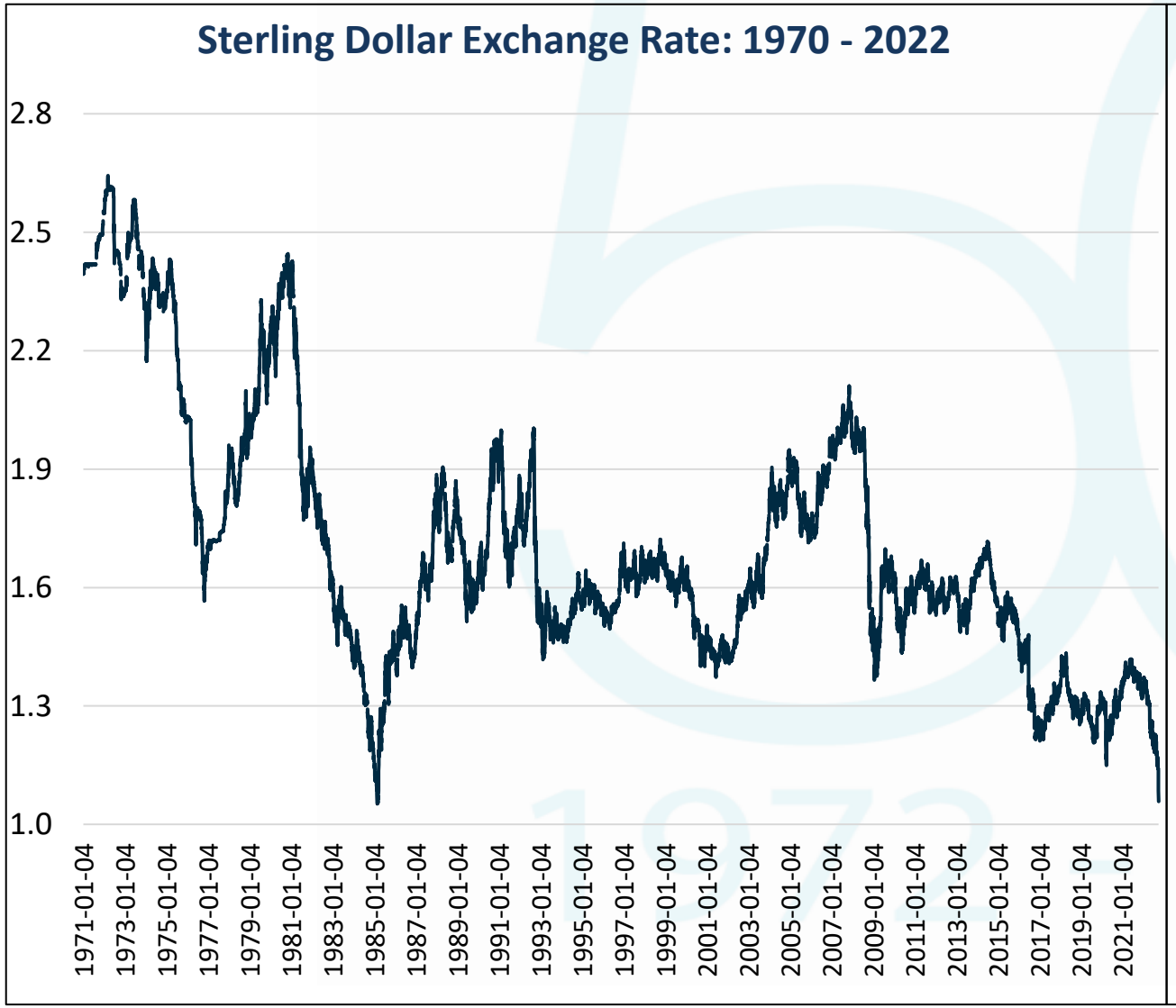
- Tighter monetary policy and era of higher interest rates in response to inflation

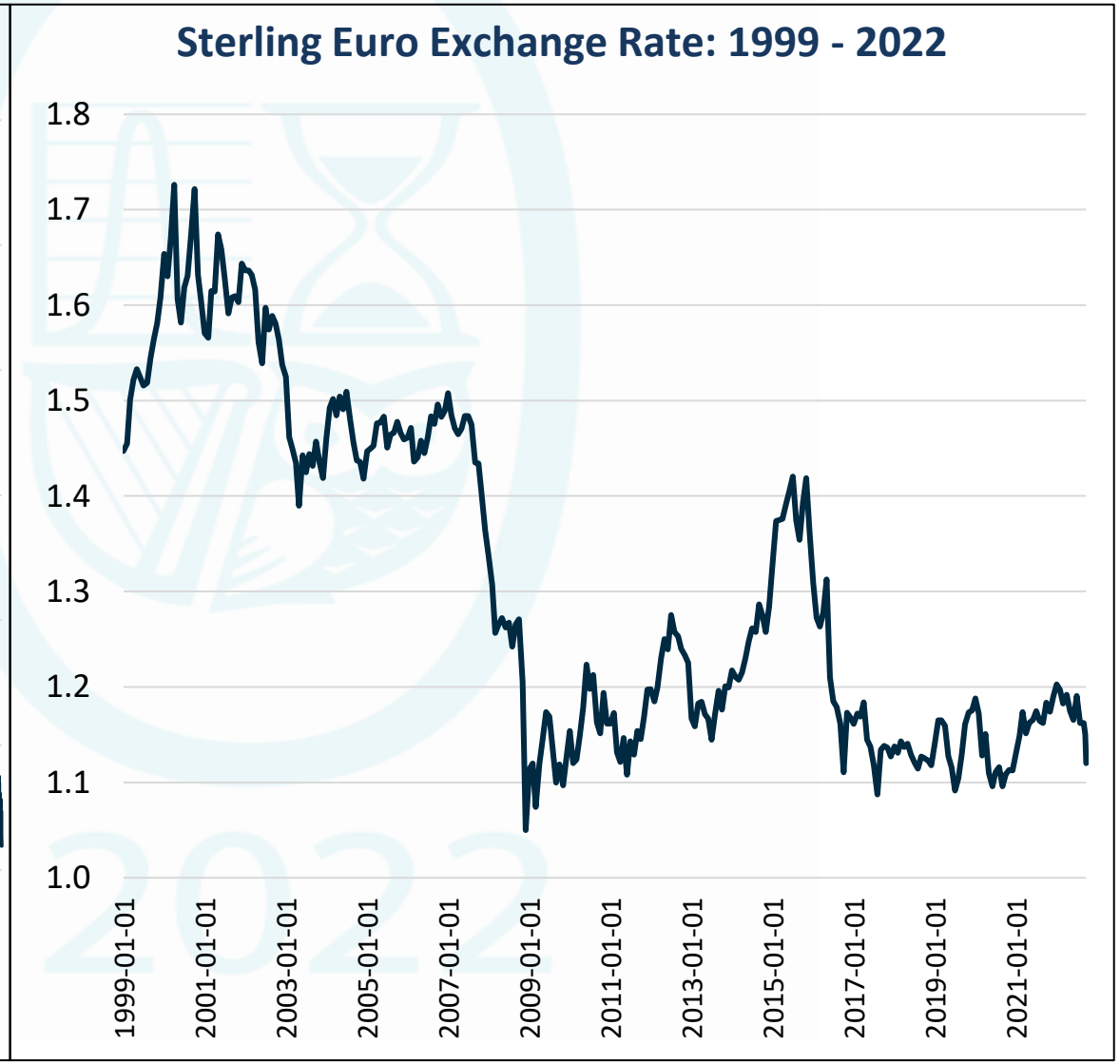
- Humanitarian cost of the war may contribute strain to public finances

Risks: Deteriorating outlook in the UK

- Market reaction to the “fiscal event” on 23rd September very adverse:
  - Significant increase in borrowing
  - Impact of tax cuts on inflation (8.6 per cent)
  - Debt sustainability over the medium-term?
  - Capacity of UK economy to grow
- Markets bidding in emergency increases in UK interest rate
- Sterling falling to lowest rate vis-à-vis the dollar since 1985 (€1.05)
- BoE intervention Wednesday the 28th of September
  - Significant difficulties in pension fund industry

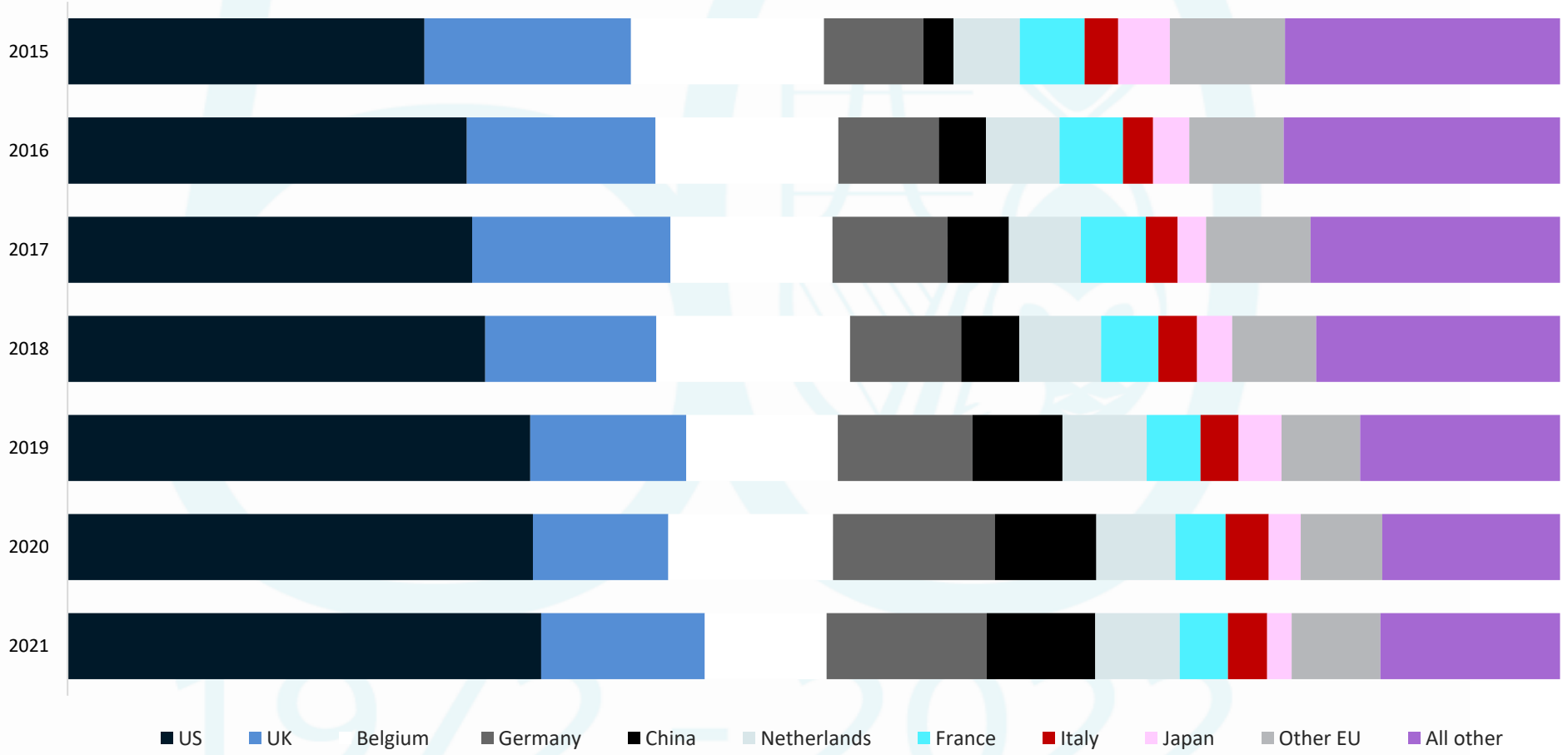
Rapid decline in sterling





Share of exports from Ireland by trading partners

(merchandise trade % share of total value)



Implications for domestic outlook

- Irish financial sector less integrated with the UK since GFC
- Most deleveraged significant shares of their UK books
- Irish financial sector much healthier now than 2007/08

- However,
- Many Irish SMEs still trade with the UK
- Already been some financial market implications
  - For Irish institutions with UK exposures
- A comprehensive overview of contagion effects difficult

Assessment

- Deteriorating geo-political situation is exacerbating pre-existing **inflationary pressures** and contributing to concerns about **energy security**
- We now expect inflation to be higher than previously forecast
- While **taxation receipts remain strong** and the **unemployment rate has fallen** considerably, there is still some scope for the **Government to assist those most affected by increases in the cost of living**.
- Domestic economy is still expected to increase, particularly as the **ICT and pharmaceutical** sectors remain largely unaffected by global slowdowns.
- GDP and MDD now expected to increase above previous forecast; growth rates of **8.1 and 7.5 per cent** in the present year. For 2023, global slowdowns will moderate growth in Ireland; GDP and MDD forecast to increase **4.4 per cent and 2.5 per cent**, respectively.

Thank You

Schroders

Schroders Commodities
A new era begins

October 2022

Investment outlook

Summary

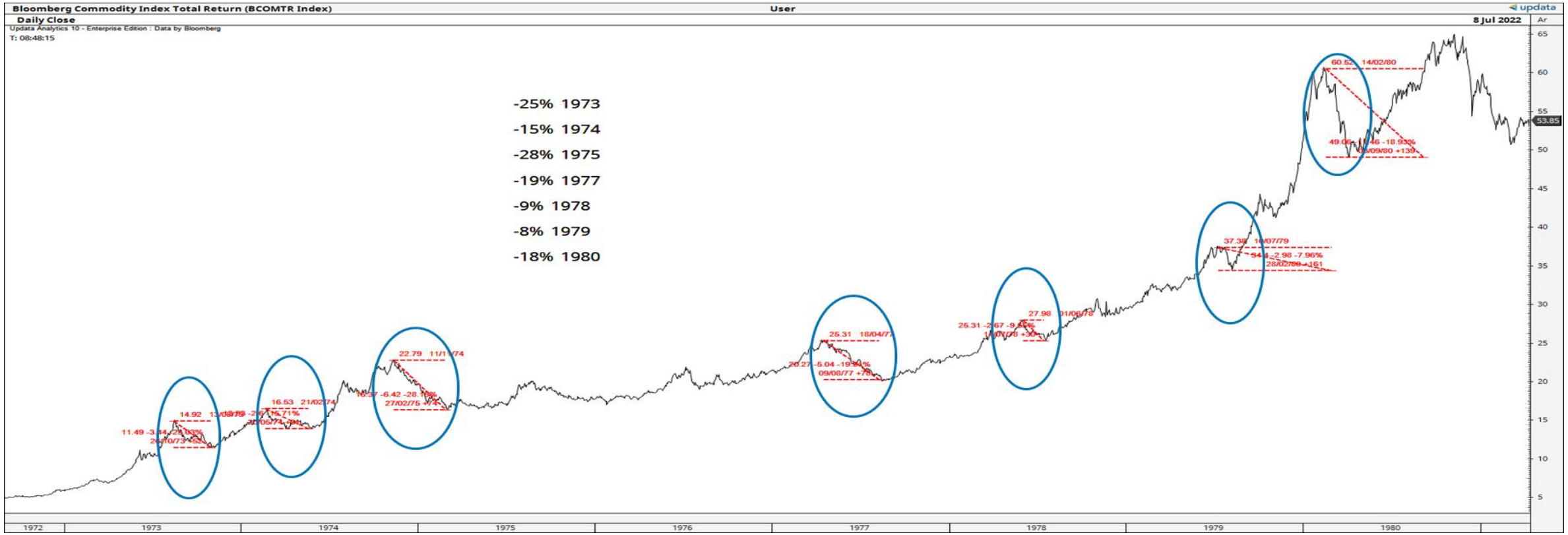
Energy	– Oil inventories remain low despite the release from the US SPR – OPEC+ have signalled $85/90/bbl. is a floor in the oil market – Demand destruction fears are valid but supply constraints outweigh these in the long term – US natural gas is at risk of a technically driven correction – **Oil prices are likely to make new highs later this year**
Metals	– Goods to services substitution and ongoing China demand weakness suggest industrial metals may underperform in 2H – Longer term energy transition demand drivers and supply constraints remain highly supportive base metals – The outlook for gold is turning positive as Central Bank tightening is priced in and systemic macro risks remain elevated – **The precious metals complex looks poised to begin to reverse several quarters of deep underperformance**
Agriculture	– Ukraine has resumed grain shipments via the Black Sea under a deal with Russia, but it will take time for the pace of exports to come back to pre-war levels – Volatile natural gas prices have led to the closure of many fertilizer plants in Europe, impacting next season's grains crops – High feed prices in the first 6 months of the year have lowered the amount of livestock placed in feedlots – **After a price correction, many agricultural commodities will benefit from additional demand, while production will be constrained by high fertilizer prices**

Source: Schroders. For illustrative purposes only and not a recommendation to buy/sell.

Corrections are normal in a commodity cycle

During 1970's commodity bull market a correction occurred most years

Bloomberg Commodity TR Index 1972 - 1980



While no cycle is the same it is not abnormal to have corrections of 15% to 25% that last months within a long term cycle

Source: Schroders, Updata, Bloomberg - July 2022.

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Why now for commodities?

1) Commodities are cheap on a relative basis

Relative performance of Commodities[1] vs S&P 500 shown as a ratio

Similarities to early 2000s / 1970s:

- Underinvestment in production capacity.
- A coming capex boom (China then, climate change mitigation now).
- Exuberant equity valuations with a tech focus.
- Geo-politically driven supply shocks.
- Inflation.

Differences:

- Climate focus / ESG is supressing supply responses, muffling the price signal (energy, aluminium).
- Early 2000s was peak Washington Consensus. Today we are headed in a more fraught direction (= supply chain resilience / strategic stockpiling, food nationalism).
- Explicit monetary / fiscal co-ordination (fiscal dominance).

Past Performance is not a guide to future performance and may not be repeated. The value of investments and the income from them may go down as well as up and investors may not get back the amounts originally invested. Exchange rate changes may cause the value of investments to fall as well as rise.

Source: Schroders, Eikon Refinitiv Datastream – 31 August 2022. [1]Represented by S&P GSCI Index.

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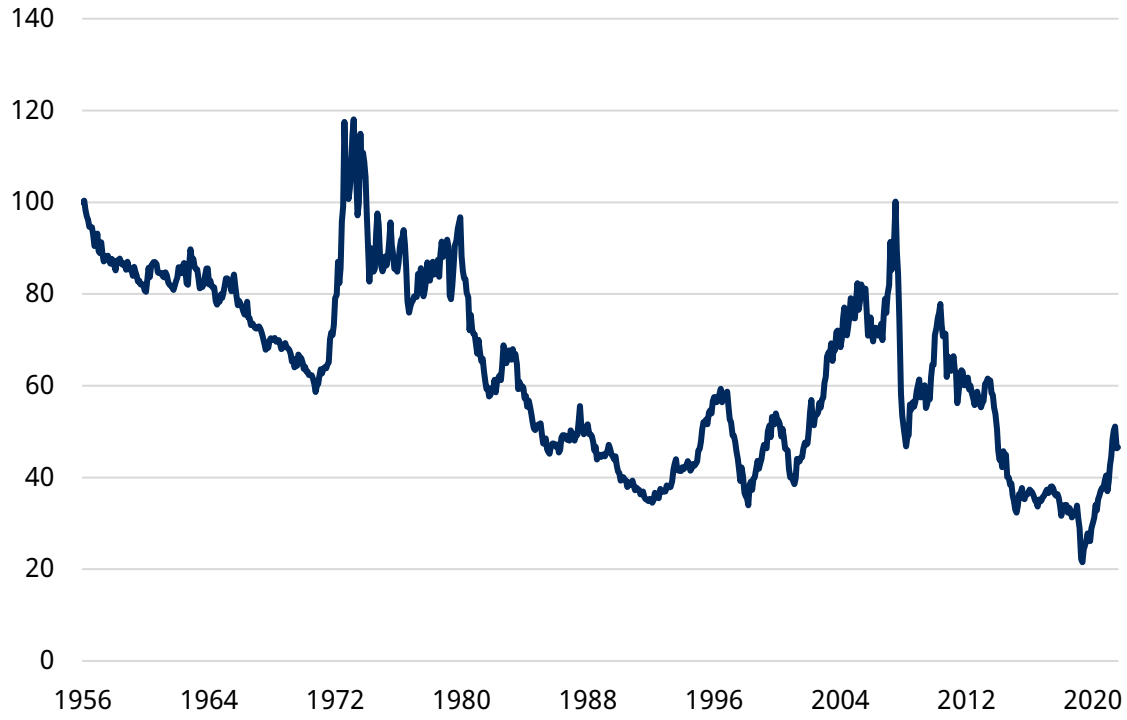
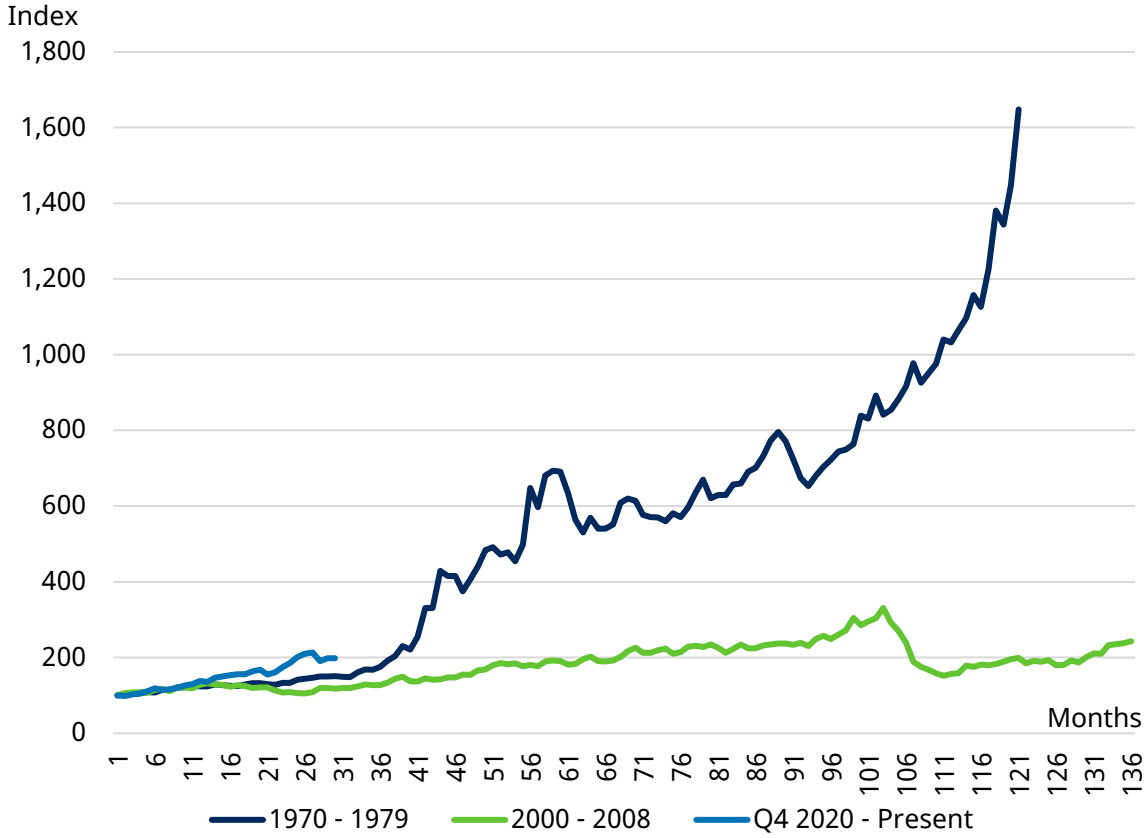
Why now for inflation protection?

1) Commodities are rising but remain cheap, especially when adjusted for inflation

CRB adjusted for inflation



Past and present rises in commodities[1]



Source: Schroders, Bloomberg – 31 August 2022. For illustrative purposes only and not a recommendation to buy/sell. [1] BCOMTR, monthly returns

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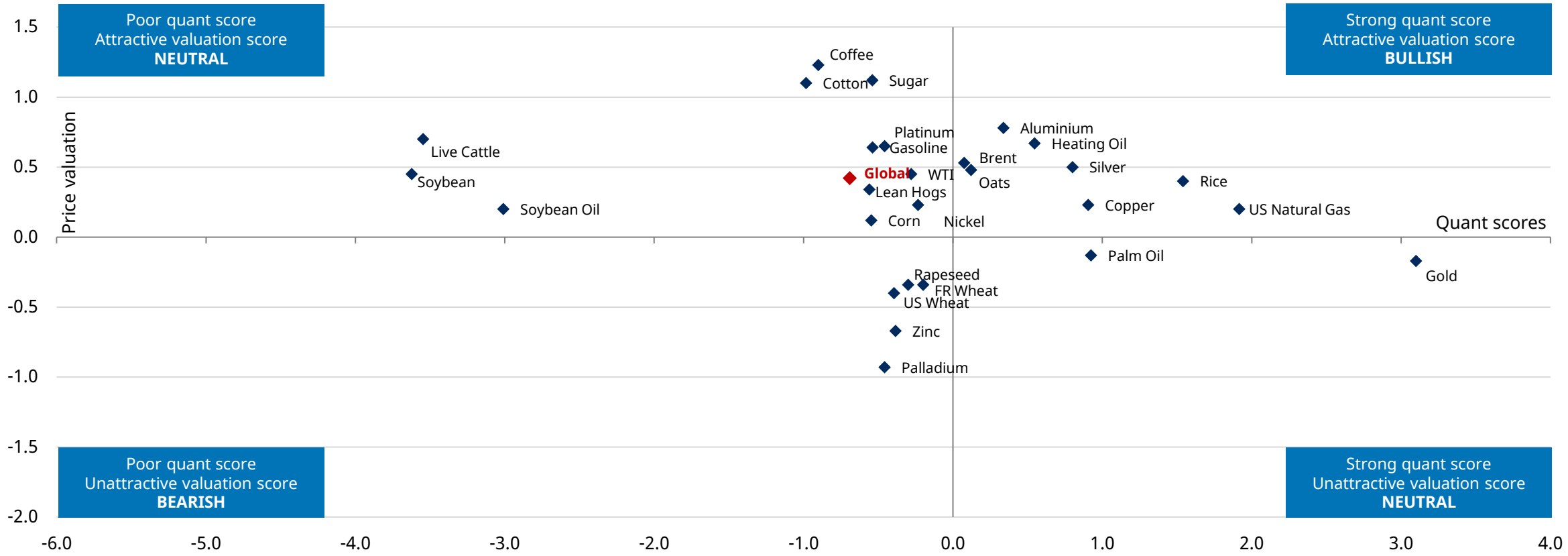
Why now for commodities?

1) Commodities are cheap on an absolute basis



X-axis: quant scores - scoring of 4 indicators derived from the supply-demand balance
Y-axis: price valuation – scoring of long-term inflation-corrected prices

Source: Schroders – 30 June 2022. For illustrative purposes only and not a recommendation to buy/sell.

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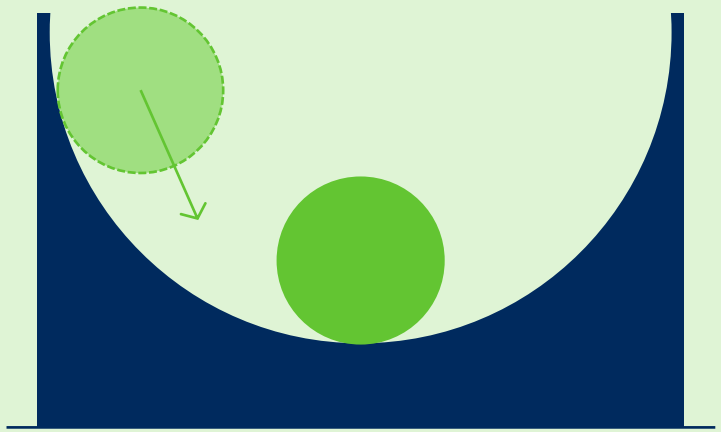
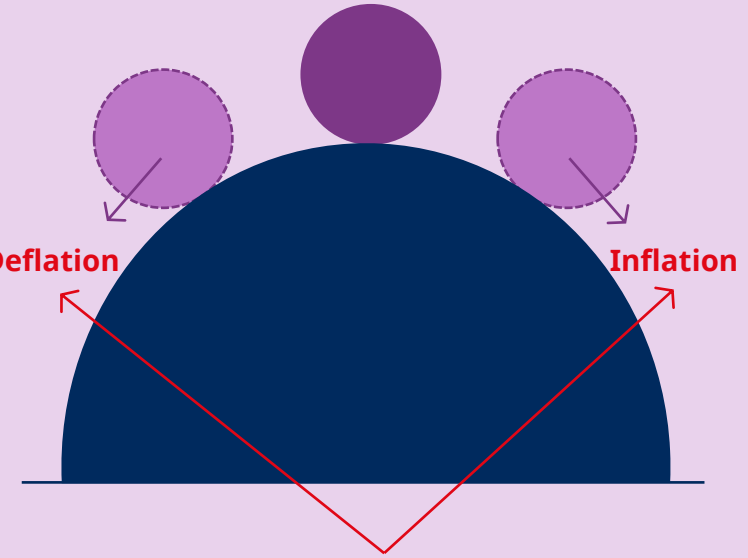
Why now for commodities?

2) An unstable economic equilibrium makes inflationary outcomes more likely

Stable Equilibrium — **1980s/90s** — **2008** — **Unstable Equilibrium** — **Now**

- Low debt/GDP
- Low stock market/GDP ratio
- Manageable deficits
- Geopolitical uni-polarity and dull domestic politics
- Dis-inflationary trends
- High property affordability
- Light touch monetary policy dominance





Which is the more palatable outcome for policy makers and political elites?

- Very high debt/GDP
- Very high stock market/ GDP ratio
- Very high deficits
- Geopolitical and domestic political polarisation
- Very unaffordable property
- A swing from capital to labour
- Heavy and permanent Central Bank / Fiscal policy interventions in the name of Climate Change / solving inequality

Source: Macro Strategy; Schroders. For illustrative purposes only and not a recommendation to buy/sell.

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Why now for commodities?

2) A new era of macro policymaking and the broader structural backdrop is also inflationary

40 Years of Disinflation 1980 – 2020	A New Inflationary Era (2021 - ?)
Free markets and e-regulation	**Solve climate change and inequality**
Volker at the Fed (monetary dominance)	**QE infinity and loose fiscal (fiscal dominance)**
Independent Central banks	**Subservient, re-politicised Central banks**
Globalised labour supply (WTO, EU, NAFTA) & demographic dividends	**Re-shoring, US-China conflict, Ageing global population**
Supply chains (just-in-time)	**Supply chain resilience (replication and precautionary stocks)**
Mass movement of peoples	**Fear of immigration**
Asset inflation (Wall Street)	**Labour / commodity inflation (Main Street)**

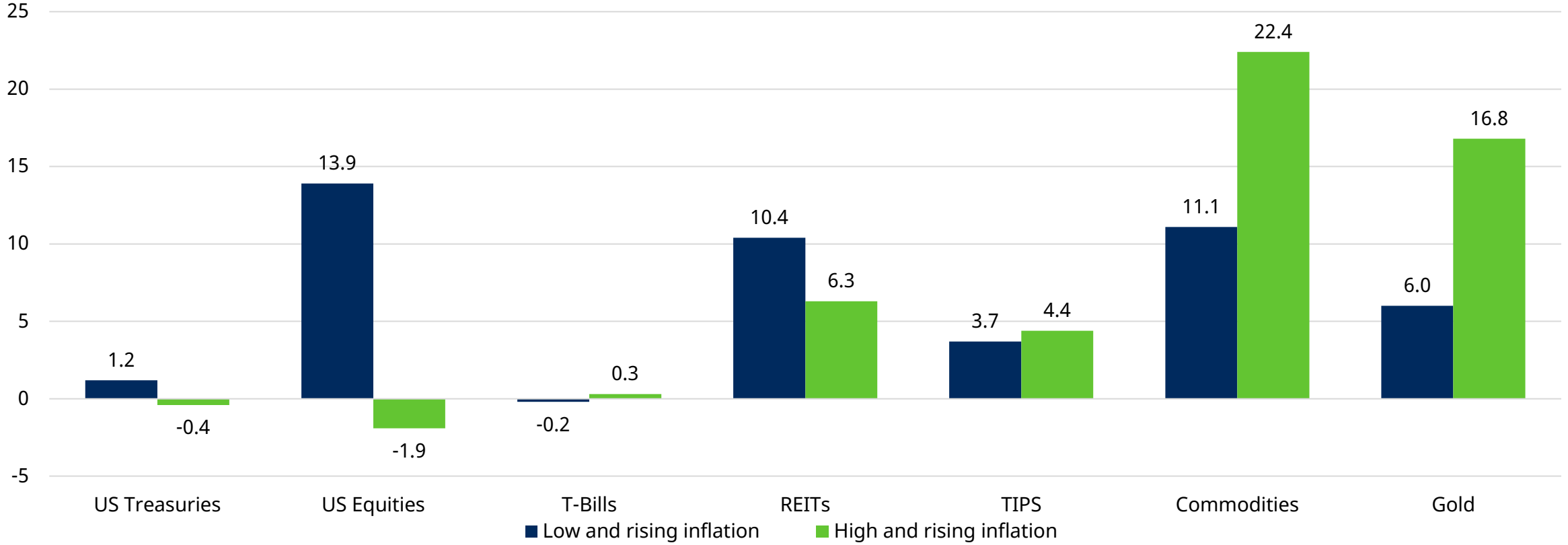
Source: Schroders; Bloomberg – 29 April 2022.

Why now for commodities?

2) Inflation is higher than many thought possible and will likely prove sticky

Commodities investments are a hedge against rising inflation

Average 12-month inflation-adjusted return, %



Source: Datastream Refinitiv and Schroders. Data from March 1973 to December 2021, except TIPS from March 1997. Low/high inflation is defined as annual inflation below or above 3% on average over a 12-month period. Rising/falling is defined as the change in the inflation rate over 12 months (inflt+0 - inflt-12). For illustrative purposes only and not a recommendation to buy/sell.

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Why now for commodities?

3) Climate change mitigation is a key supply and demand driver

The impact of climate change mitigation policies is the underappreciated driver of 'greenflation' dynamics

Demand is set to accelerate

- ✓ The energy transition is set to see demand for metals accelerate in the coming years as the world starts the switch to EVs and more renewable energy sources.

Underinvestment in supply

- ✓ Global focus on climate change mitigation strategies is distorting the relationship between increased prices and supply responses.
- ✓ Higher prices remain the most likely path to stimulate investment in commodity sectors.

Broad inflation risks increased

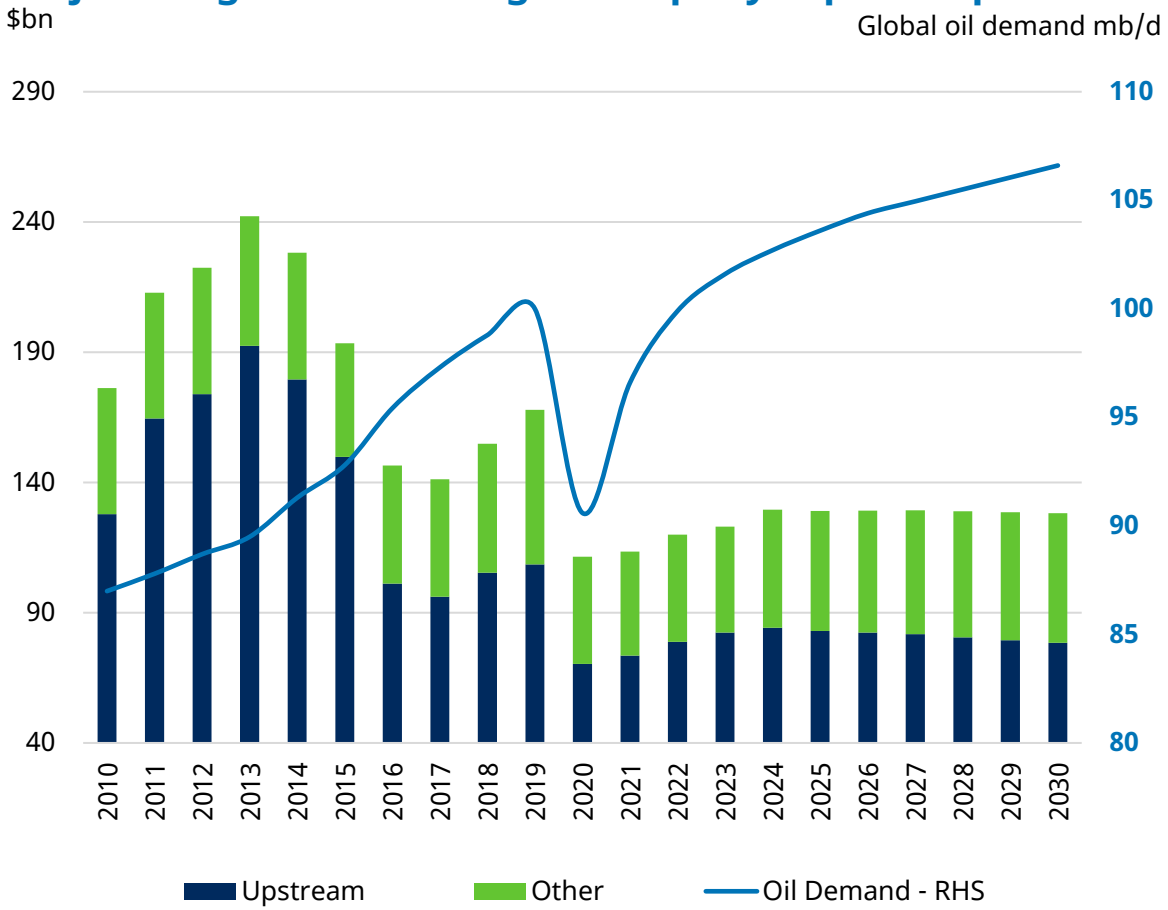
- ✓ Co-ordinated combination of aggressive fiscal and monetary policy may be required to facilitate climate mitigation and is one reason high inflation will persist.
- ✓ Commodities provide a hedge against rising inflation that few other asset classes have been able to demonstrate historically.

Source: Schroders.

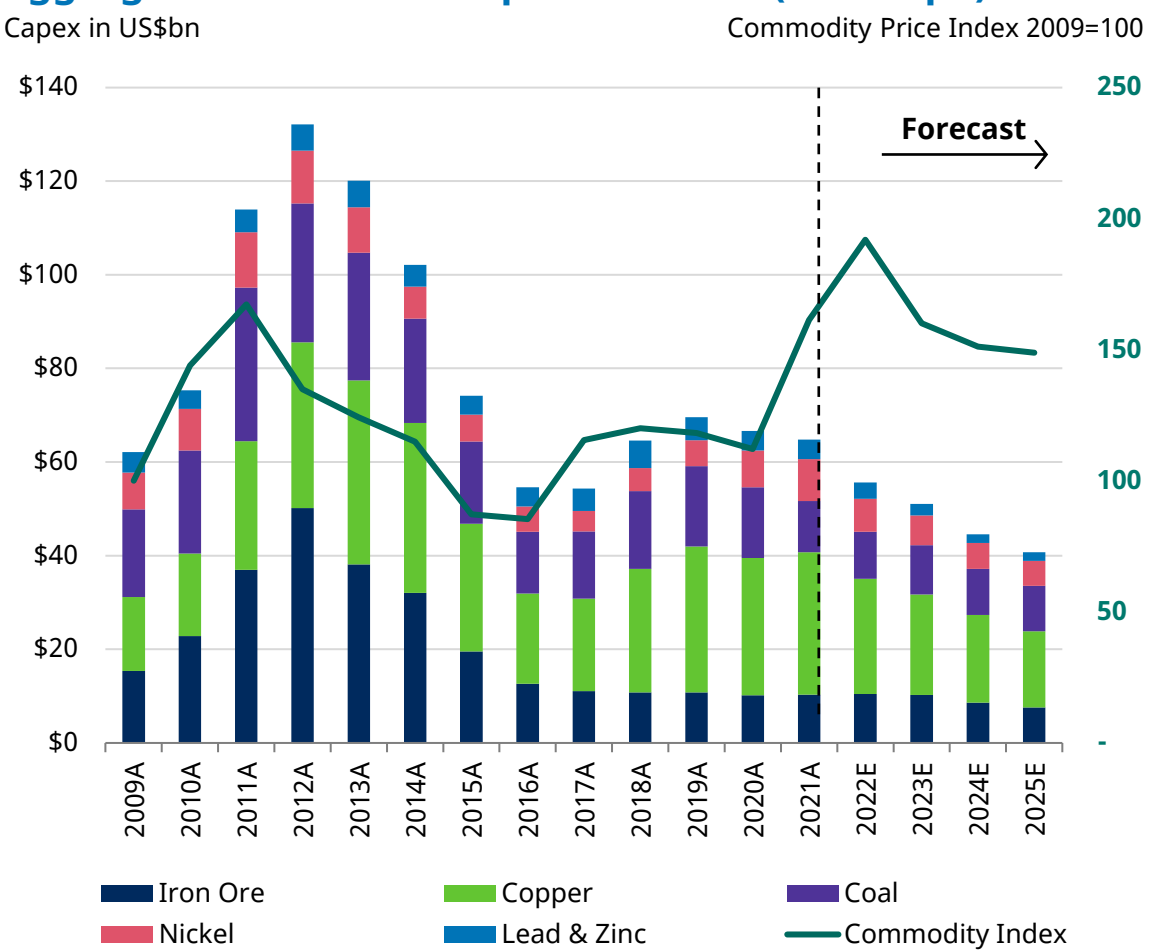
Why now for commodities?

3) A climate change driven commodity super-cycle?

Major integrated oil and gas company capital expenditure[1]



Aggregate base metal Capex forecast[2] (US$bn pa)



Source: [1]Company data, Bloomberg; BNEF; Macquarie; WoodMac; OPEC; Schroders – September 2021. [2]Scotia – 29 April 2022. For illustrative purposes only and not a recommendation to buy/sell.

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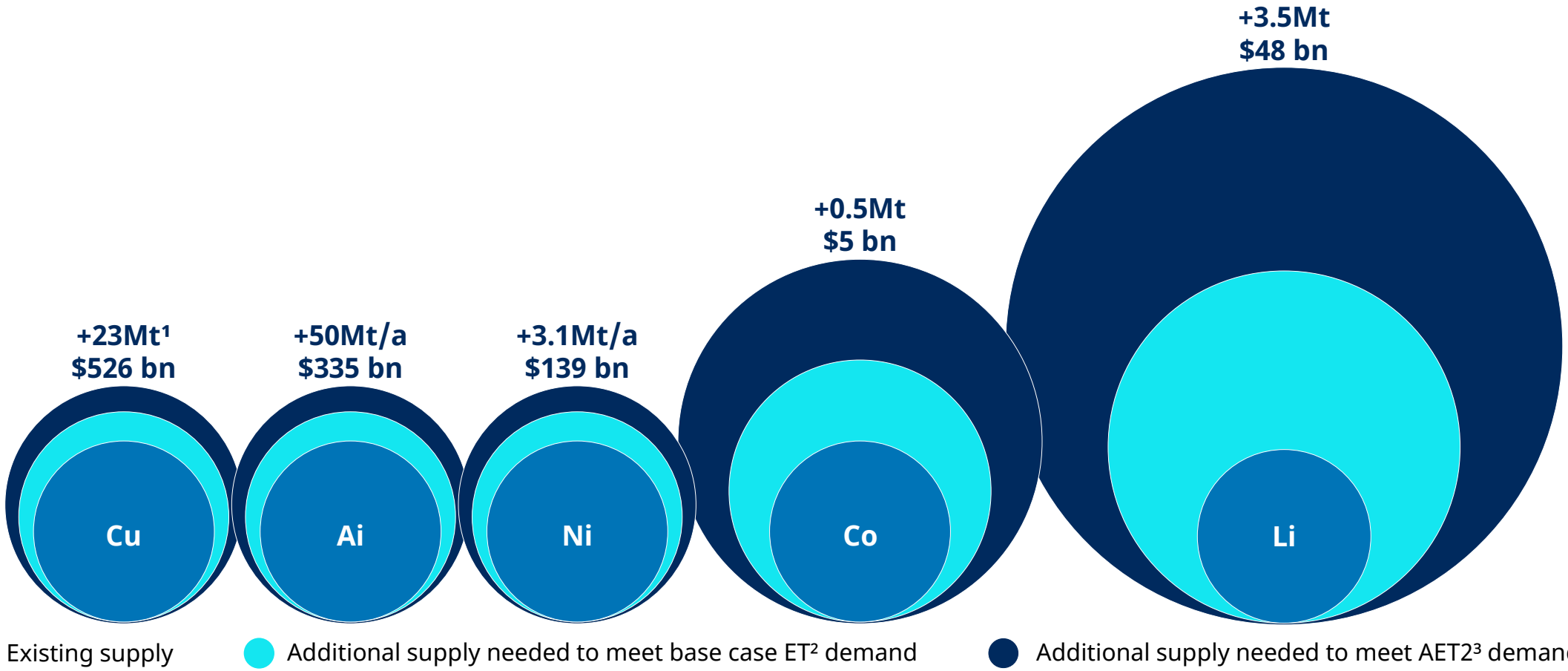
Why now for commodities?

3) Accelerating demand for metals - energy transition

Metals needed to support a 2 degree trajectory would require over 1 trillion of investment over next 15 years



Source: Bloomberg Intelligence, BNEF, Schroders. For illustrative purposes only and not a recommendation to buy/sell. ¹Metric tons. ²Energy Transition. ³Accelrated Energy Transition 2 – which considers how the world can limit global warming under 2C.

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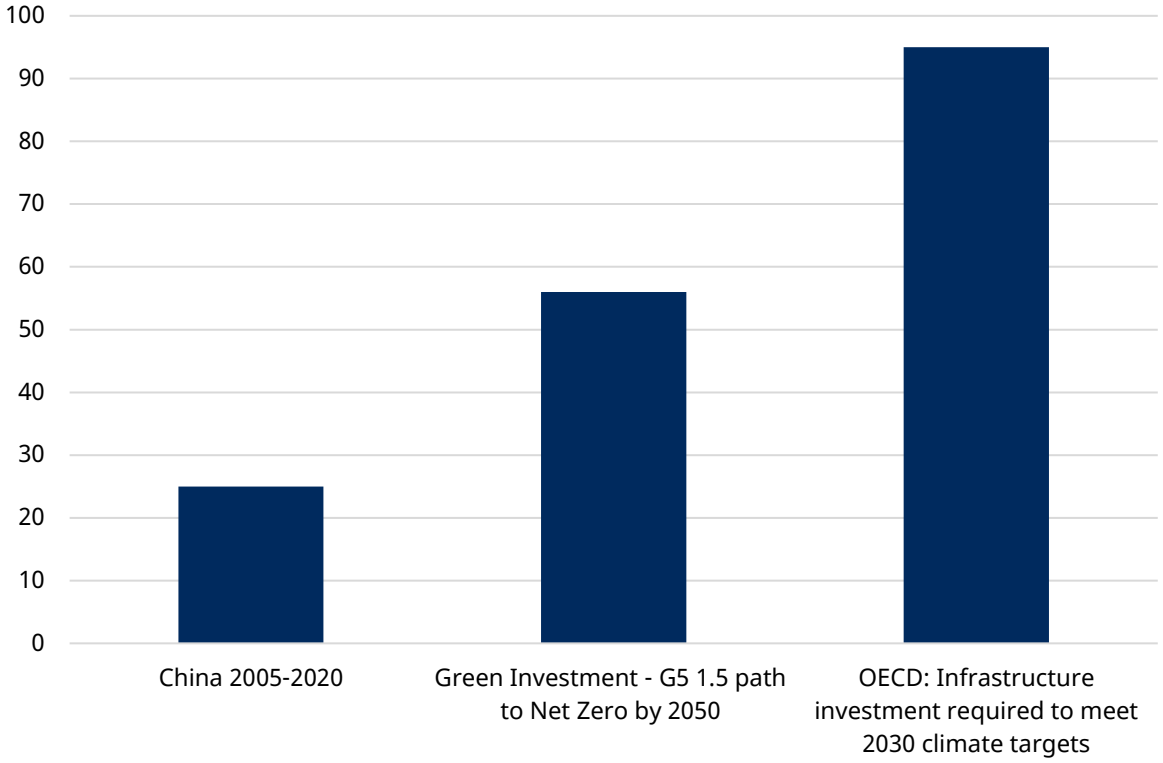
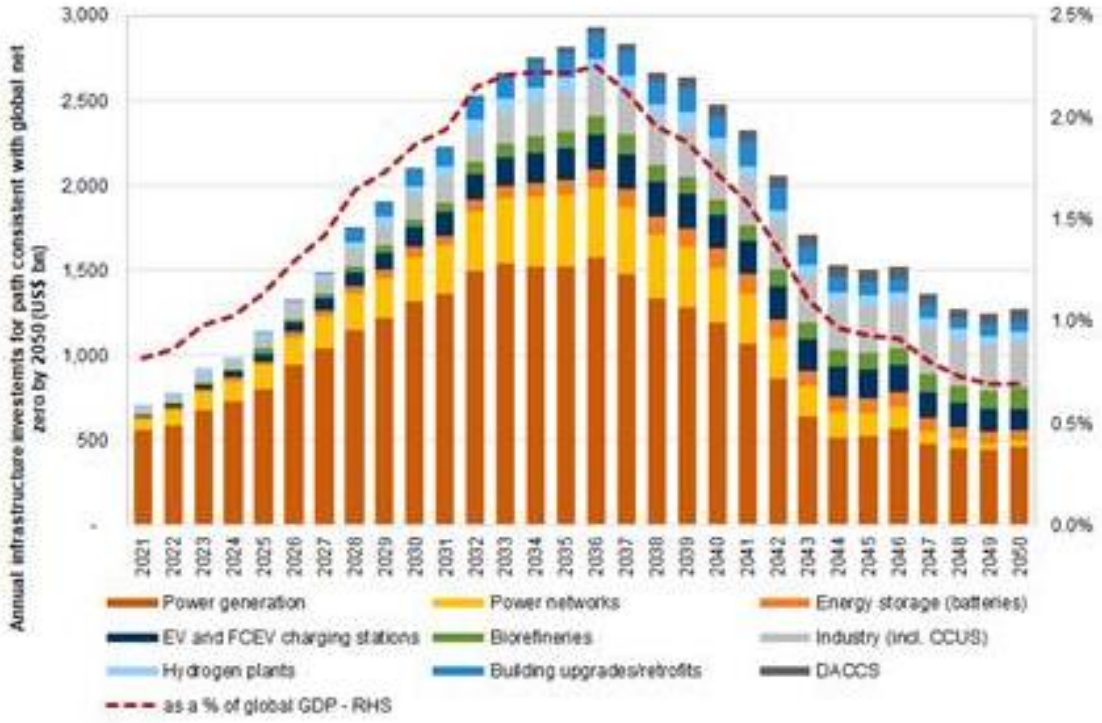
Why now for commodities?

3) The scale of climate mitigation capex estimates are huge

Climate mitigation spending in context (US$tn)



Green Capex spending for 1.5 path to Net Zero by 2050[1]



Source: OECD, Goldman Sachs, Wood Mackenzie, Schroders – December 2021. [1]G5 countries. For illustrative purposes only and not a recommendation to buy/sell.

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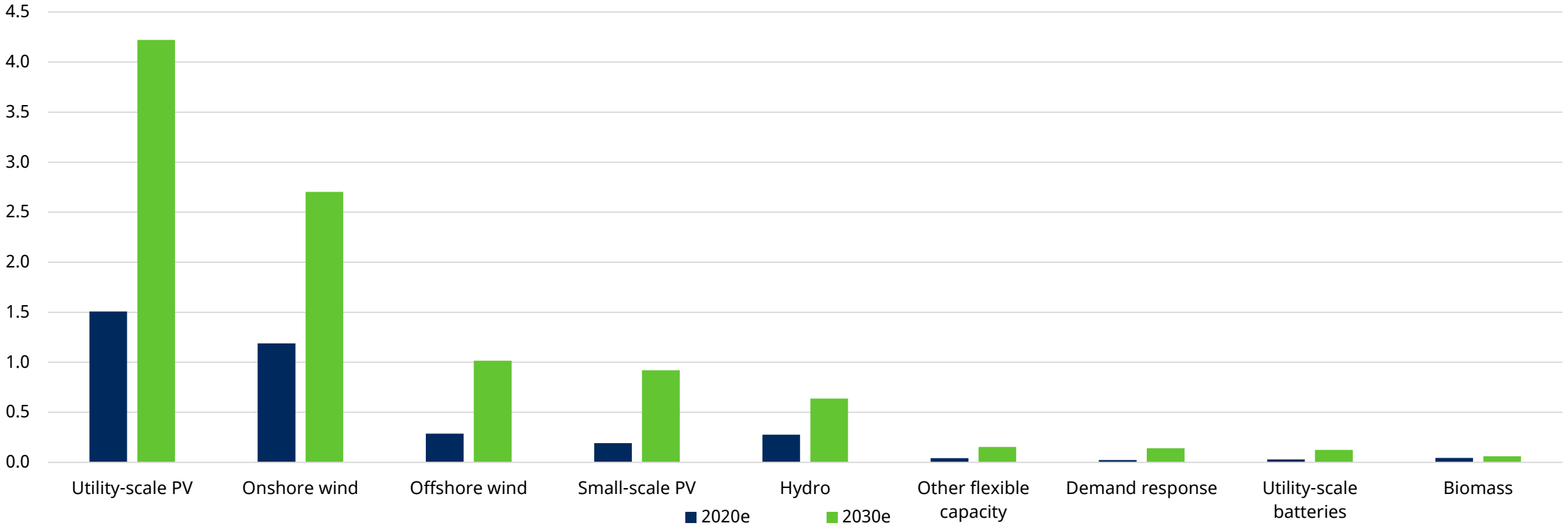
Why now for commodities?

3) A climate change driven commodity super-cycle?

Copper demand in 'New Energy' segments of the Energy Transition (2020e and 2030e, Mt)



Source: Bloomberg Intelligence; BNEF; Macquarie; WoodMac; OPEC; Schroders – September 2021. For illustrative purposes only and not a recommendation to buy/sell.

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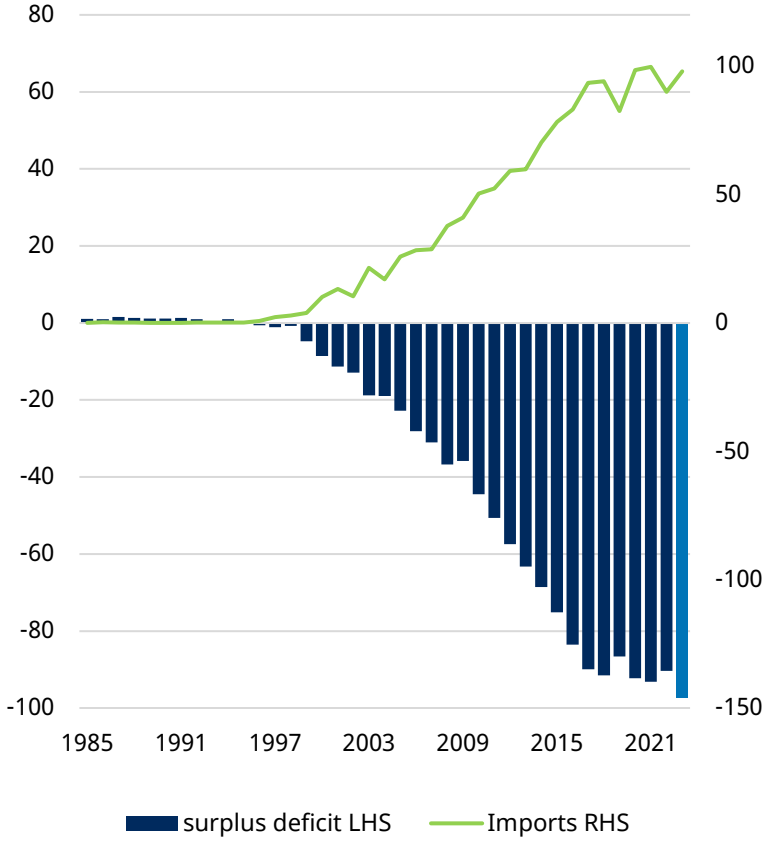
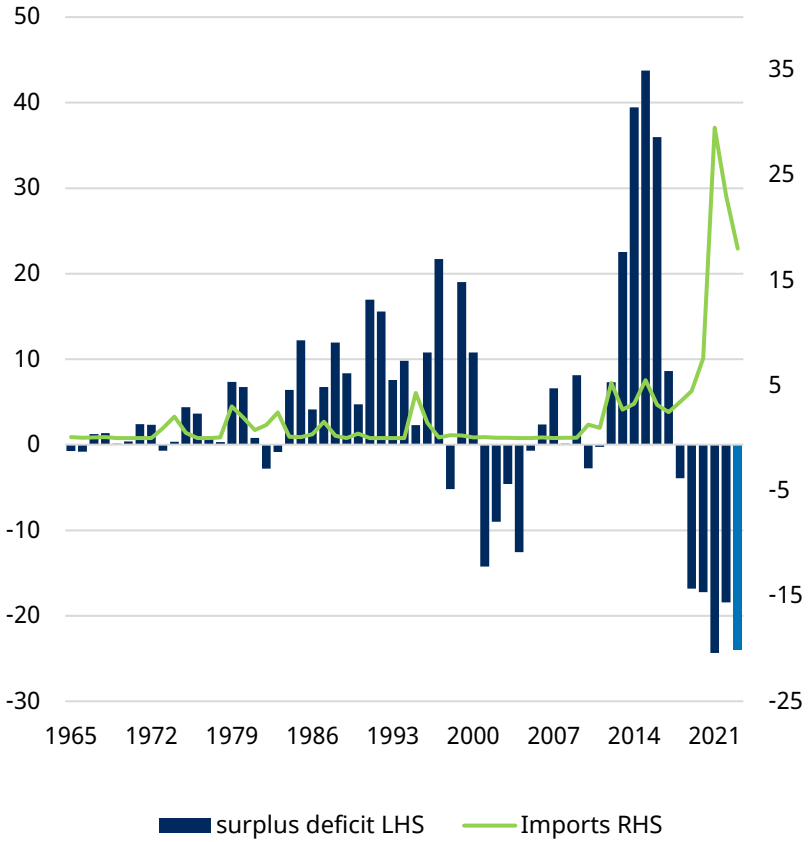
Why now for commodities?

4) Accelerating demand for agriculture - China has shifted into a structural deficit

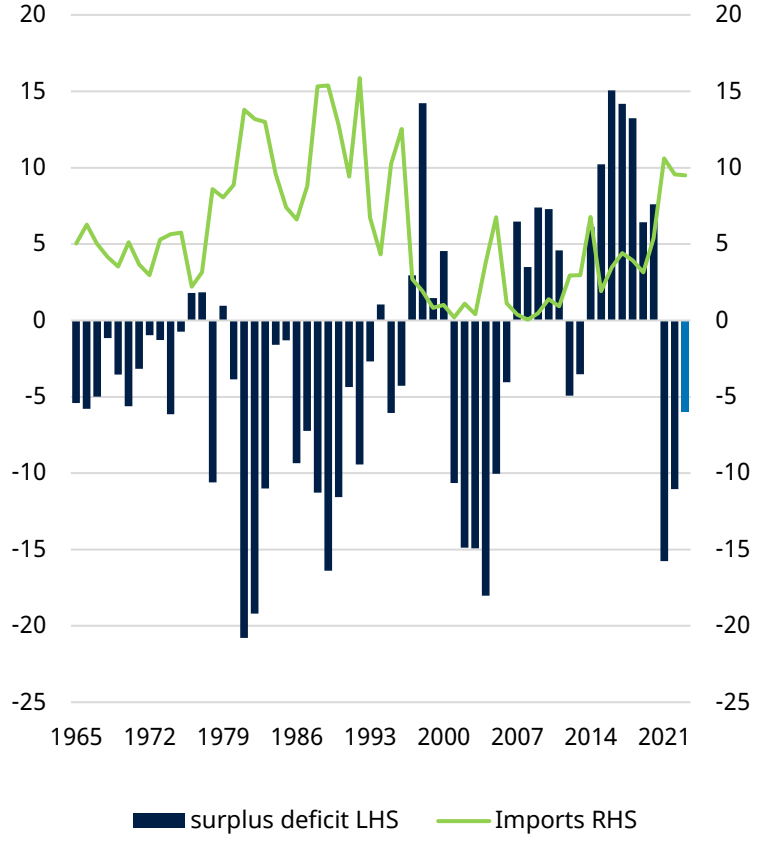
China soybean deficit is now close to 100MT (Million MT)



Corn buy commitments still high (Million MT)



Wheat import demand to increase (Million MT)



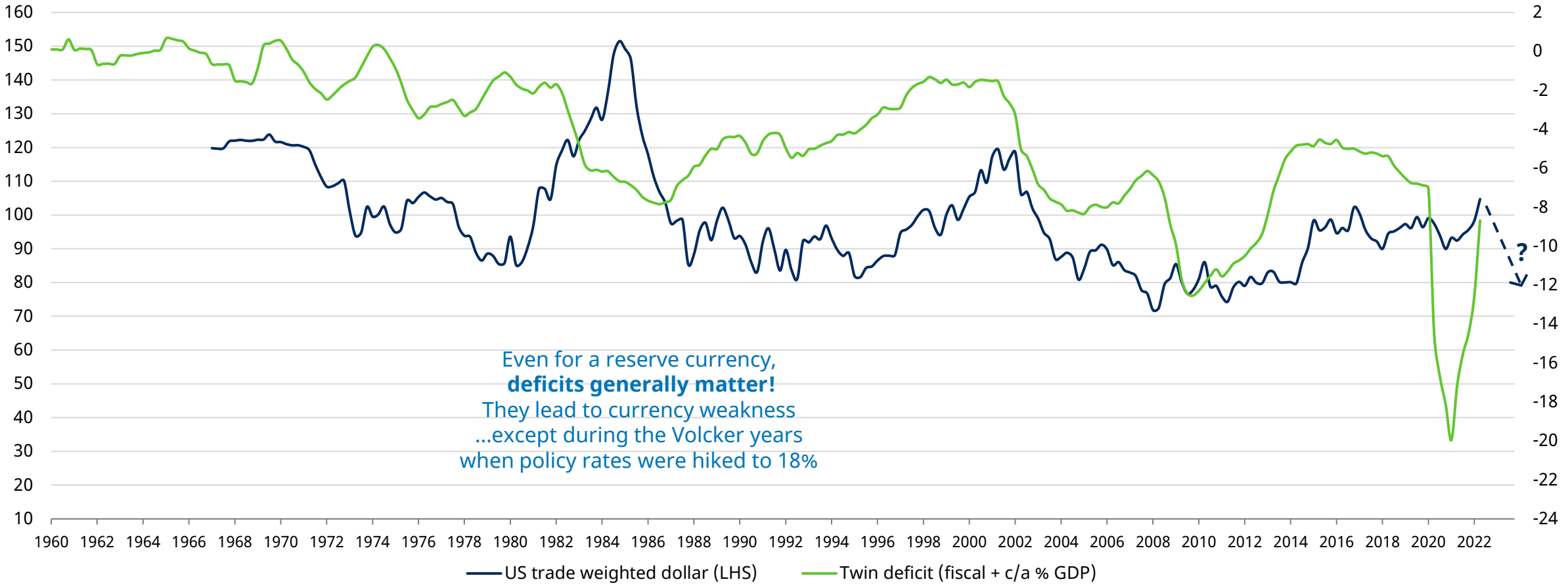
Source: USDA, Schroders – September 2022. For illustrative purposes only and not a recommendation to buy/sell.

Schroders

Why now for commodities?

5) The US dollar headwind will abate at some stage

US economy accumulating imbalances – US trade weighted dollar vs US twin deficit



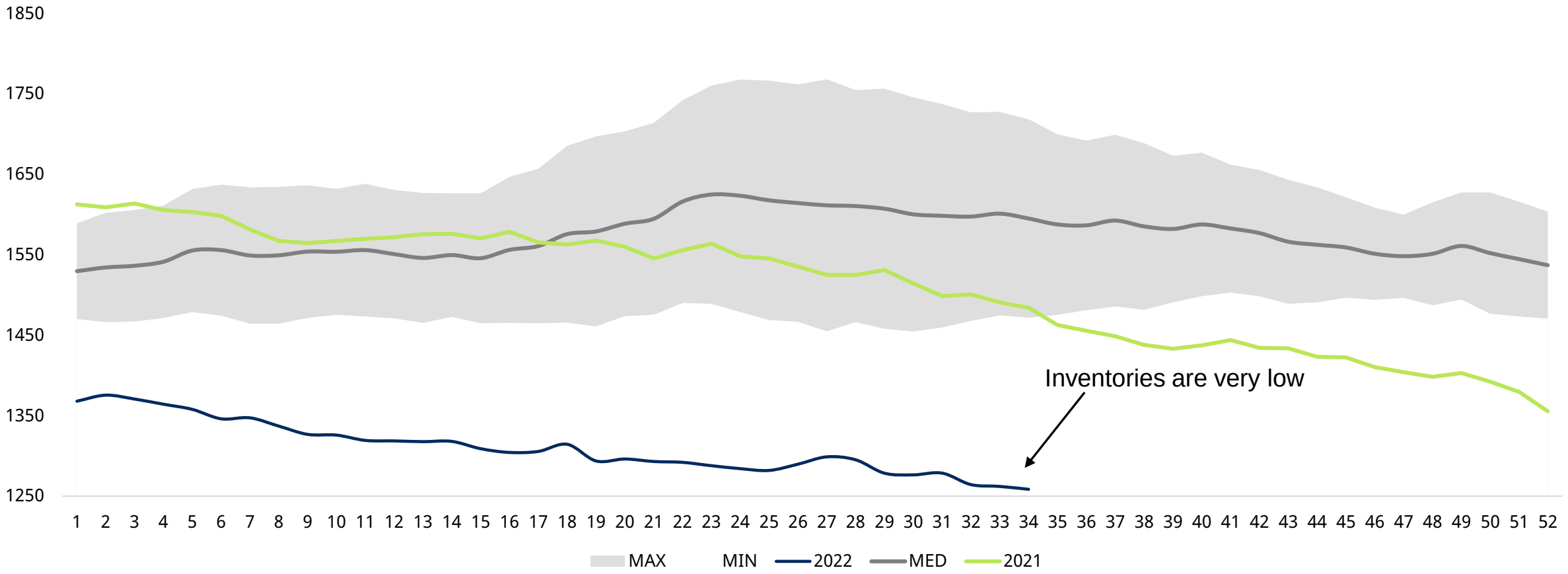
Source: Bloomberg; Schroders – 30 June 2022.

Schroders

Oil – Short term demand headwinds hide supply constraints

Oil inventories remain low and have yet to show any signs of rising.

Global inventories – Total Oil (mln bbl) v's average, max, min 2016 to 2020

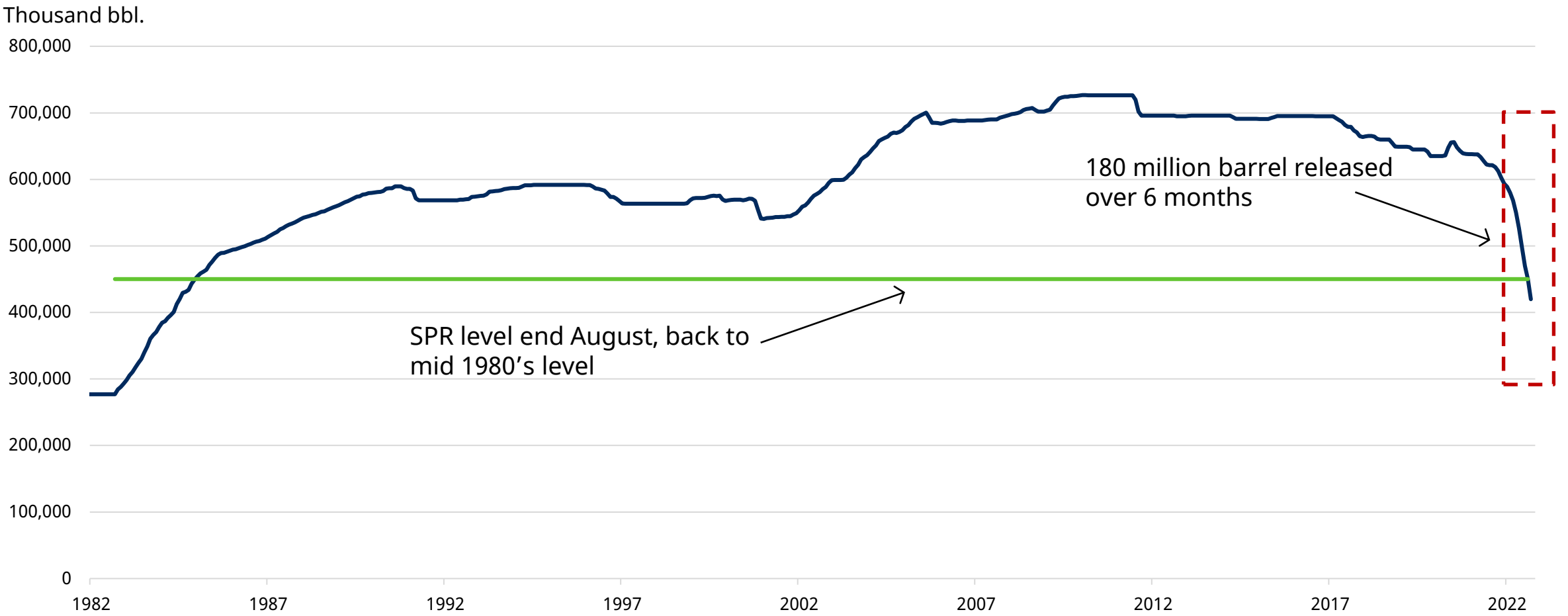


Source: Morgan Stanley – September 2022. Sectors shown for illustrative purposes only and should not be viewed as a recommendation to buy/sell. Past performance is not a guide to future performance and may not be repeated

Schroders

US Strategic Petroleum Reserve

The release of reserves is aggressive but is a “loan” to the market, not a long term solution to an under supplied oil market



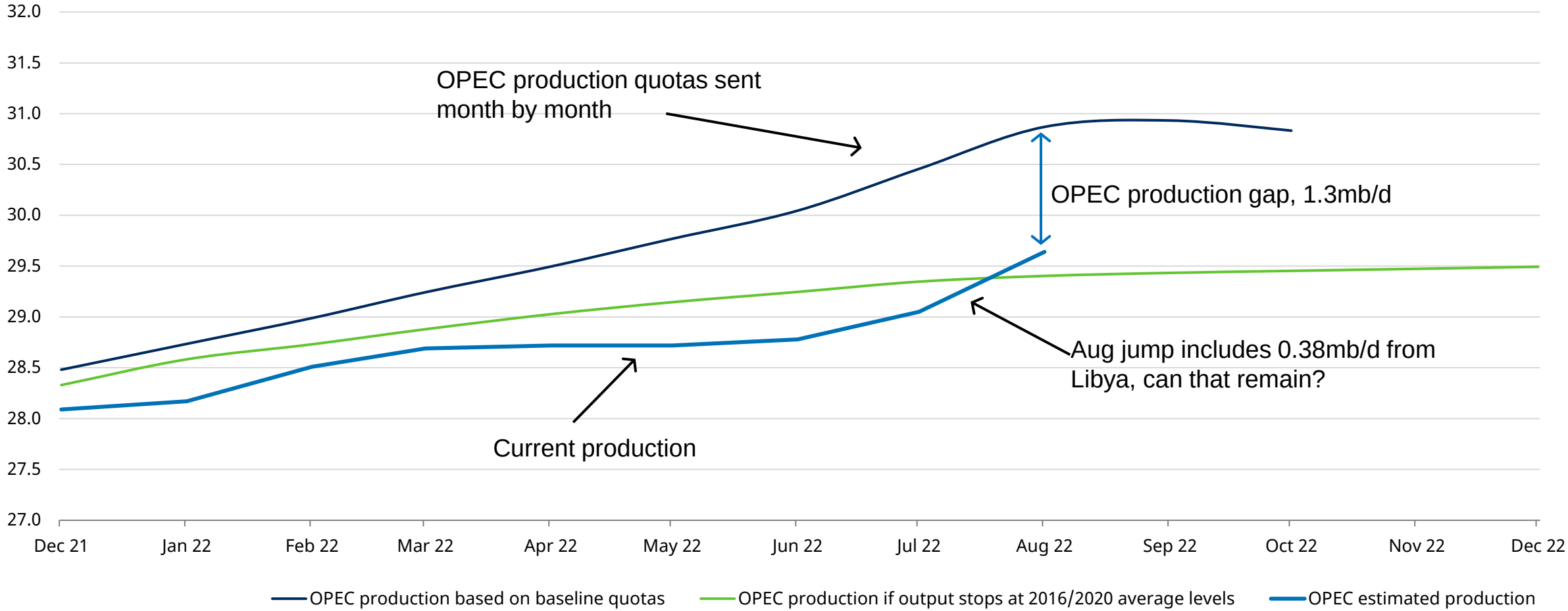
Source: Bloomberg, Schroders - September 2022.

Schroders

OPEC production scenario analysis

OPEC is operating at close to maximum and has failed to get near their quotas

Million barrels per day

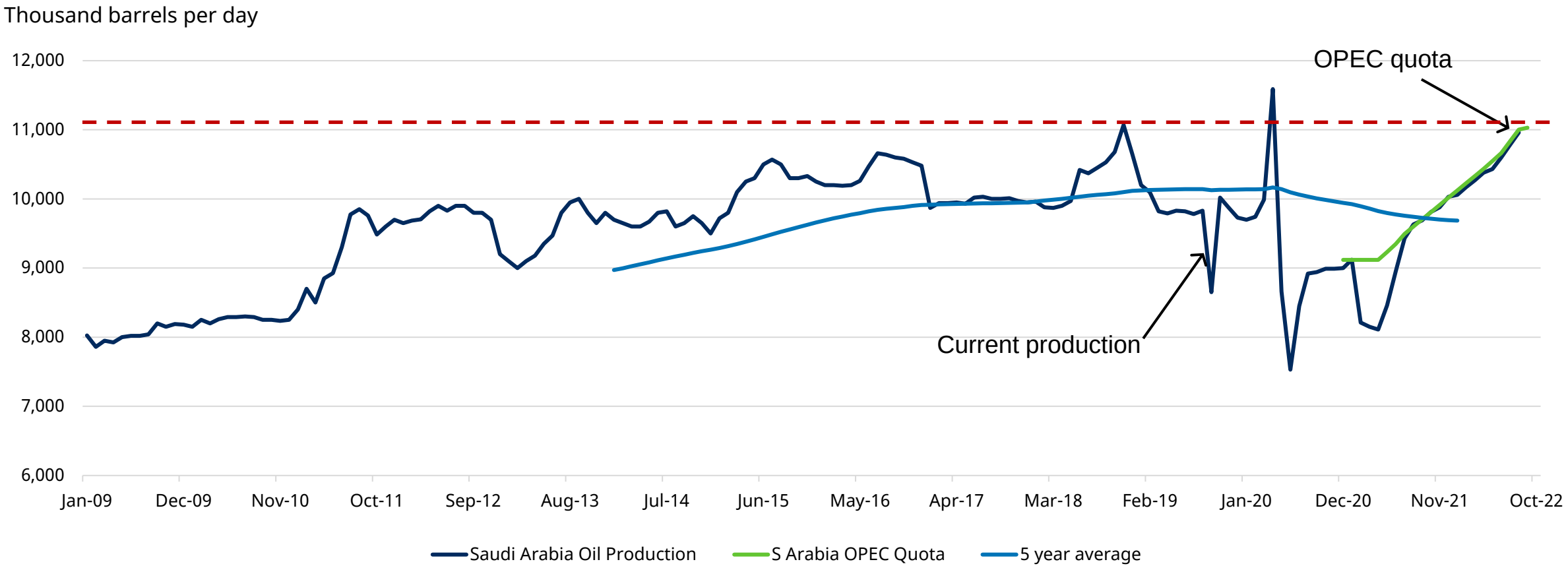


Source: Bloomberg, Schroders – 5 September 2022. For illustrative purposes only and not a recommendation to buy/sell.

Schroders

OPEC production analysis

Saudi Arabia will have to produce on a sustained basis at levels rarely seen before



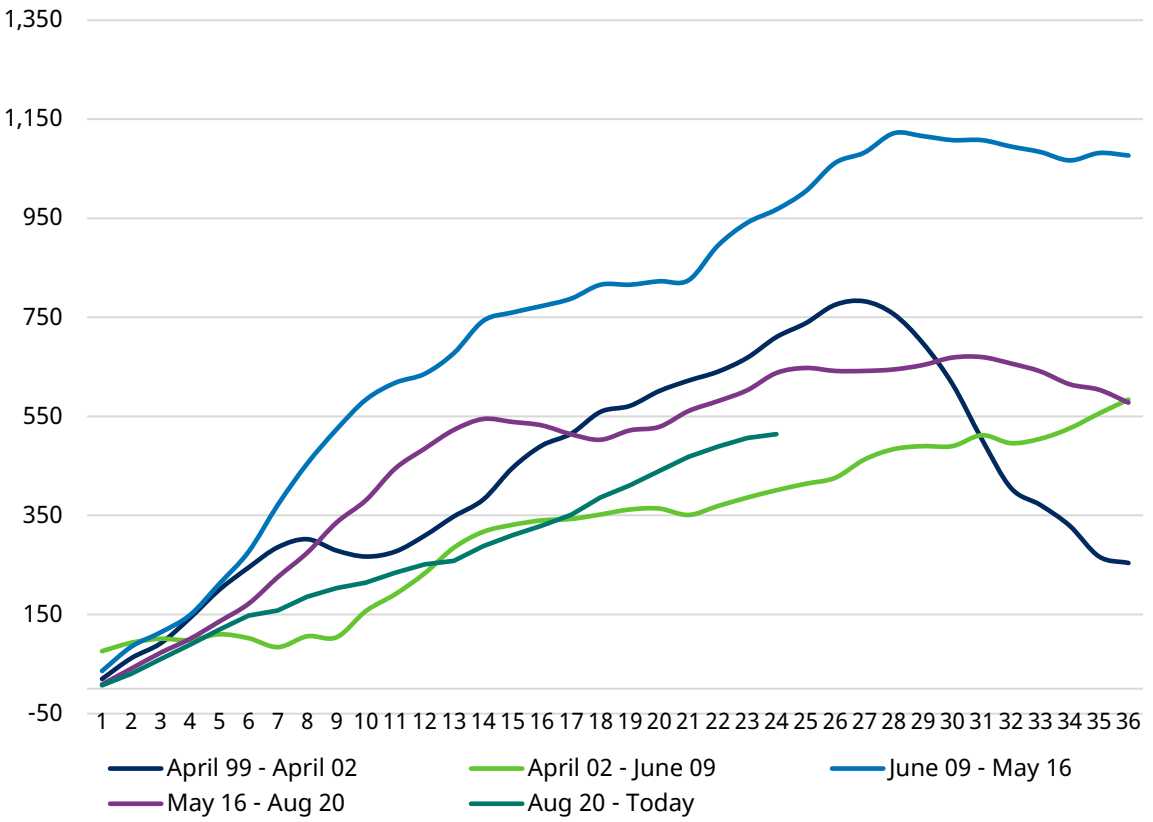
Source: Bloomberg, Schroders; Bloomberg - 21 June 2022.

Energy capex is significantly lagging price

Supply: the increase in rigs, as oil prices have recovered, has been slow as companies are reluctant to invest

Baker Hughes Oil & Gas rig count v's oil price

The rise in rigs has lagged other cycles



Source: Bloomberg – September 2022. For illustrative purposes only and not a recommendation to buy/sell.

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Ireland's carbon budget programme & a pathway net-zero energy

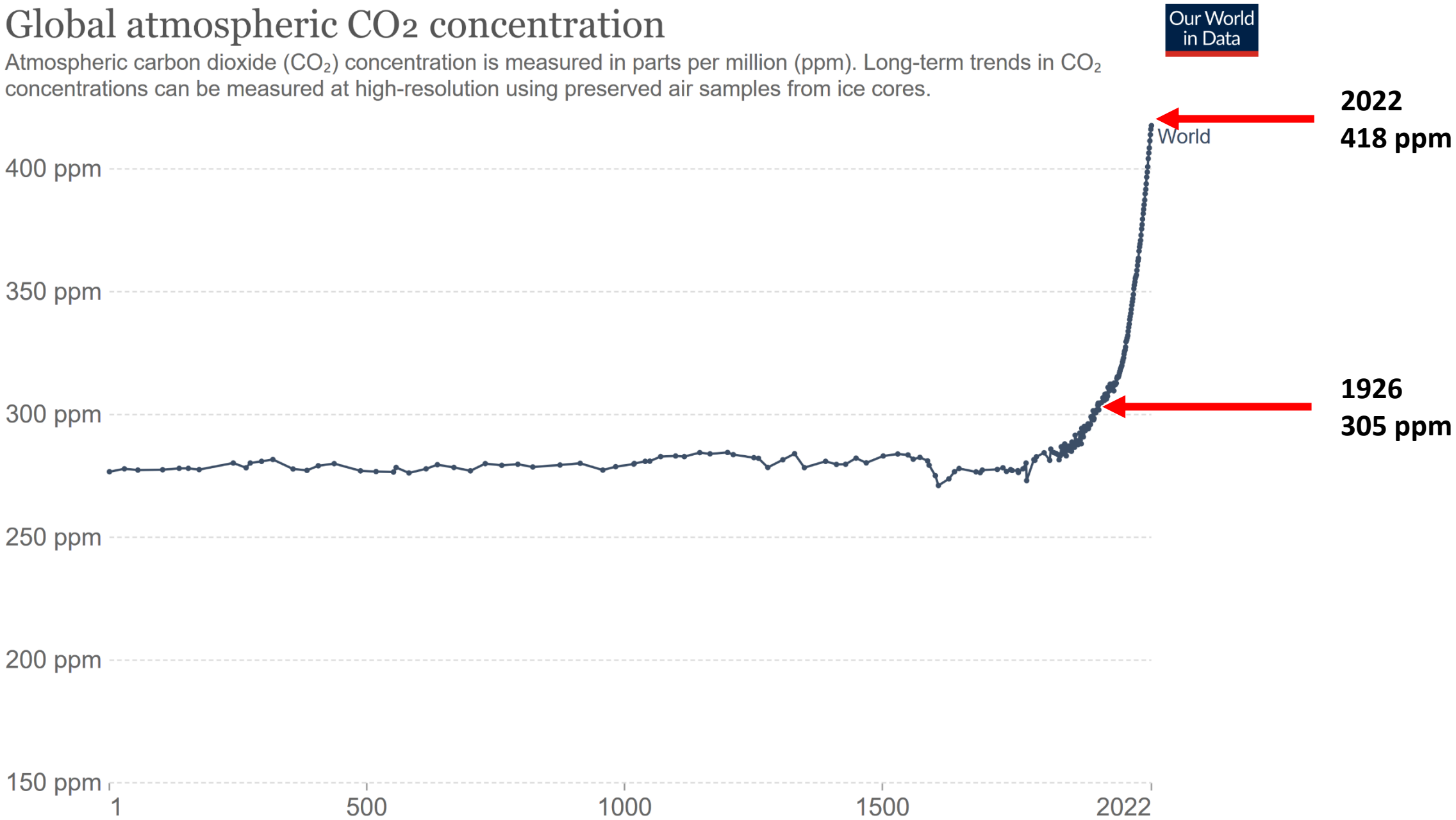
Prof. Hannah Daly

Society of Actuaries in Ireland - Finance and Investment Forum

October 11th 2022

Global atmospheric CO_2 concentration

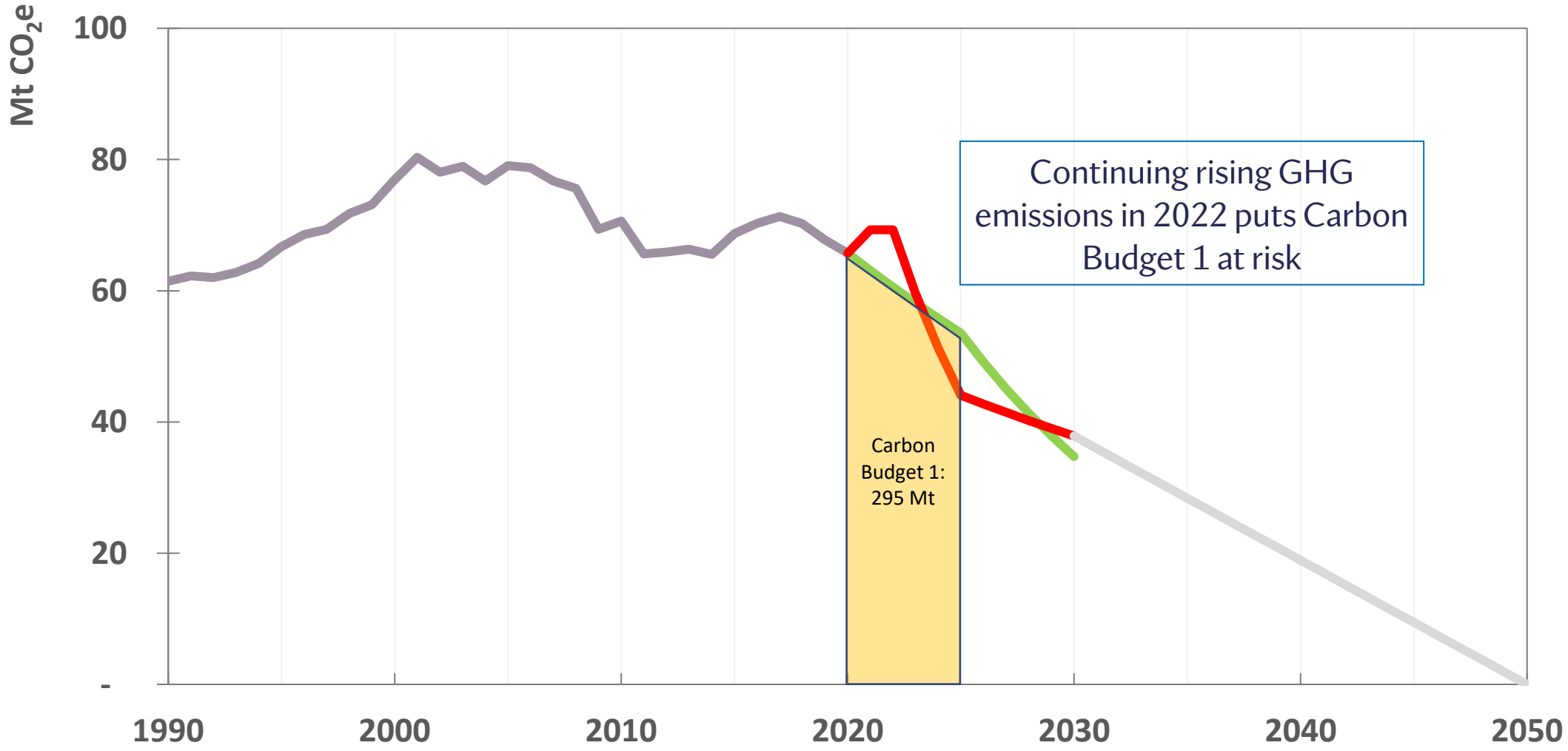
Atmospheric carbon dioxide (CO_2) concentration is measured in parts per million (ppm). Long-term trends in CO_2 concentrations can be measured at high-resolution using preserved air samples from ice cores.



Source: National Oceanic and Atmospheric Administration (NOAA)

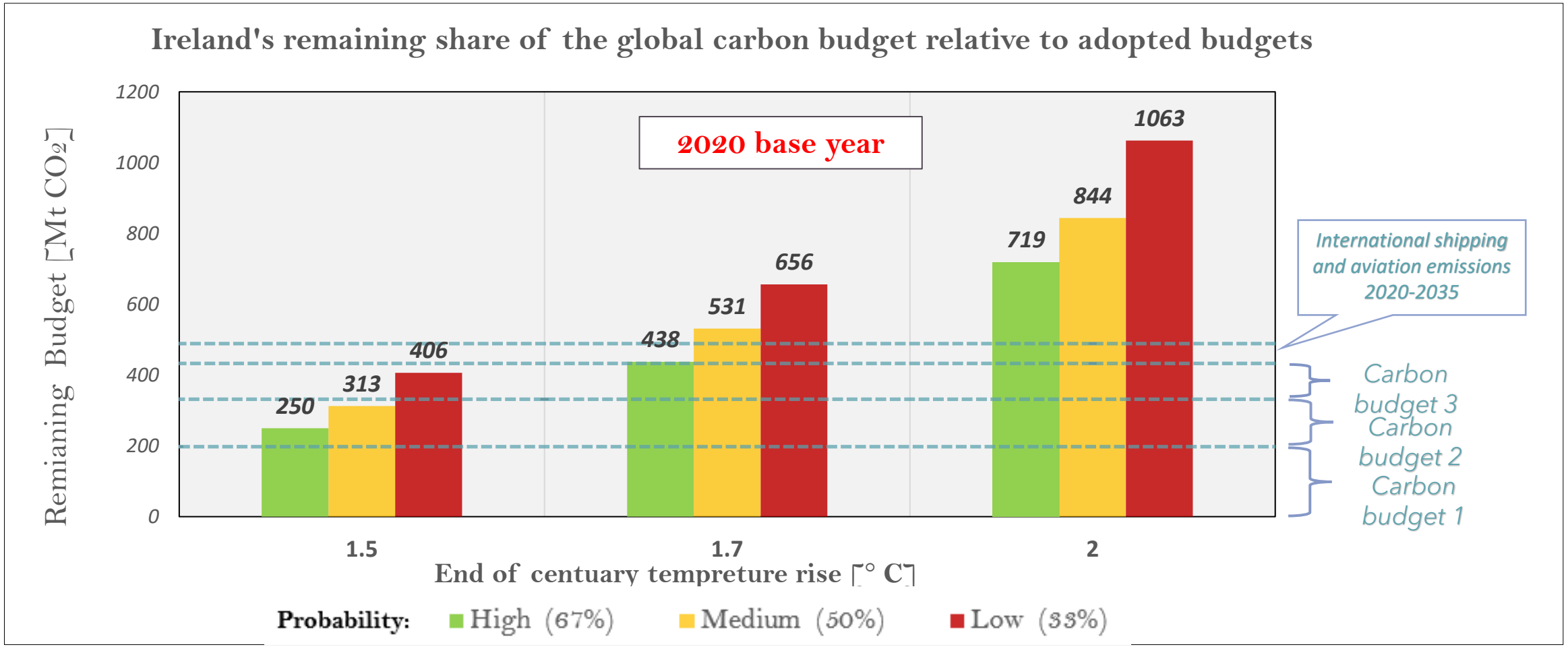
Ireland's carbon budget programme

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh



Are Ireland's carbon budgets compatible with required global effort?

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh



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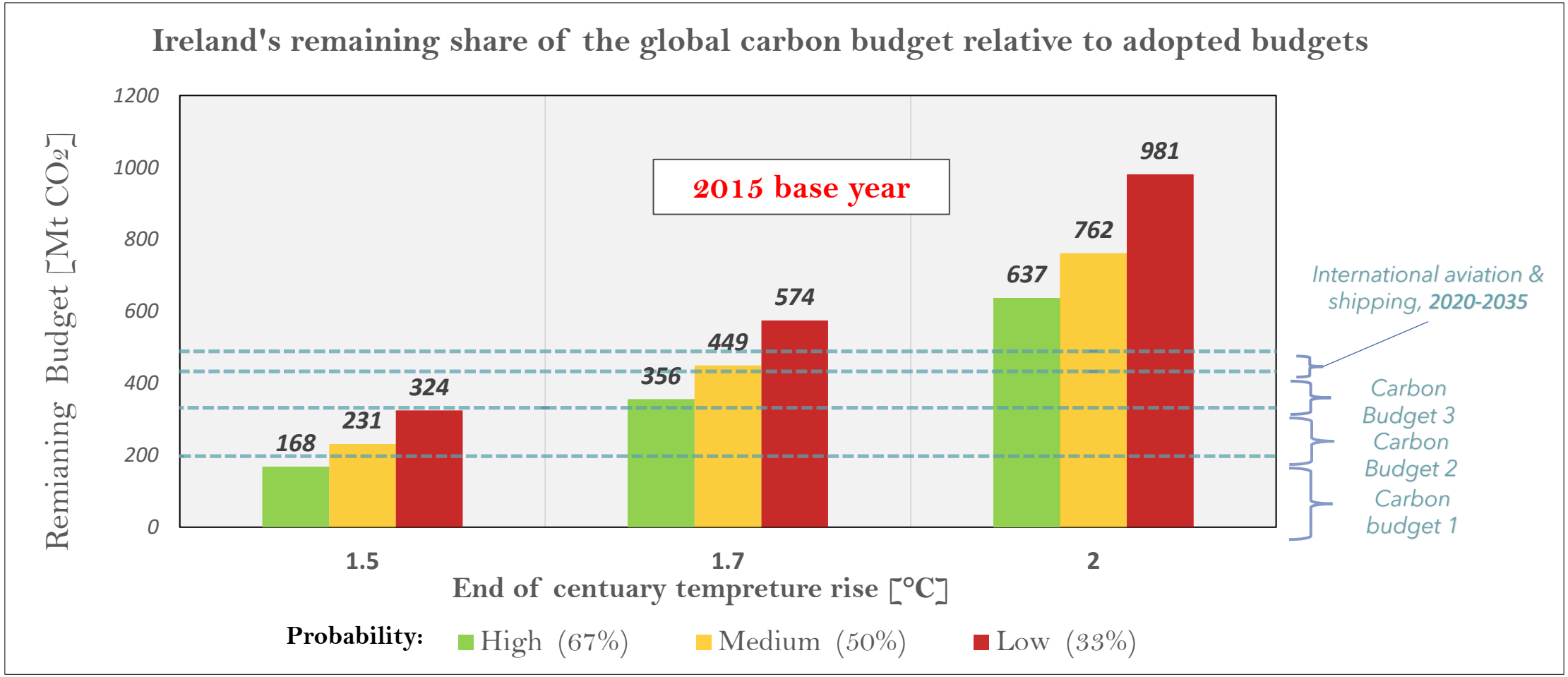

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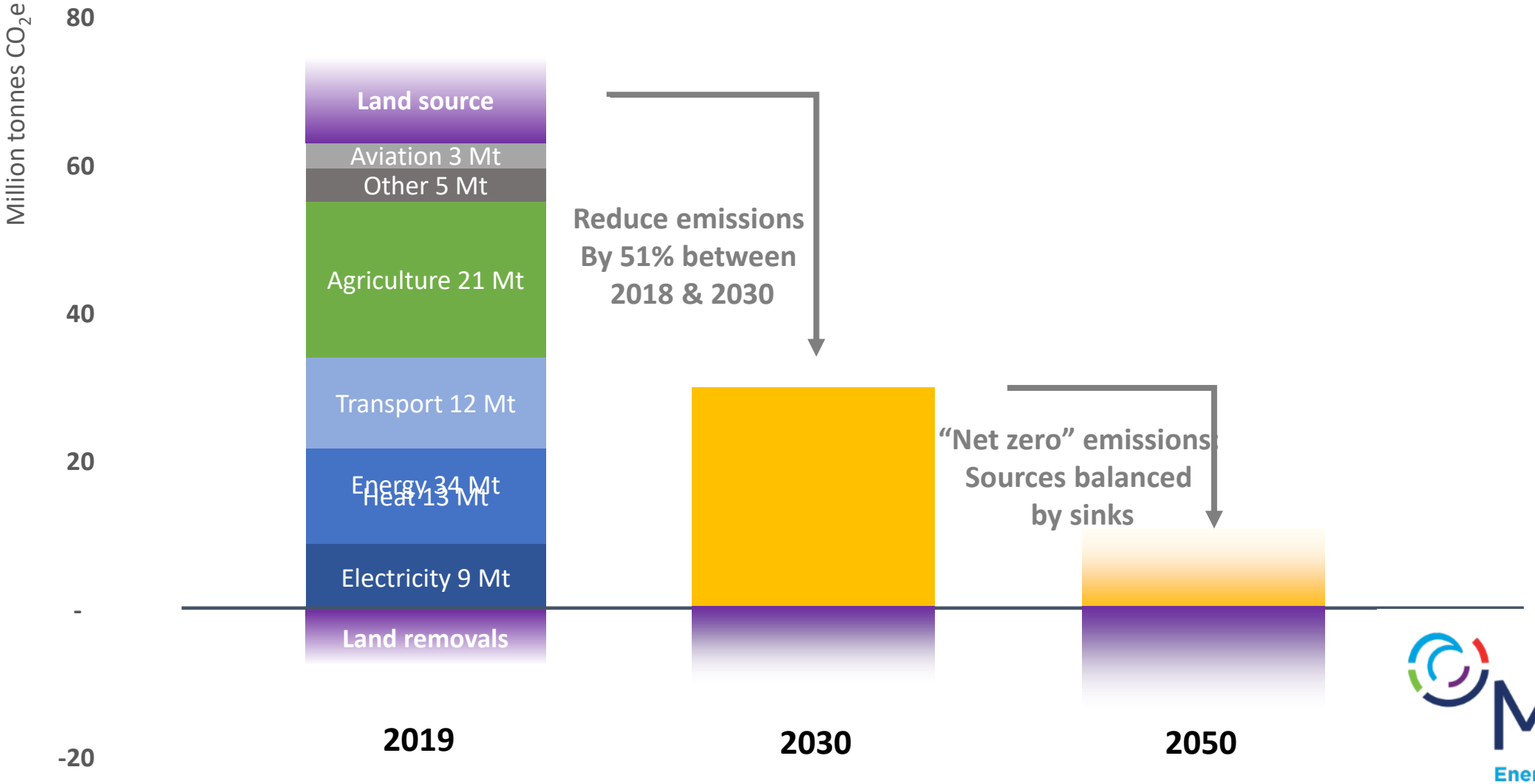
The Energy Trilemma

ENERGY SECURITY

ENERGY SUSTAINABILITY

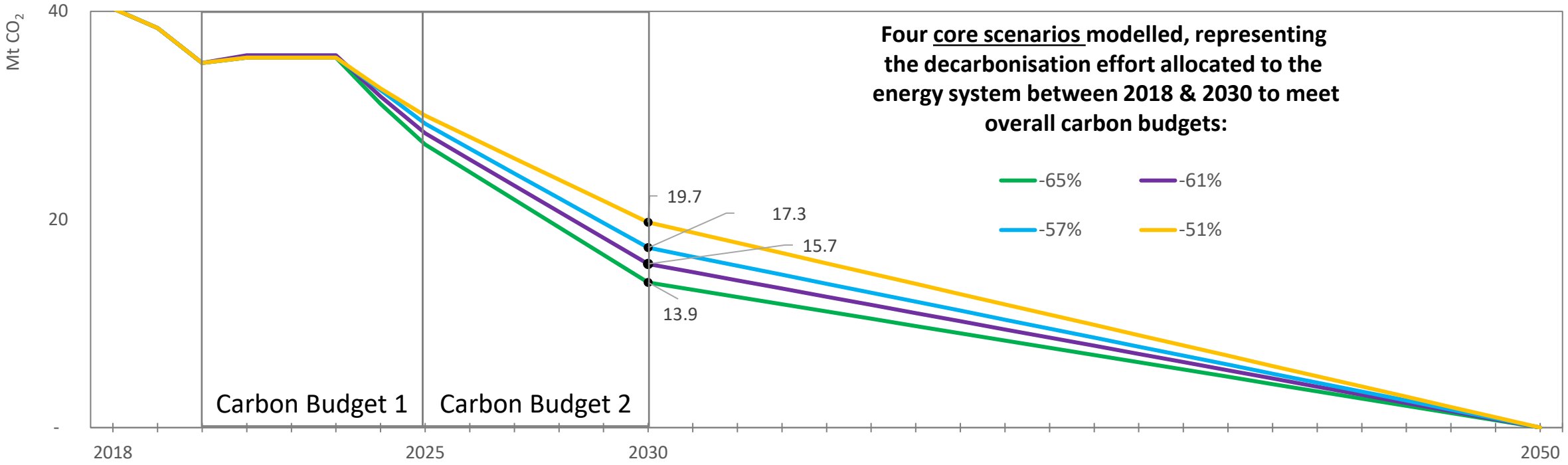
ENERGY AFFORDABILITY

Ireland has committed to halve greenhouse-gas emissions by 2030 and reach "net zero" by 2050



MaREI
Energy · Climate · Marine

Key energy system decarbonisation scenarios modelled for Ireland



Additional scenarios:

Alternative GHG constraints

Early action (from 2020);
Late action;
Constrained carbon budget;
No mitigation;
Climate Action Plan 2019 ambition

Alternative technology deployment constraints & demand

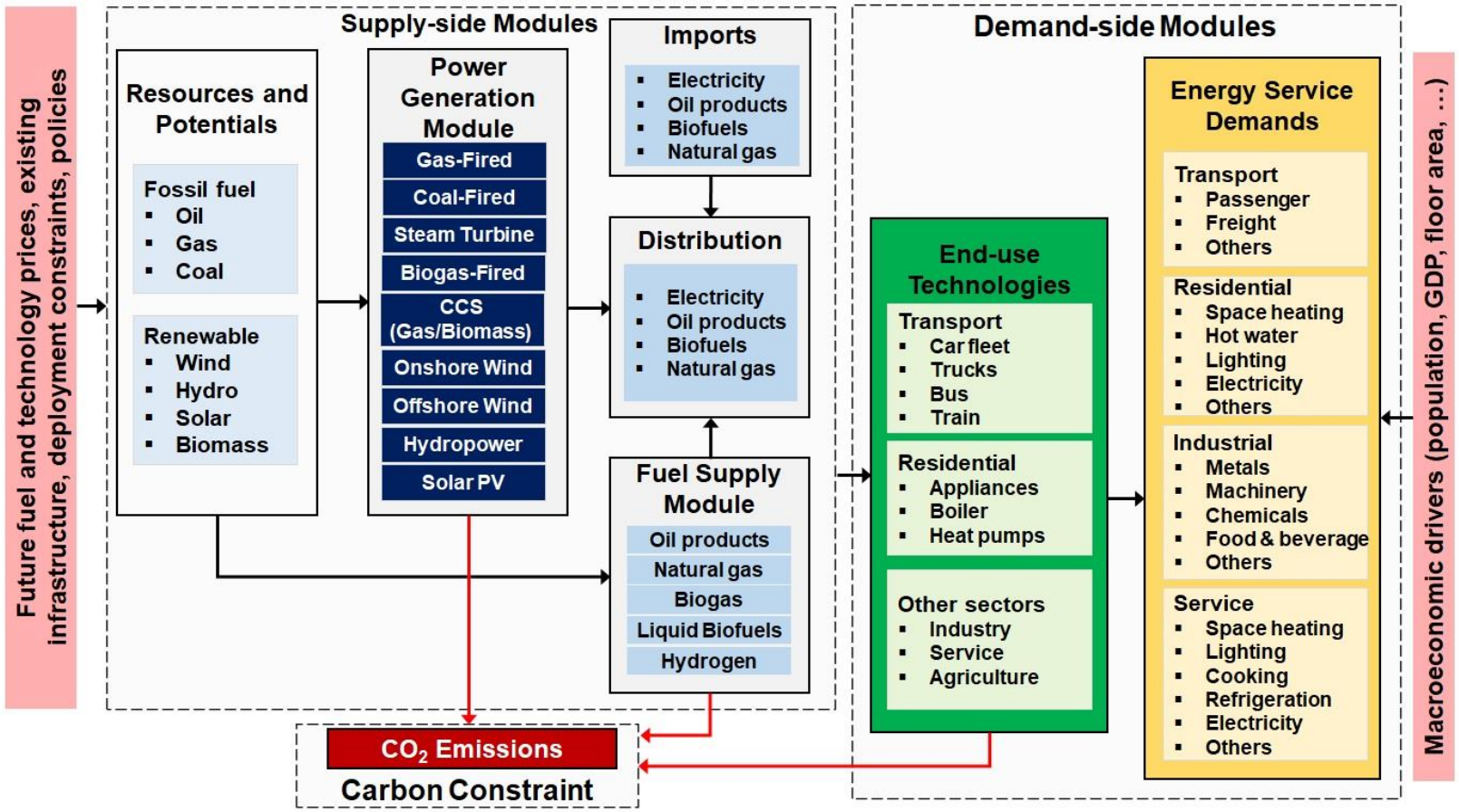
Low Energy Demand (LED) scenario
Higher wind & solar
Limited Bioenergy/High bioenergy
No CCS/Early CCS
"Technology optimism"

Prof. Hannah Daly, University College Cork

TIMES-Ireland Model (TIM)

Informing CCAC Carbon Budgets

TIM is an Energy Systems Optimisation Model (ESOM) which calculates the "least-cost" configuration of the energy system which meets future energy demands, respecting technical, environmental, social & policy constraints defined by the user.



Given

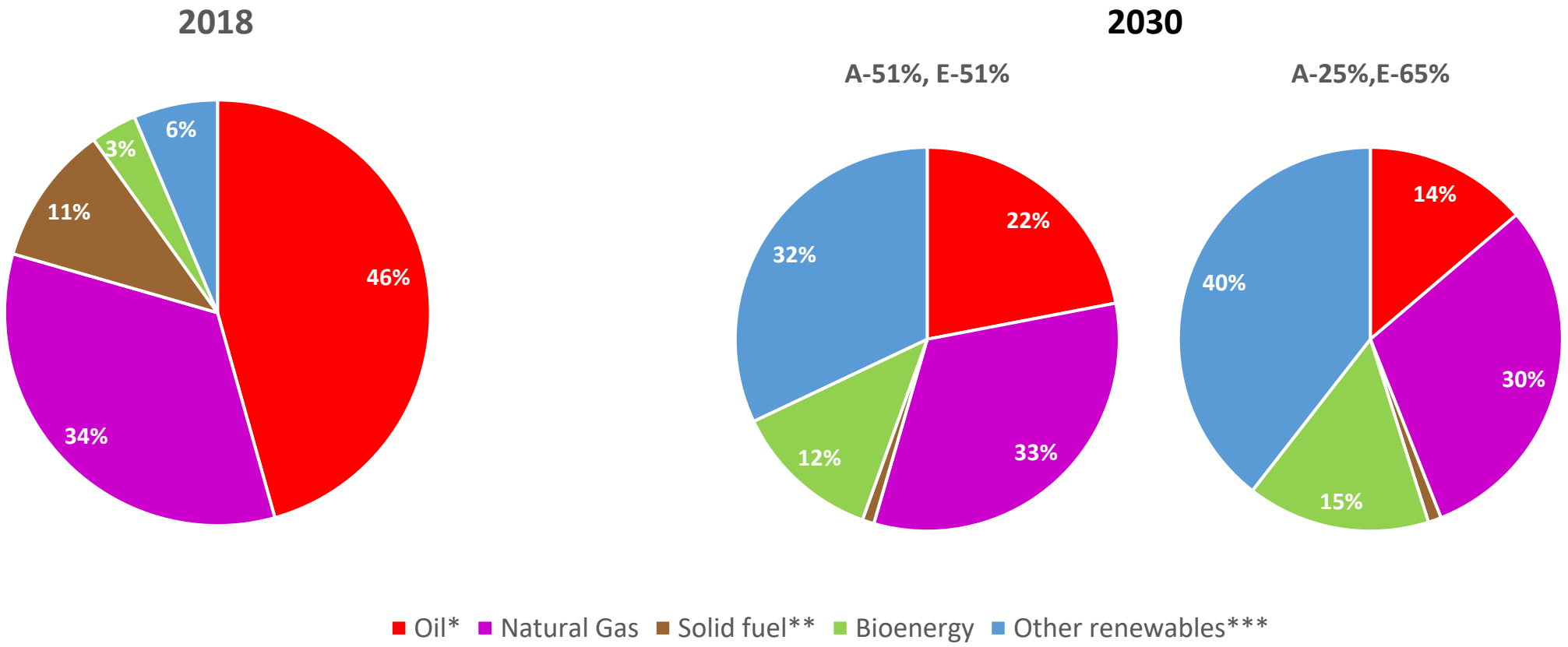
- Final energy demands
  - e.g., passenger kms, home heating
- CO_2 constraints on energy
  - e.g., carbon budget, annual target
- Technology, fuel costs & efficiency
  - Existing & future cost and performance
- Resource availability
  - e.g., on/offshore wind, bioenergy
- User-defined constraints
  - e.g., speed of technology uptake, policies

TIM calculates

- "Least-cost" energy system meeting all constraints
- Investment and operation of energy technologies
- Emissions trajectories
- Total system cost
- Imports/exports
- Marginal energy prices

Download full documentation paper: https://tim-carbon-budgets-2021.netlify.app/documentation/tim-documentation-paper.pdf

Fossil fuels fall from 90% of primary energy demand in 2018 to 45-56% in 2030



* Oil excludes kerosene for international aviation
** Coal, peat and MSW
*** Primary wind, solar, ambient heat, hydro & ocean

Prof. Hannah Daly, University College Cork

Marginal Abatement Cost (2025-30 average) in core mitigation scenarios and scenario variants

		A-51%,E-51%	A-40%,E-57%	A-33%,E-61%	A-25%,E-65%
Core	"BAU" demands, no bioenergy imports, 4-times 2018 indigenous bioenergy, no power-CCS available, no H2 import, ~74% RES-E	**€674**	**€1,100**	**€1,292**	**€1,485**

The Marginal Abatement Cost represents the cost of mitigating the most expensive tonne of CO_2 in each scenario for the energy sector

Prof. Hannah Daly, University College Cork

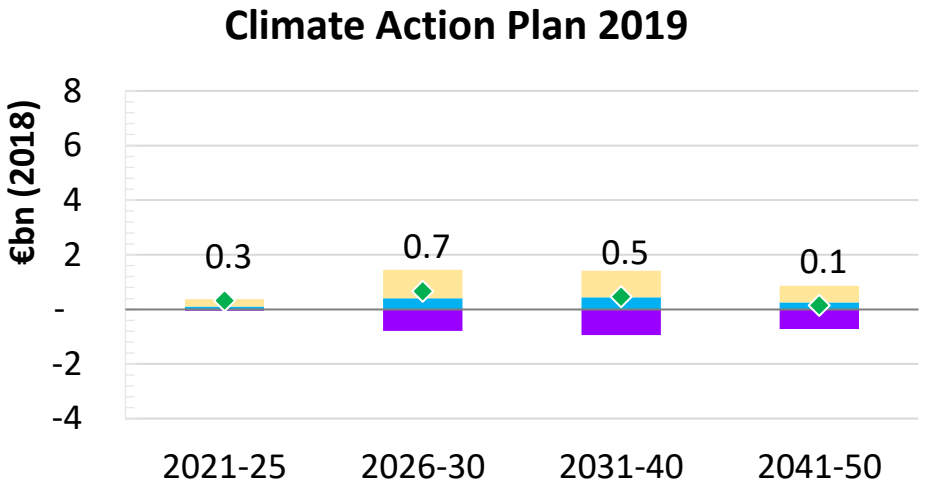
Marginal Abatement Cost (2025-30 average) in core mitigation scenarios and scenario variants

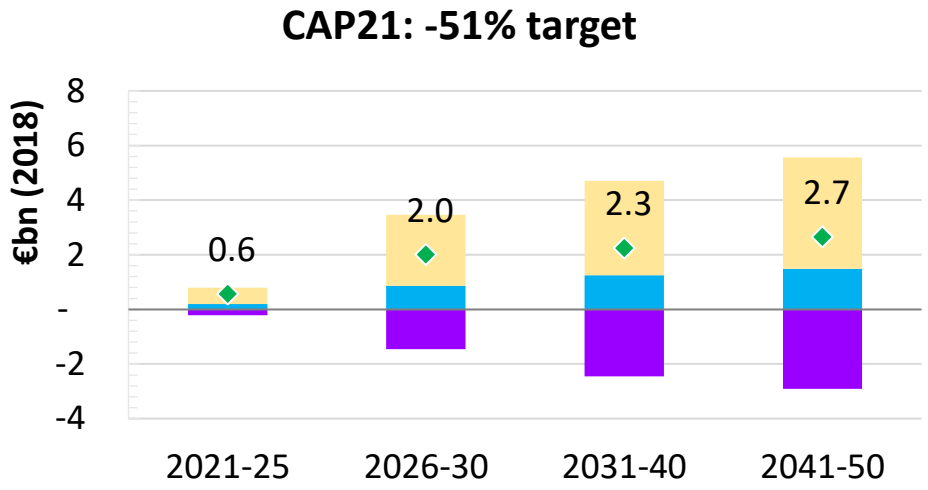
		A-51%,E-51%	A-40%,E-57%	A-33%,E-61%	A-25%,E-65%
Core	"BAU" demands, no bioenergy imports, 4-times 2018 indigenous bioenergy, no power-CCS available, no H2 import, ~74% RES-E	€674	€1,100	€1,292	€1,485
Low Energy Demand (LED)	Decoupling energy service demands: mobility shifting; dematerialisation; lower heating	€128	€403	€545	€757
Tech-Optimism	Up to 25GW VAR-RE by 2030; additional H2 & Bioenergy, 400 MW CCS available from 2027. >90% zero-carbon power generation	€436	€639	€812	€1,284
LED + Tech-optimism		€76	€125	€202	€317

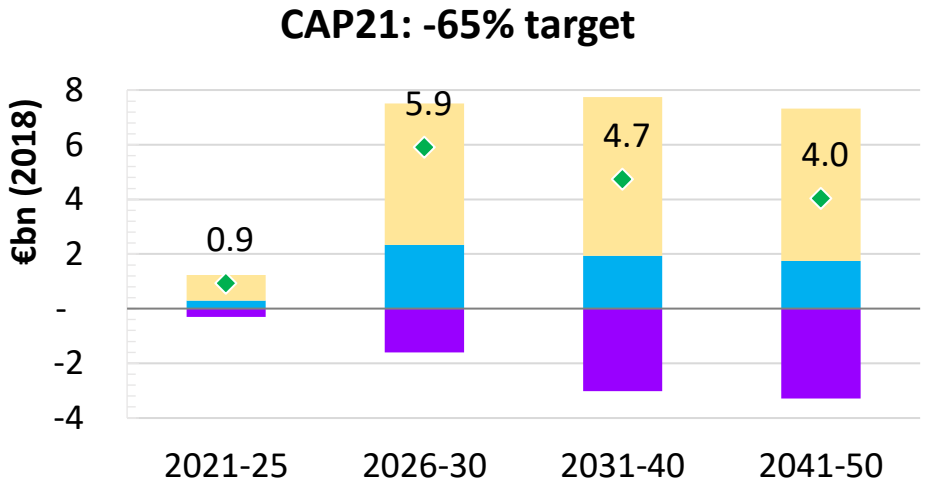
The Marginal Abatement Cost represents the cost of mitigating the most expensive tonne of CO_2 in each scenario for the energy sector

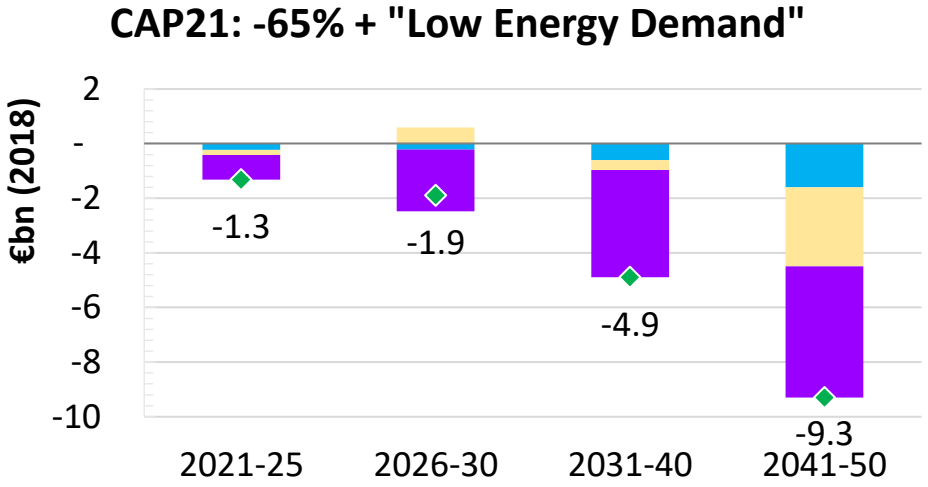
Prof. Hannah Daly, University College Cork

Average additional annualised energy system cost









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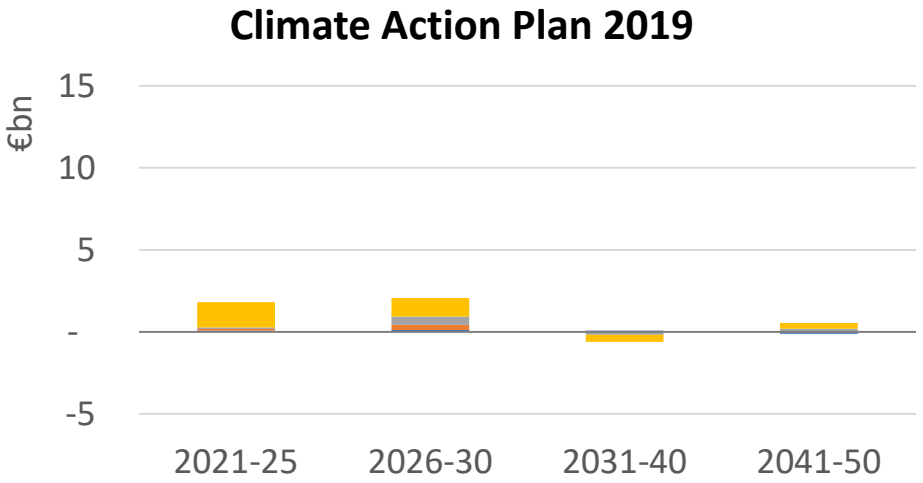
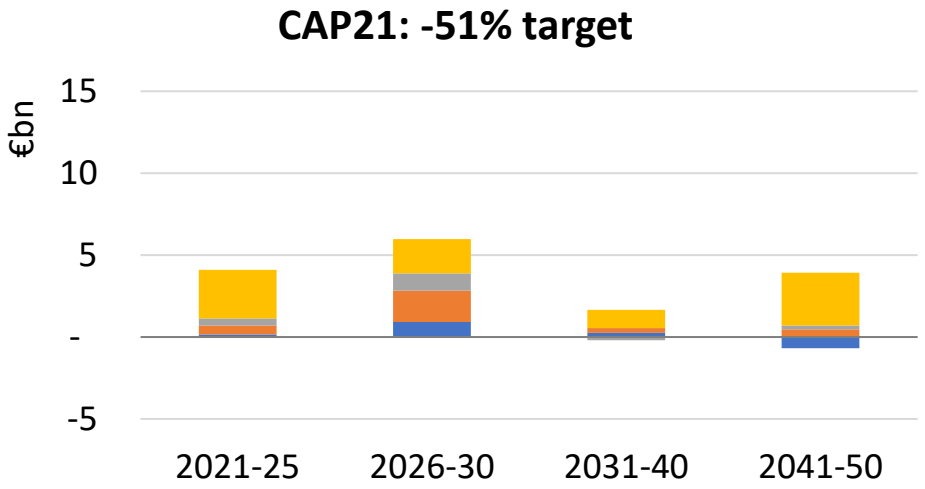
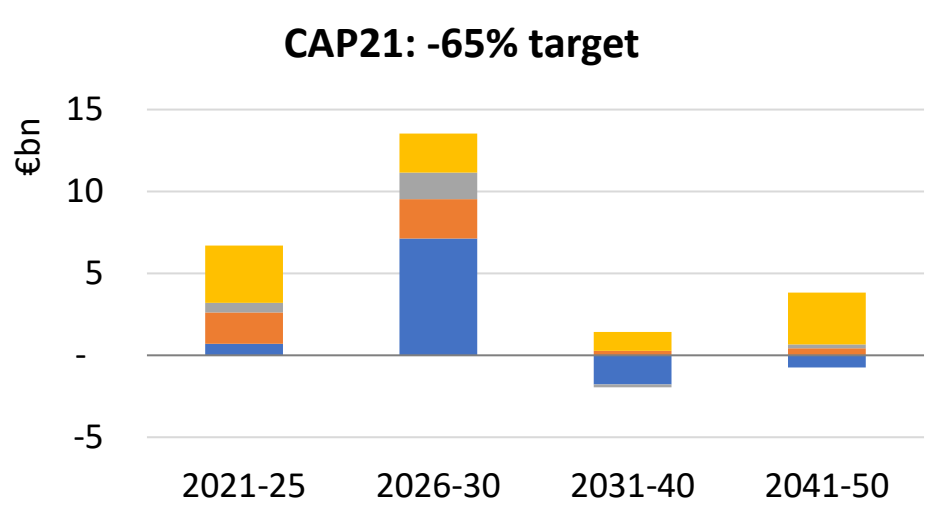
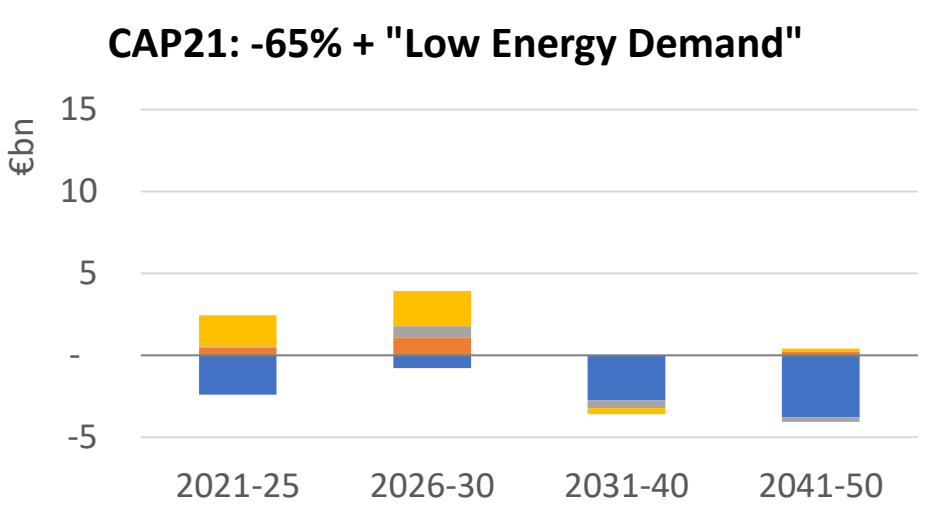
Annual average annualised undiscounted energy system cost, wholesale, excluding taxes/subsidies, additional to “no mitigation” scenario, excluding grid infrastructure

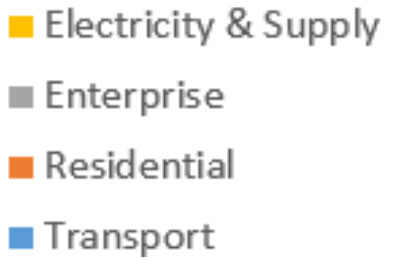
Annual additional upfront investment cost by sector











Carbon drawdown before 2050

requires mobilisation of resources this decade

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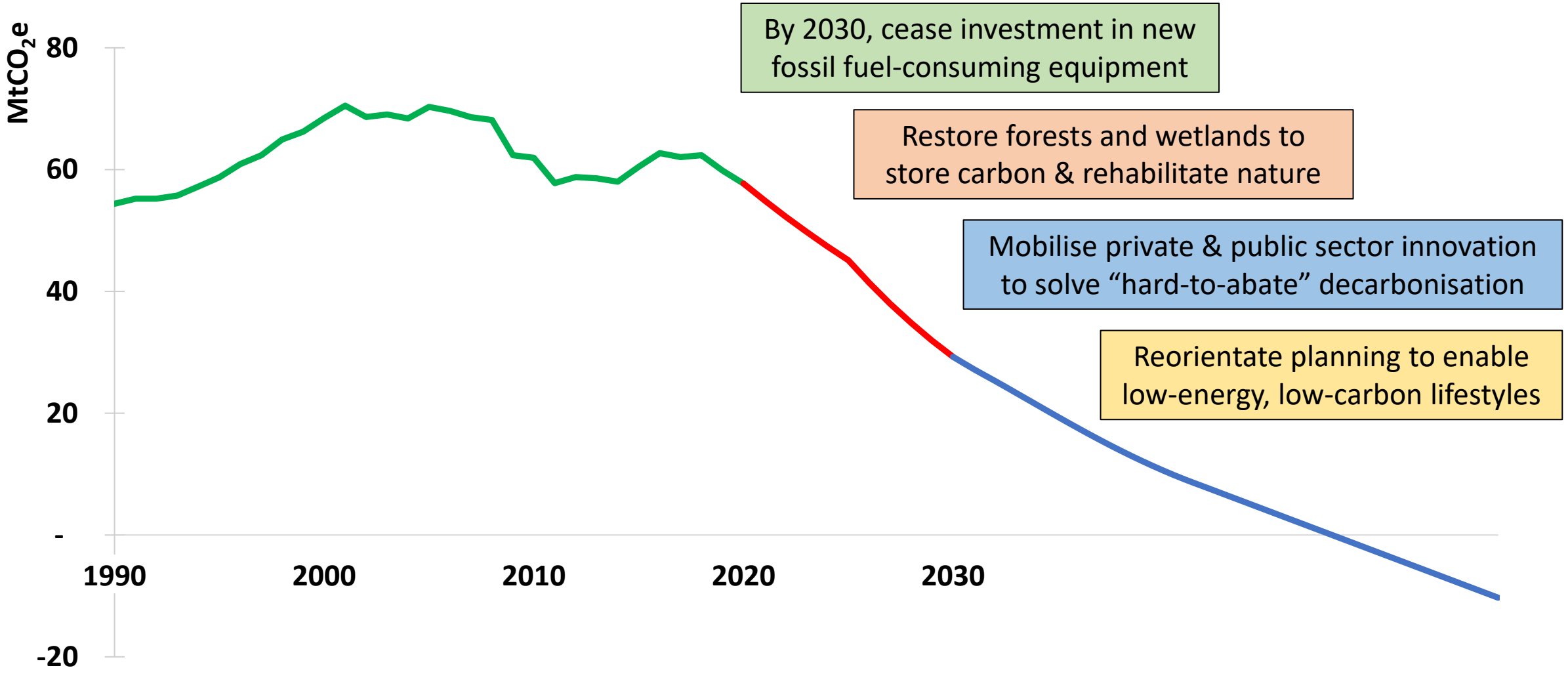
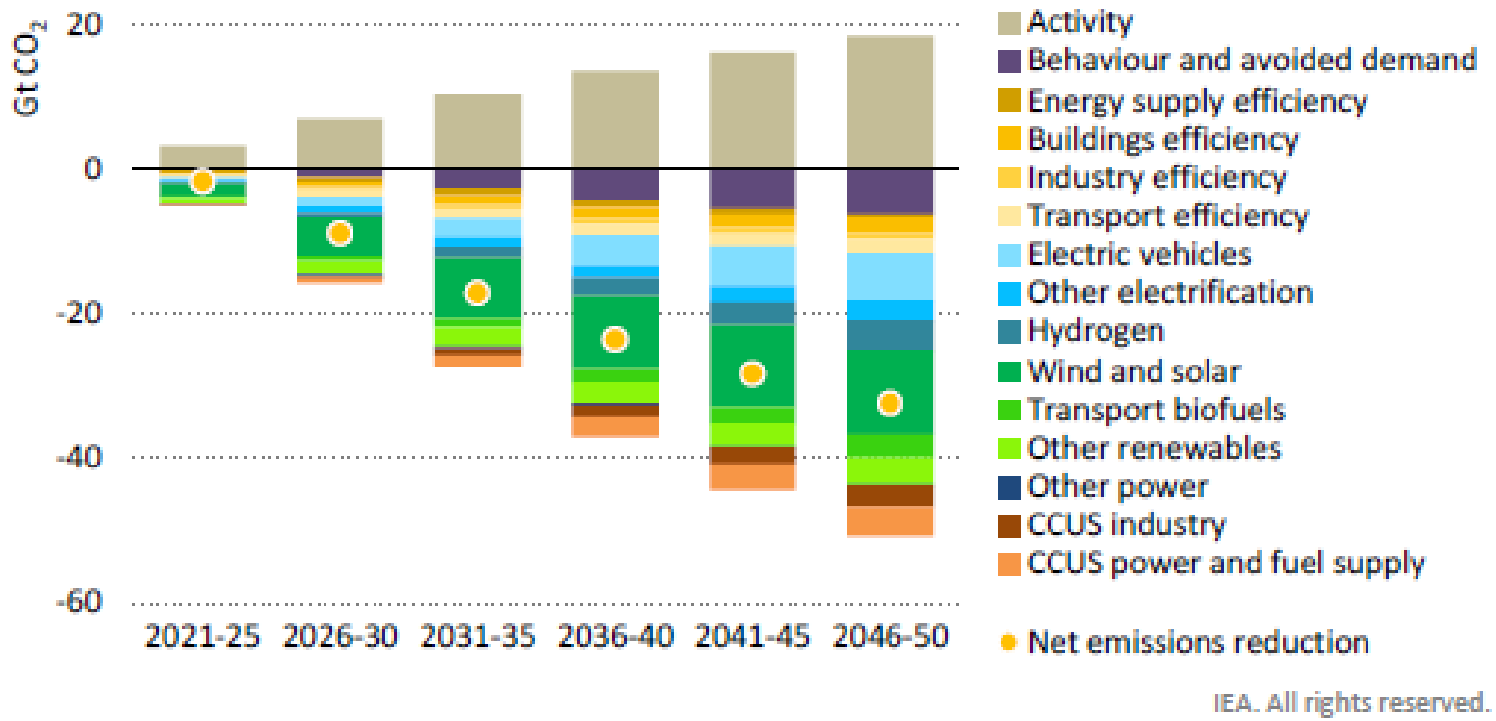


Global pathway to a net-zero energy system

No silver bullet solution

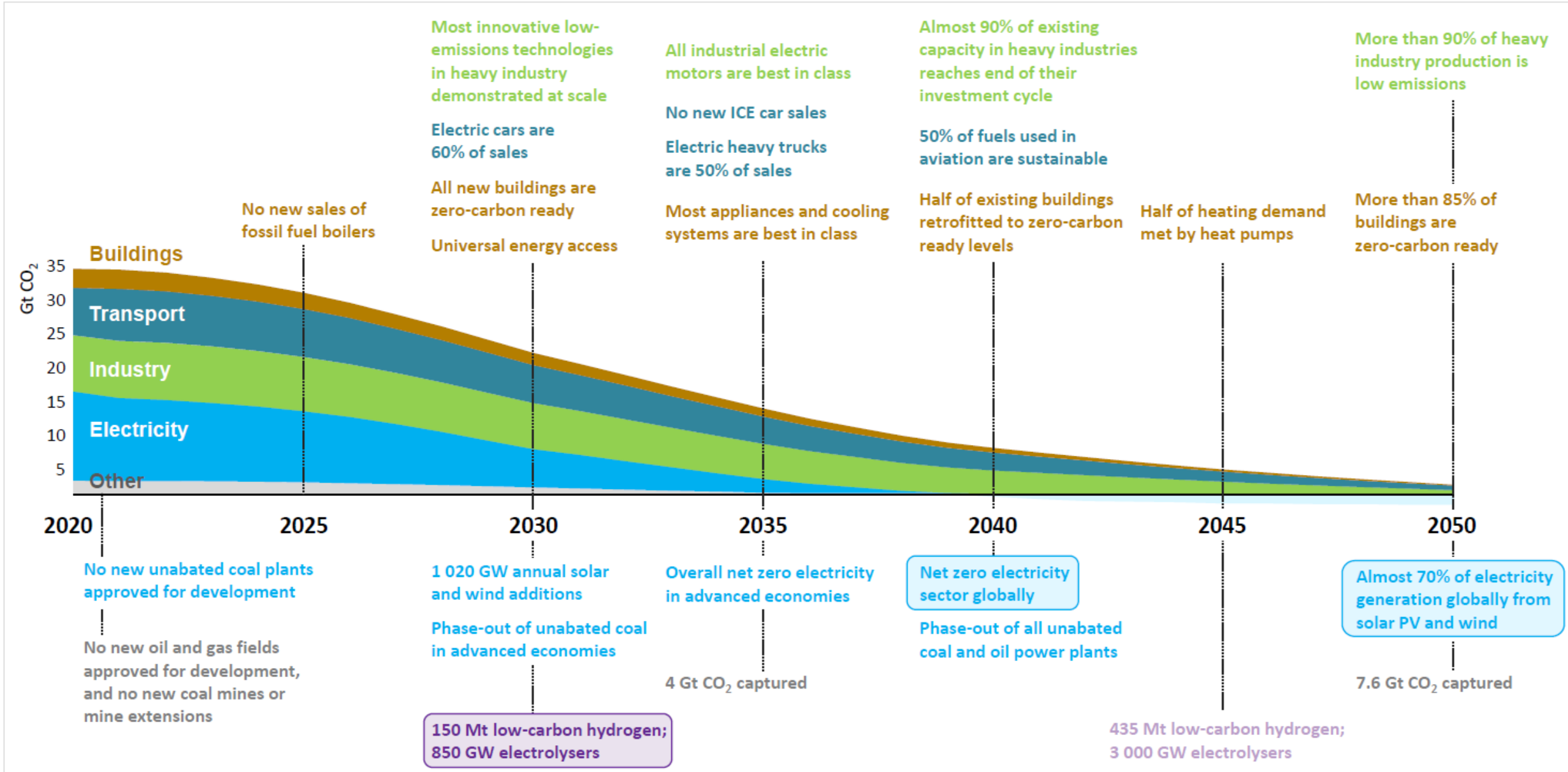
Figure 2.4 ▷ Average annual CO_2 reductions from 2020 in the NZE



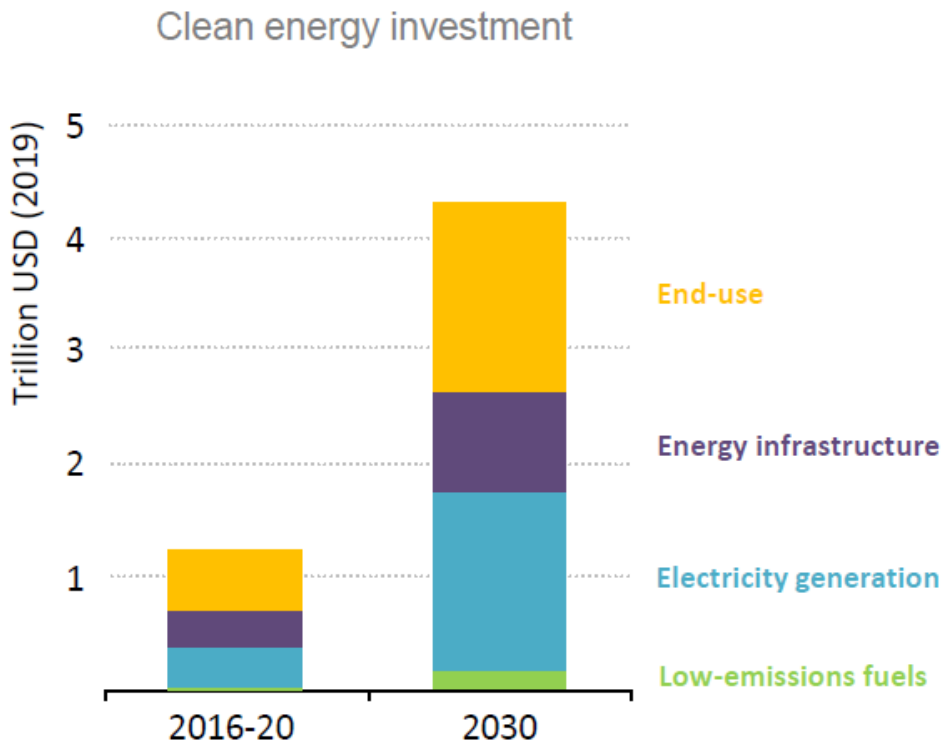
Renewables and electrification make the largest contribution to emissions reductions, but a wide range of measures and technologies are needed to achieve net-zero emissions

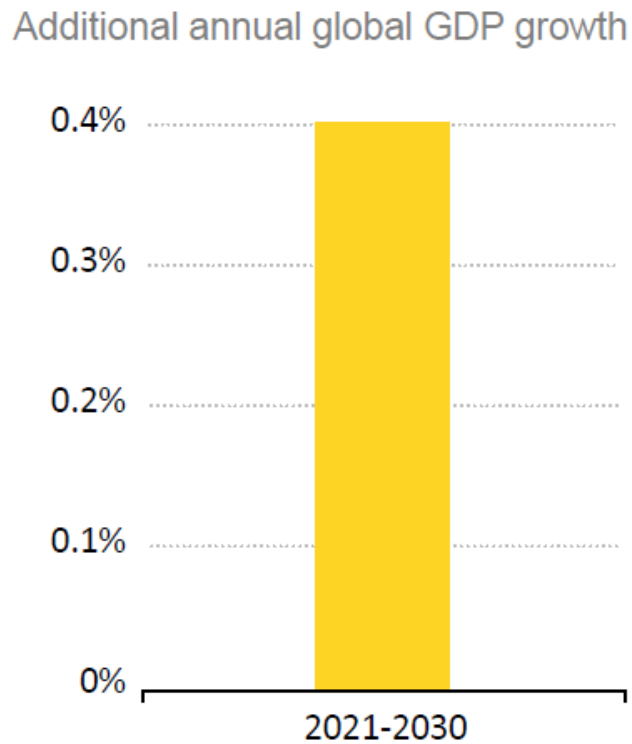
Renewables
Efficiency
Electrification
Bioenergy
Hydrogen
Demand shift
CCUS

Set near-term milestones to get on track for long-term targets



Drive a historic surge in clean energy investment

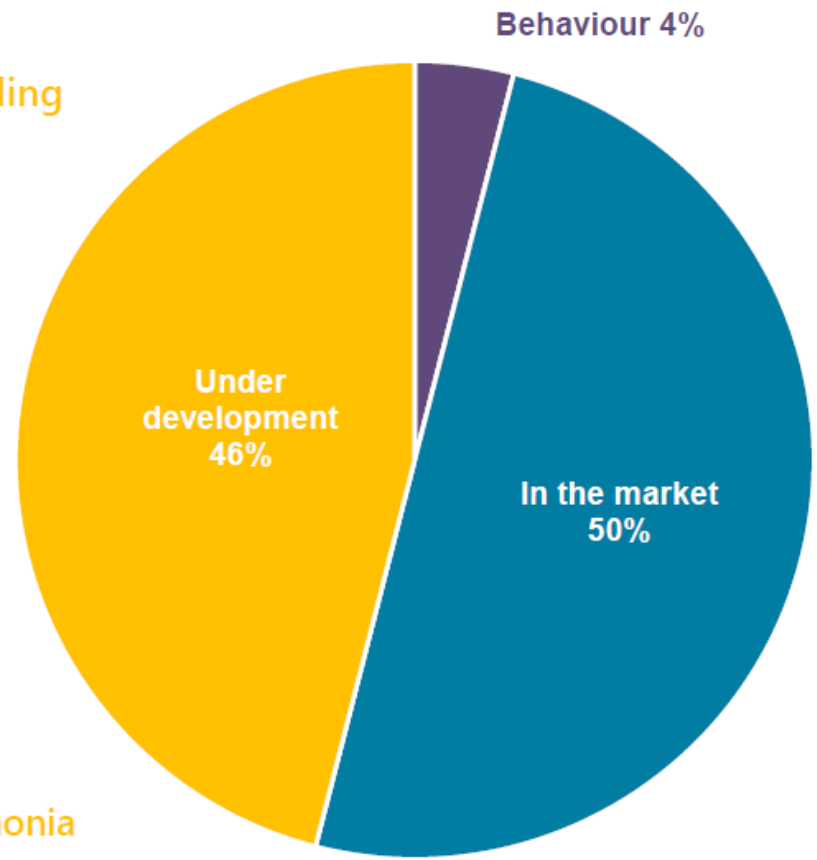




Annual clean energy investment more than triples by 2030 in the NZE scenario, driving an average 0.4% per year increase in global GDP to 2030 & speeding the recovery from the COVID-19 shock

Prepare for the next phase of the transition by boosting innovation

CO_2 savings by technology maturity in 2050, NZE scenario



Refrigerant-free advanced cooling

Advanced batteries

Next-generation biofuels

CO_2 capture from cement

Hydrogen-based steel

Small modular reactors

Synthetic liquid fuels

Electrolytic hydrogen for ammonia

Autonomous trucks

Optimised heat pump with storage

Direct air capture

Ammonia-powered ships

Electrolytic hydrogen for methanol

Building-integrated storage

Electric steam crackers

Unlocking the next generation of low-carbon technologies requires more clean energy R&D and $90 billion in demonstrations by 2030; without greater international co-operation, global CO_2 will not fall to net-zero by 2050.

Contact

h.daly@ucc.ie

CAPACITY
CLIMATE ACTION PATHWAYS & ABSORPTIVE CAPACITY

Environmental Research Institute

MaREI
Energy · Climate · Marine

UCC
University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

Technology switches alone will not be enough:
A change in *approach* is required to achieve transformation

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Lessons from COVID19

1. **Follow the science:** Immediate, bold action is necessary
2. **Every choice matters**: Some effort & sacrifice is needed from everyone
3. **Leadership**: Trust, fairness, leading by example
4. **Communications**: of the threat, causes of, and solutions
5. **Solidarity:** Protect each other