



#### **Transition risks:** investments in productive capacity in both brown and green causes risk of stranded assets. Risk ownership accumulates across the financial system.

1. Introduction

**Case study**: **oil and gas** development in a context of rapidly diffusing electric vehicles and renewables. We explore the risk of excess capacity in oil and gas assets. Which oil and gas assets are at risk of stranding depends on their competitiveness in global oil and gas markets. We explore asset repricing events under different expectation scenarios.



**Risk ownership**: We track who ultimately owns risks of stranded assets, between funds, governments, individuals.

# Oil & gas demand focus Model: FTT





- Oil & gas transition risks affects not only companies but also governments and pension funds
- OECD: risk owned by funds incl. Pension plans, financial institutions and individuals
- Non-OECD: risks owned by governments
- OECD (e.g. UK, US) imports substantial risk from non-OECD (e.g. Russia)



OECD (51.7%) | Non-OECD

OECD (57.1%) | Non-OECD

OECD (55.5%) | Non-OECD

OECD (39.2%) | Non-OECD

Funds

Stage 1:

oil/gas field

Stage 2:

quarters

Stage 3

corporate

Stage 4: ultimate

owner loss

loss at head-

loss at

Oil assets Gas assets

Non-financials Finance

📕 Listed companies 🛛 📕 Unlisted companies

- Up to 1.4tn in bankrupt equity
- Sufficient risk to trigger 2008 type financial instability

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# Traditional focus on supply pathways



## More realistic focus on demand drivers

Positive/Negative Macro impacts

needs

Regulatory reform, Preferences Technological change Endogenous transformation - Energy demand - Productivity growth Creation of resources - Technologies - Knowledge, - GDP, employment, Fiscal space

Financial impacts
- Physical risks
- Transition risks
- Opportunities

 $\frac{ETER}{ETER} = 6LOBAL SYSTEMS$ 







