



The Economic Impacts for Ireland of High Oil and Gas Prices

Pathways to risk mitigation and a low carbon future

A research project commissioned by Siemens Limited



Study Context

Research question posed and supported by

SIEMENS

Research conducted by



Completed Summer 2010

Report available via Siemens Ireland

Study Concept

What would happen if oil and gas prices were to rise rapidly and what could be done to mitigate the effects of such a change?

Stage 1

Examine price trends and drivers

Design price scenarios

Test scenarios against baseline

Stage 2

Evaluate the principal impacts

Review options to mitigate

Present conclusions of the study

Presentation Structure

Oil, Gas, and Ireland

Oil Prices – History and Forecasting

Methodology – Baseline and HOG Price Scenarios

Modelled Economic Impacts

Broader Social and Economic Impacts

Summary Conclusions

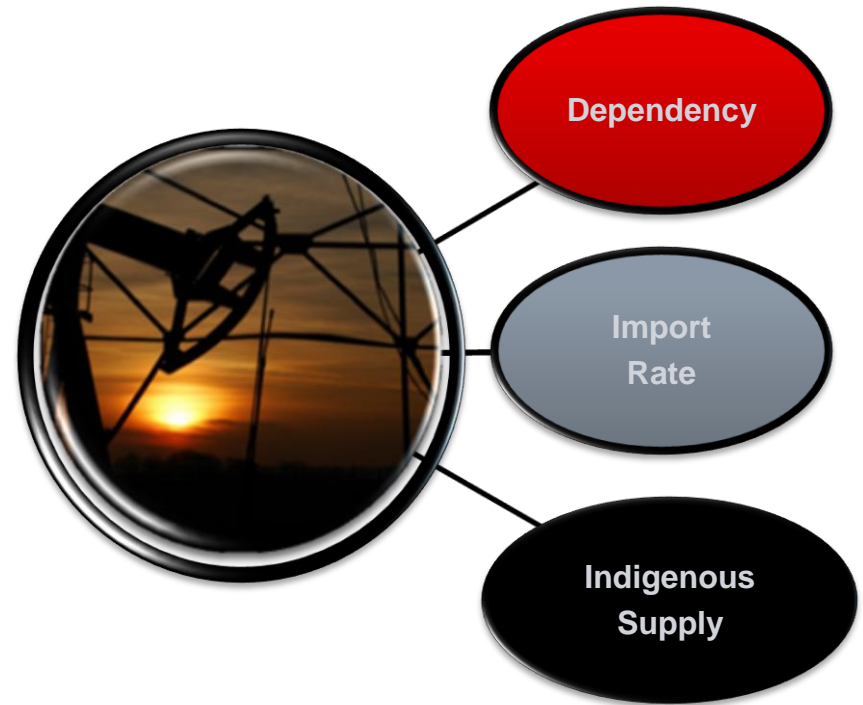


Brief Context

Oil and Gas hold around 80% of PED from 2008 to 2025 in baseline* forecast
Dependency in transport and power generation

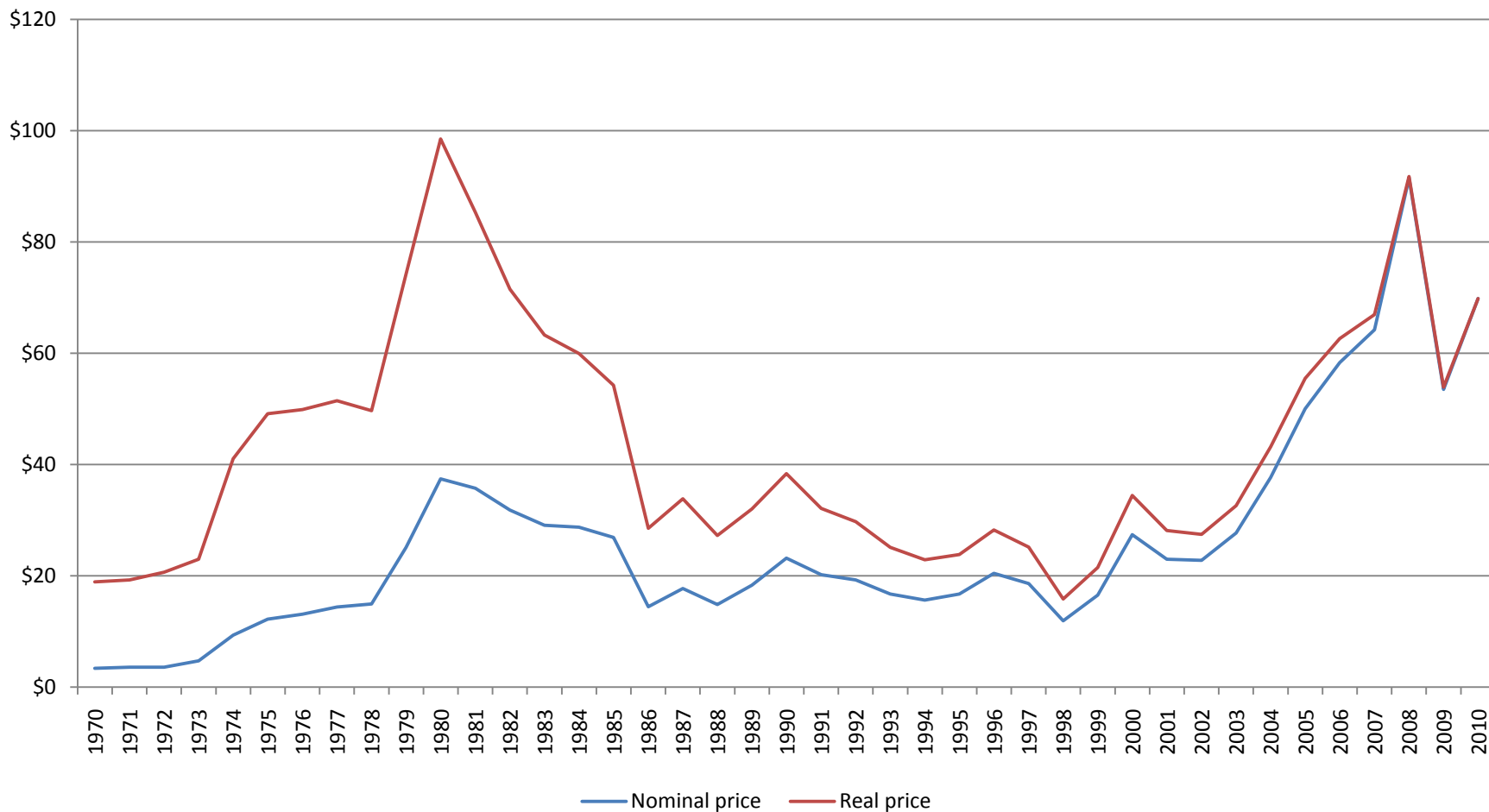
Oil and Gas imports account for 81% of energy supply in 2008
Estimated at 91% in 2025 under baseline

Corrib offers some shorter-term supply
No 'scenario changing' reserves identified

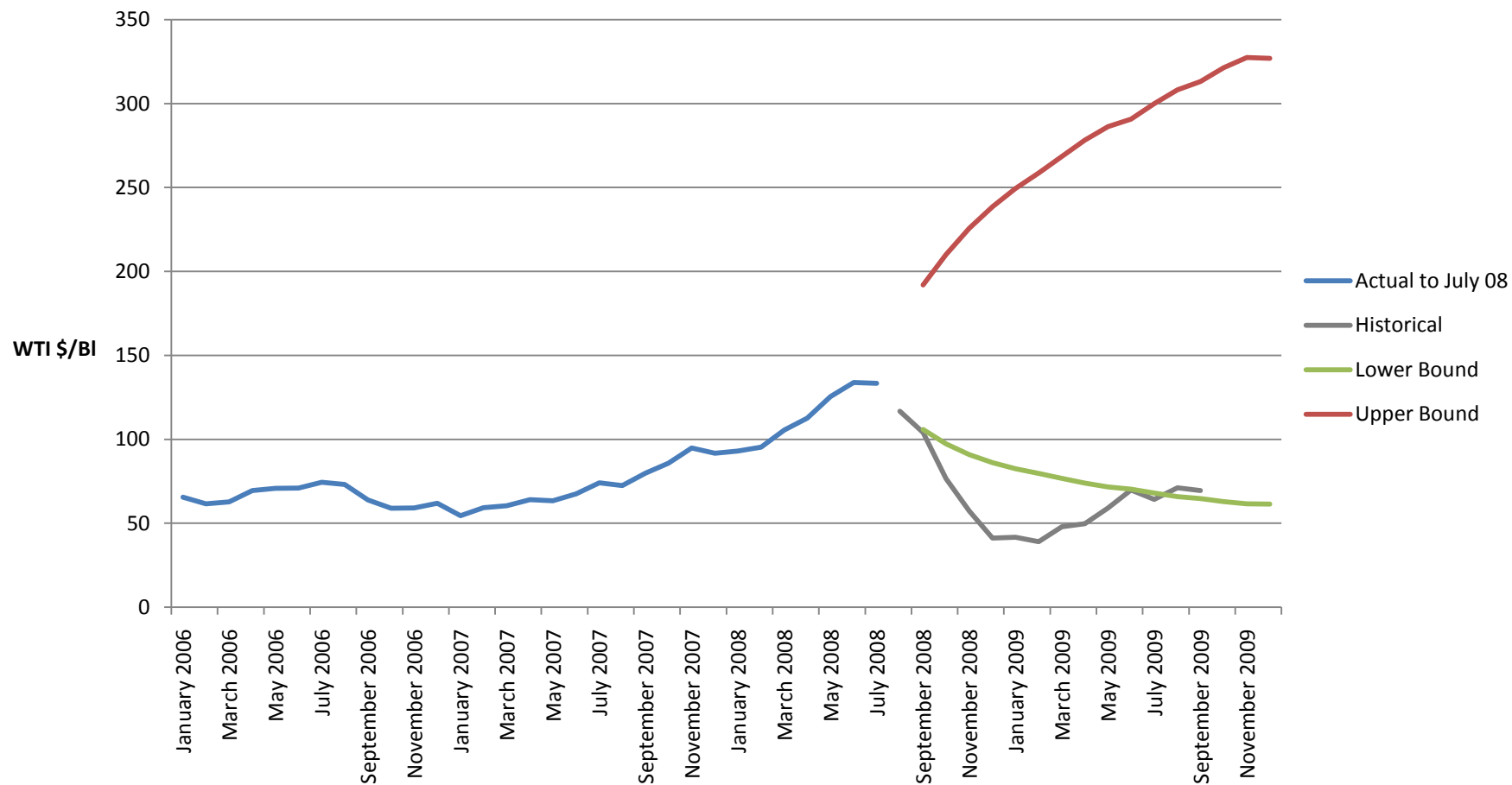


Historical Oil Prices

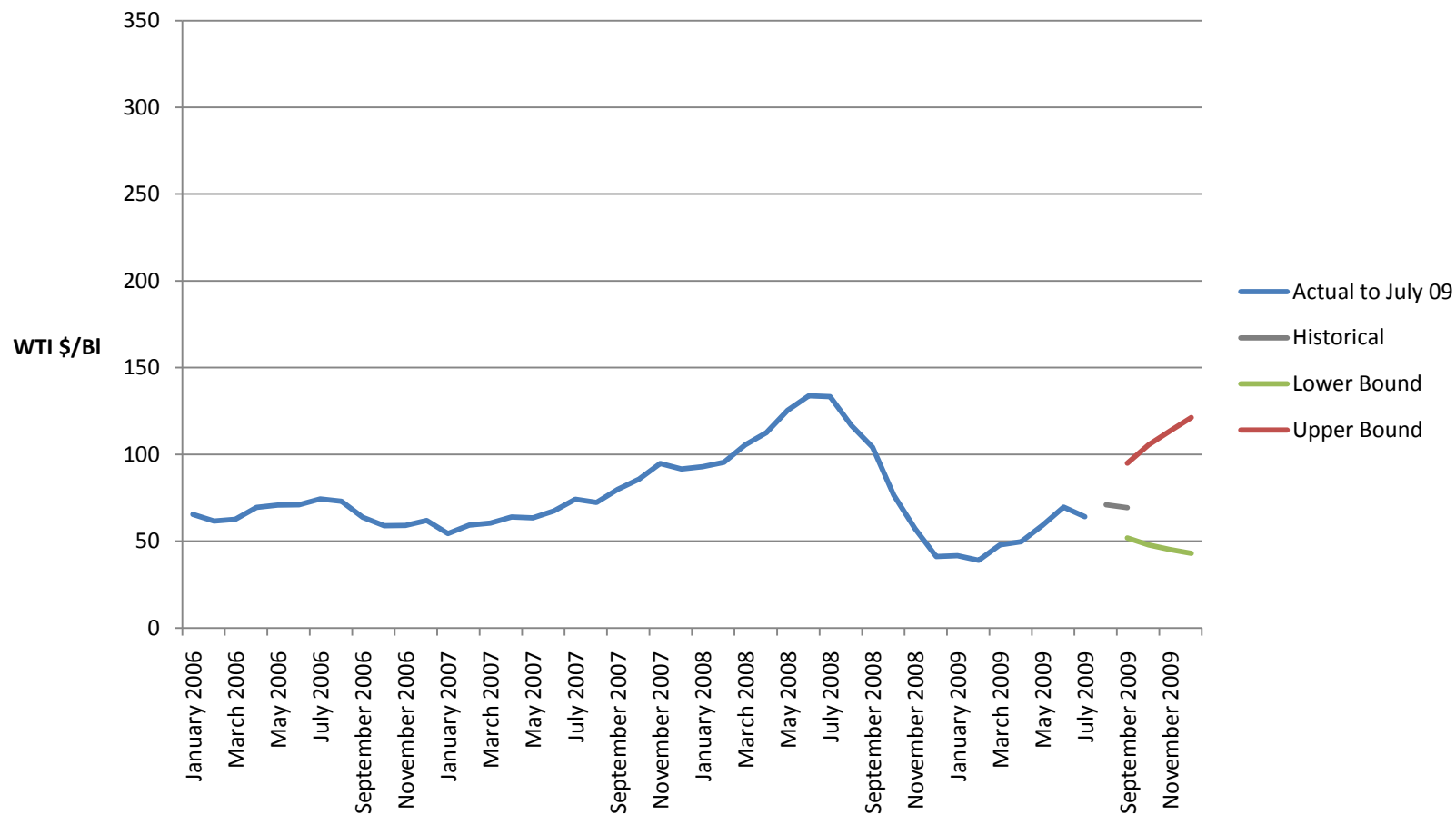
Annual Average Crude Oil Price (US \$)



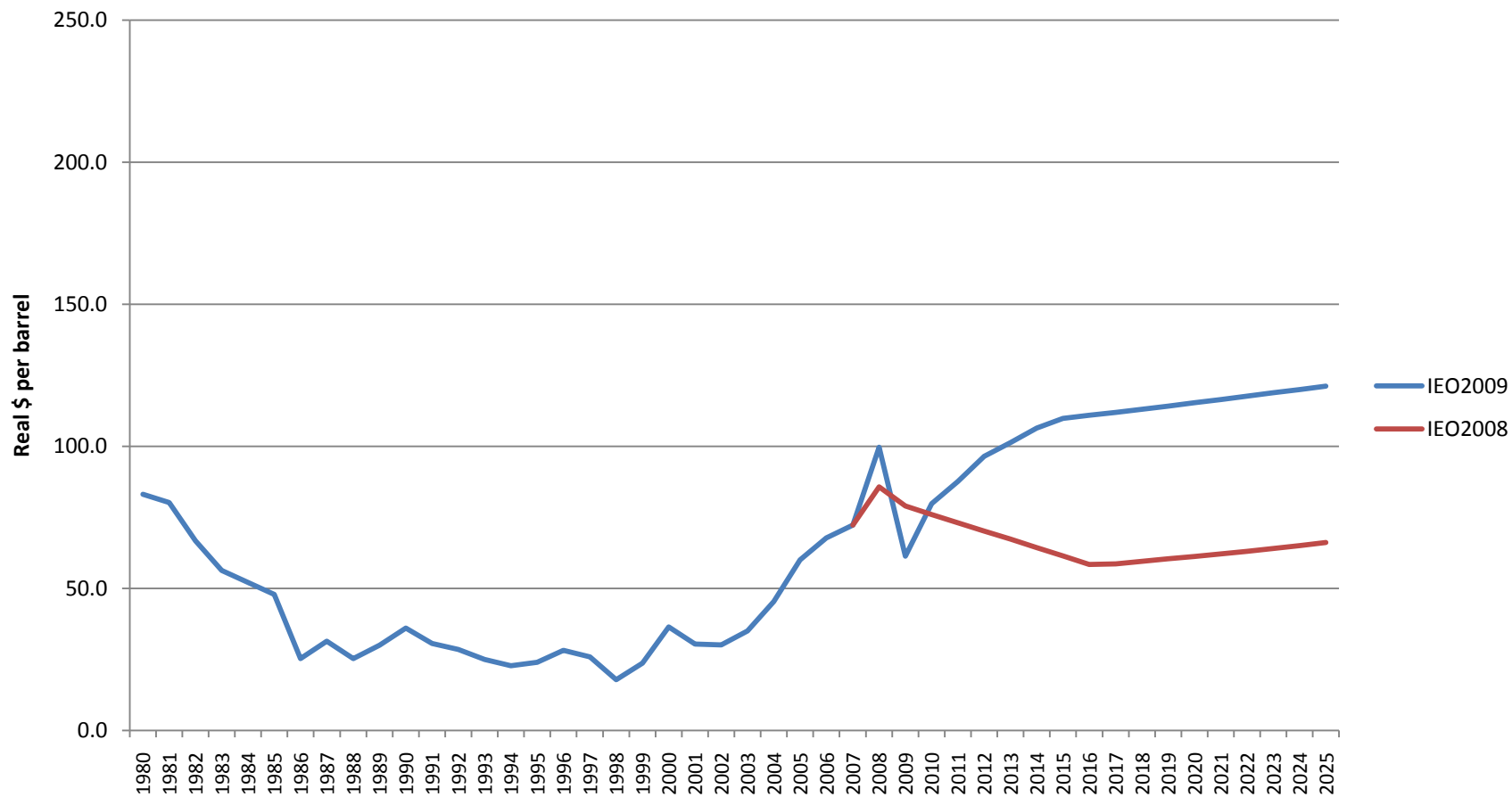
Short-Term Confidence Intervals



Short-Term Confidence Intervals



Longer Term Projections



Longer Term Projections



Conclusion on Oil Prices



Historical evidence of both acute and protracted 'shocks'

Challenging and complex market with considerable uncertainty

'Events' may deliver a bumpy pathway for price into the future

Longer-term forecasting suggests a 'one way' path for price

Recent revisions to longer term forecasts have been notable

Basic Methodology

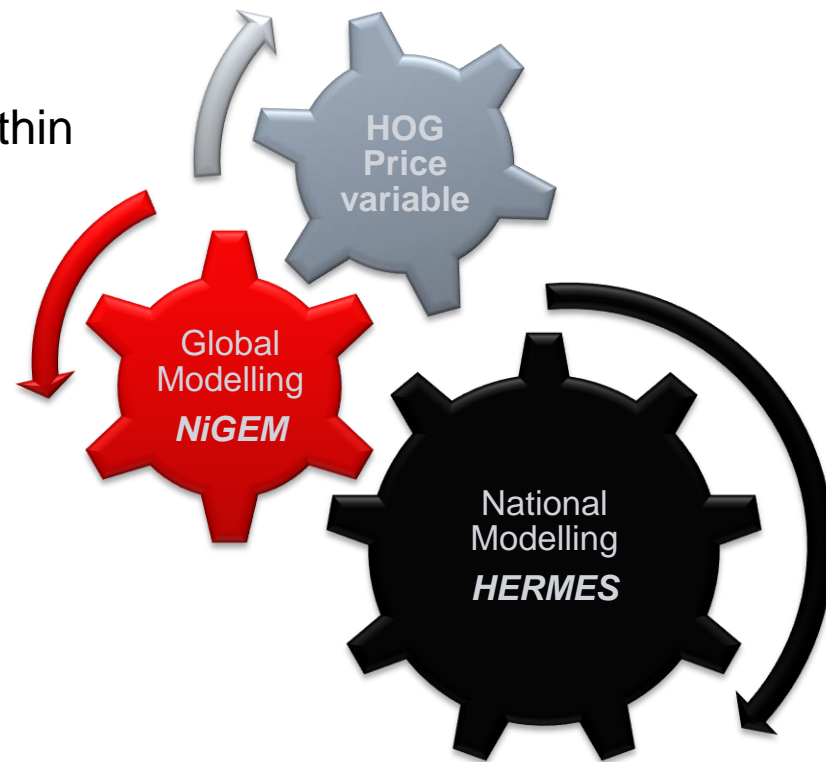
A baseline scenario provides the marker for what is expected out to 2025.

Oil and gas prices are just two components within the larger economic systems that we model.

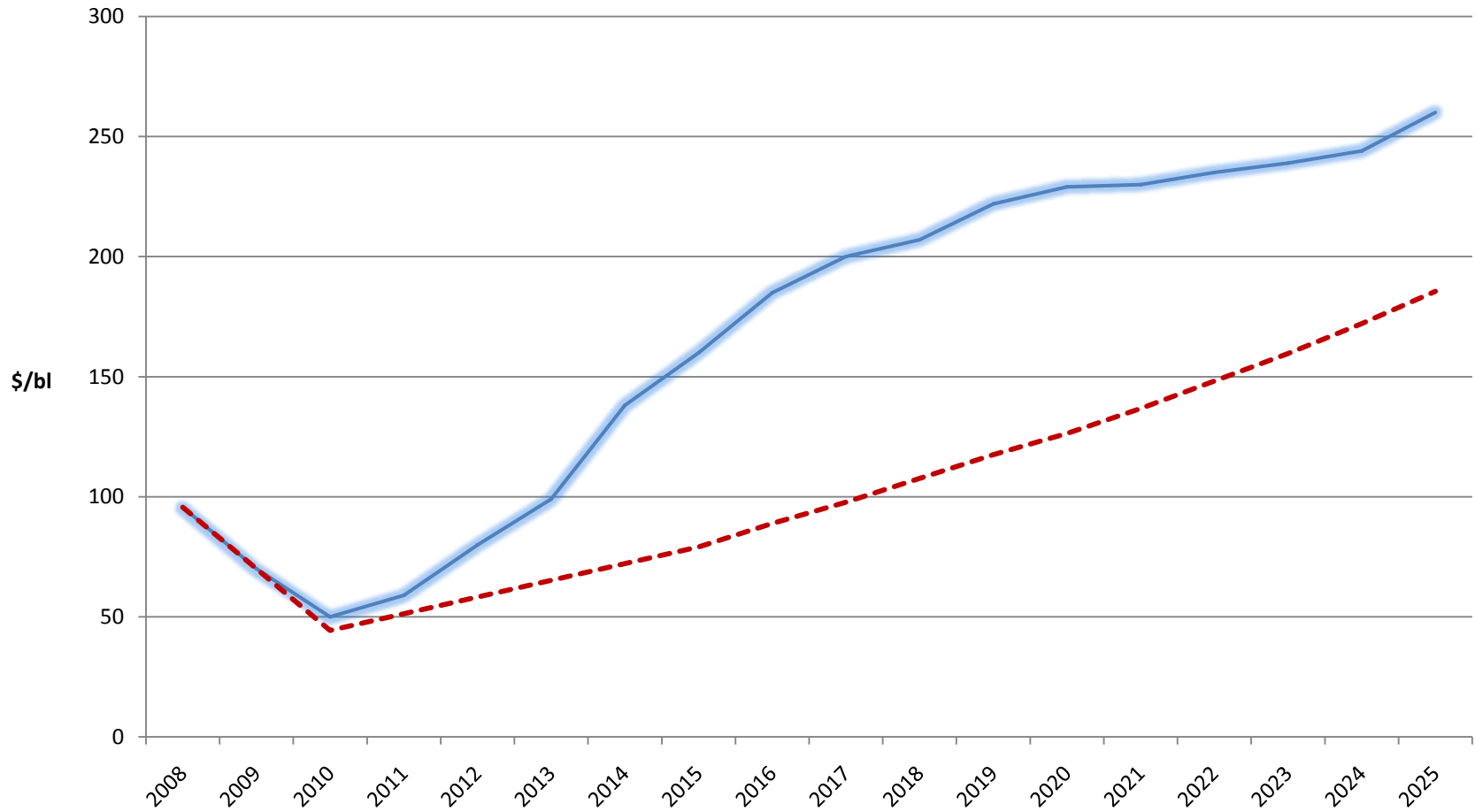
NiGEM used to model the impact of our HOG price scenarios on the global economy.

These outcomes then feed a more detailed national evaluation using the ESRI HERMES model.

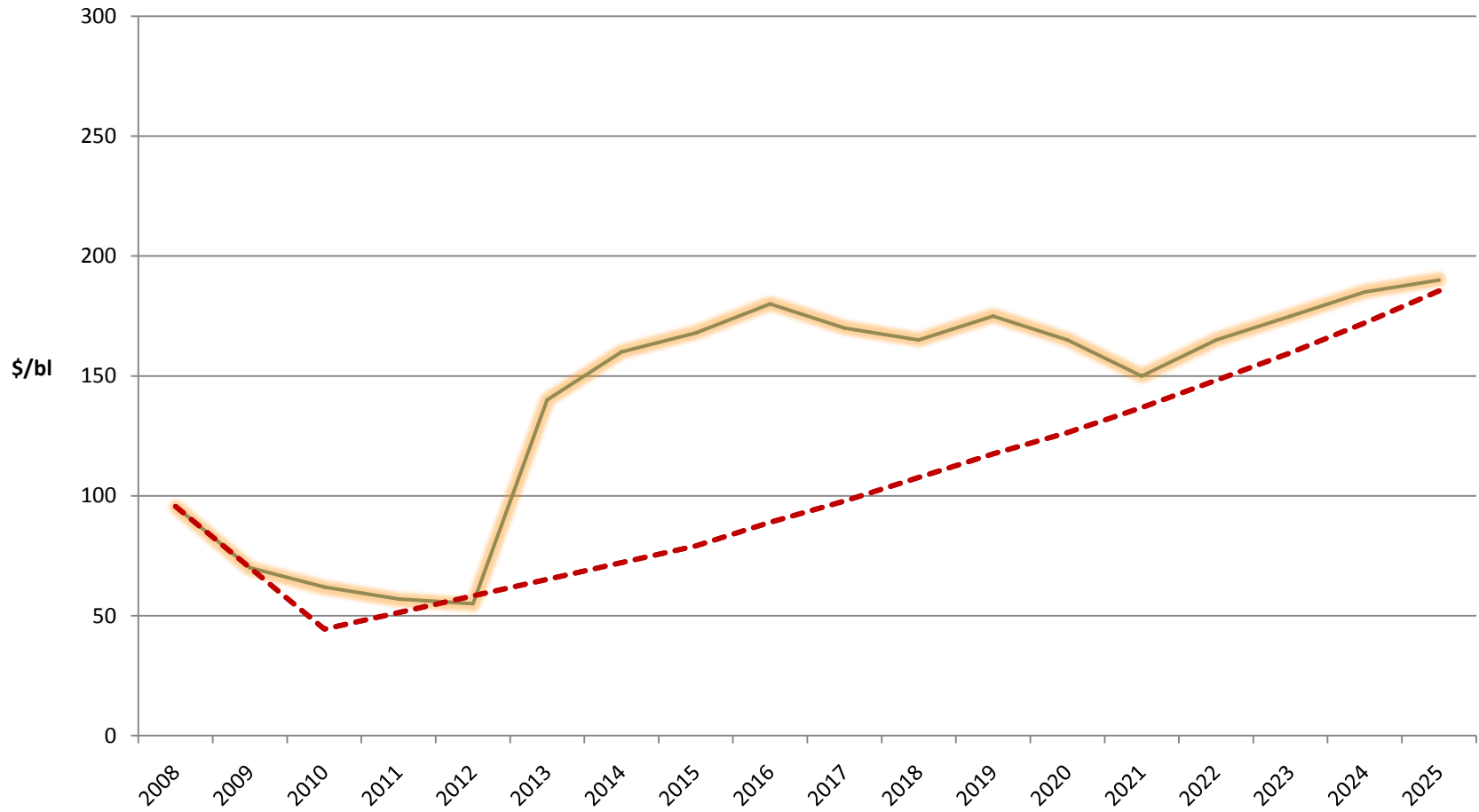
Results are presented relative to the baseline



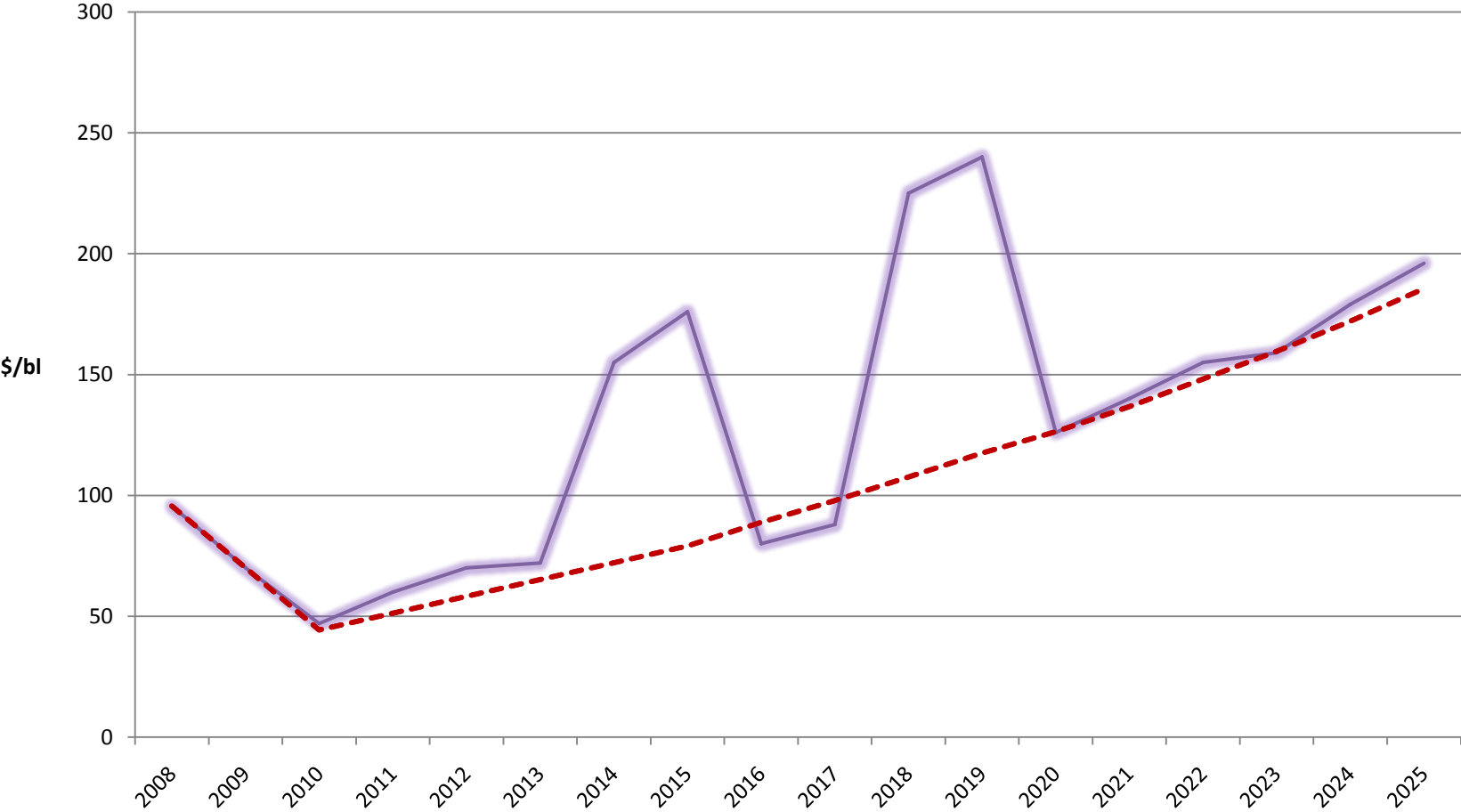
Accelerated Growth



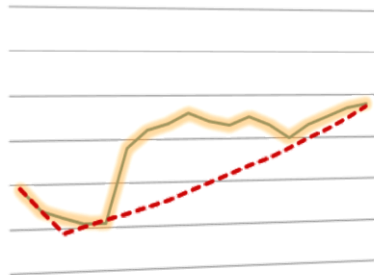
Root



Camel

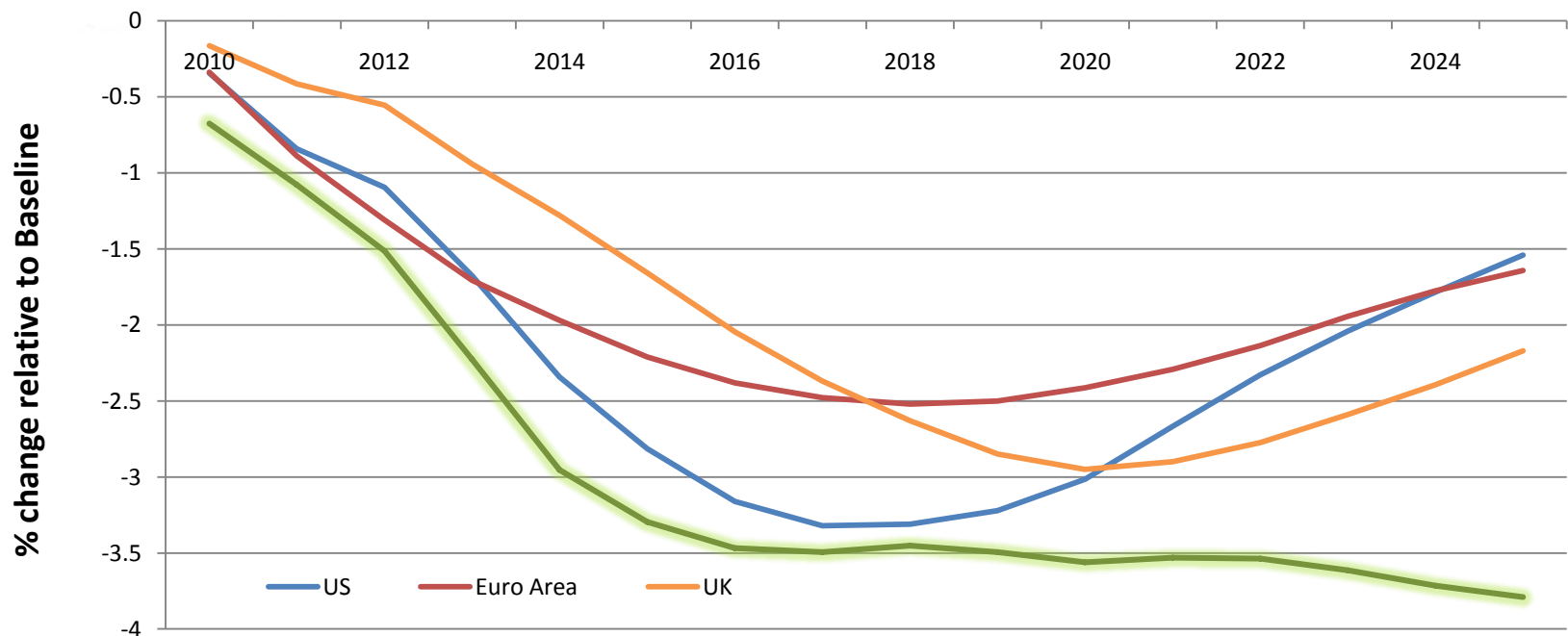


Impacts under the Root Scenario

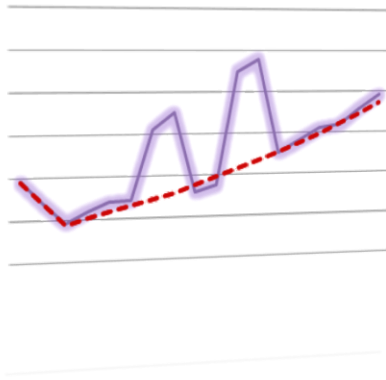


- Sharp fall in growth of up to 3.5% in Ireland then levelling off. Impact sustained on this time horizon.

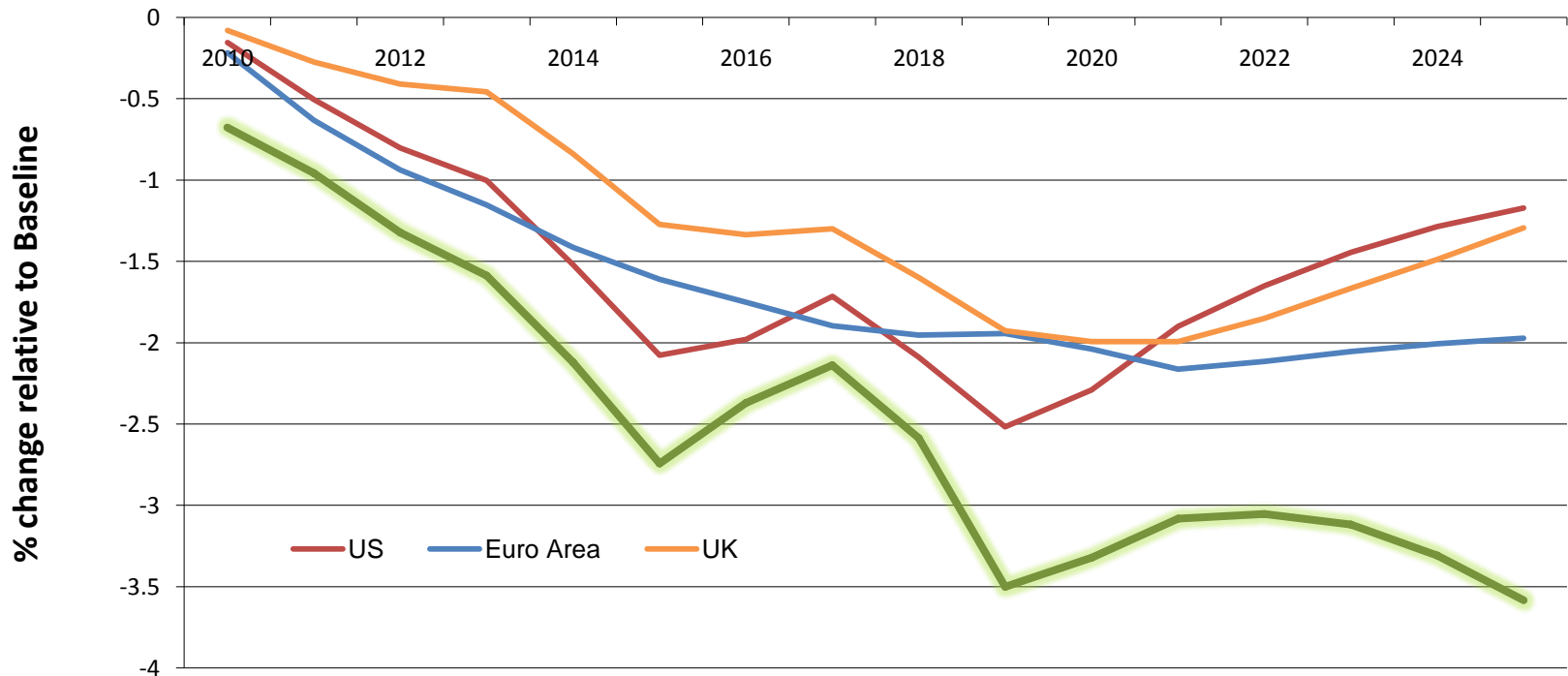
- Comparable scale of impacts in International economy with adjustments and recoveries noted from between 2018 - 2020



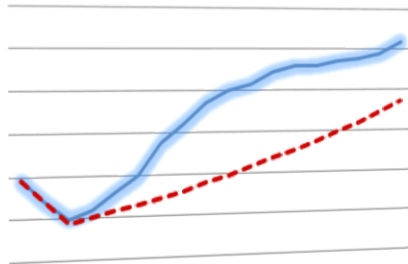
Impacts under the Camel Scenario



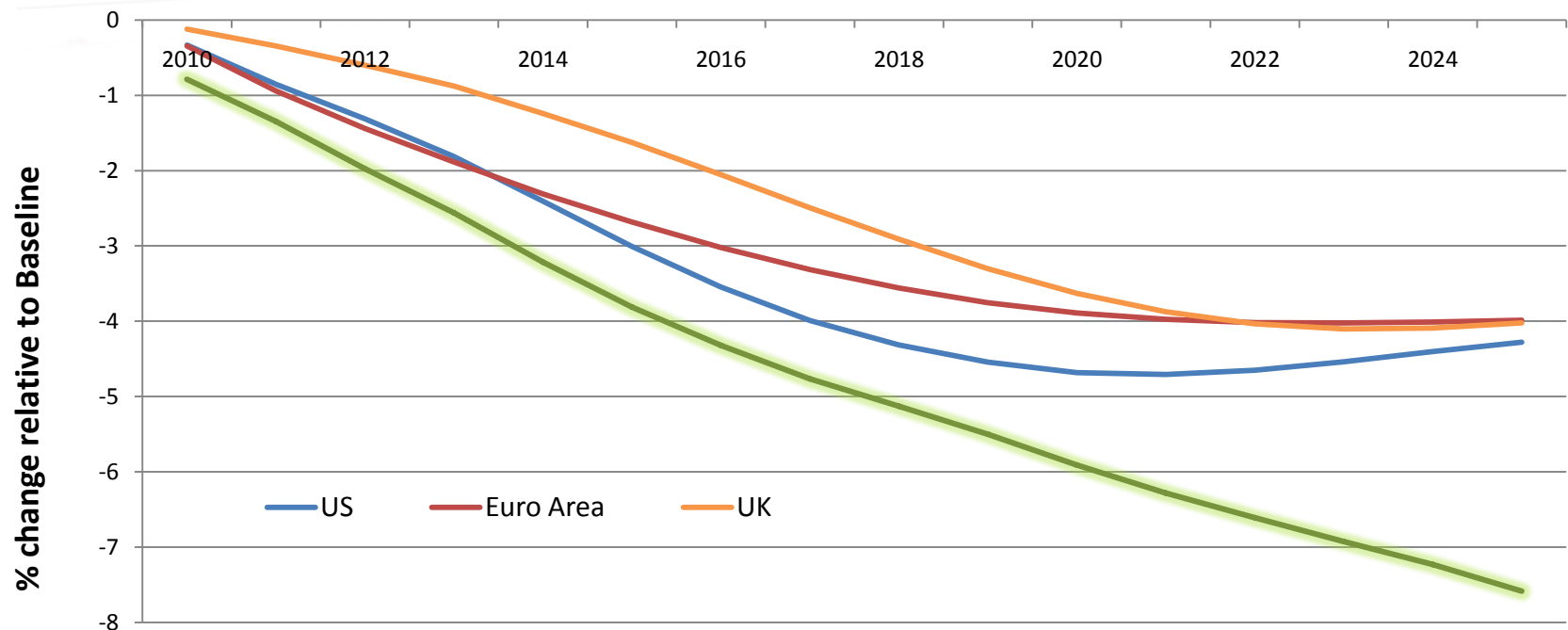
- Second shocks brings GDP in Ireland down 3.5% from the baseline. Unstable economic path.
- More moderate impacts internationally that track the shocks as monetary authorities raise and drop interest rates in response.



Impacts under the Accelerated Growth Scenario



- Rapid and sustained downward trend in GDP for Ireland to a point 7.5% below baseline GDP in 2025
- More moderate, yet still strong, impacts on GDP within the US, Europe and the UK that level off over the long term.





Broader and Social impacts:

Distributional impacts – greater relative burden on those least able to afford

Fuel & Energy poverty – greater shift from the margins with associated impacts

Mobility reduction – cost of travel would increase – leisure trips may suffer more

Price volatility and uncertainty – Challenge for markets and business planning

National cost competitiveness – Could reduce international cost competitiveness

Energy Import bill – Estimated €6bn p.a leaving the economy on imported fuels

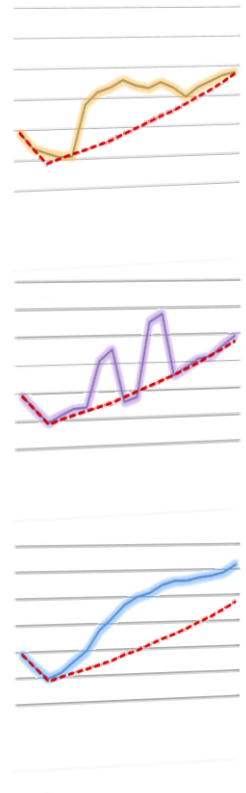
Conclusion on Impacts

Economic impacts for Ireland and core trading partners are substantial

Scale varies, but impacts stem from three sources:

- Appreciation of the Euro reduces Irish competitiveness
- Inflation triggers interest rate increases from monetary authorities and reduces investment and national output
- Slowdown in the international economy reduces demand for Irish export

Broader impacts would exacerbate problems faced nationally on both social and economic levels.



Summary



Ireland and close trading partners are dependent upon fossil fuels for the normal operation of their economies

Ireland does not have significant indigenous reserves

Feasible shocks to the price of these fuels would have pronounced economic and social impacts internationally

Results indicate Ireland suffers a greater relative impact and a slower recovery under the scenarios examined

International action offers greatest potential for mitigation of impacts, but national action is also relevant with regard to economic cost, environmental synergies, energy security, social impacts, competitiveness and market opportunities.



Thank You



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