



# Competition, pricing, and trade in international gas & LNG markets

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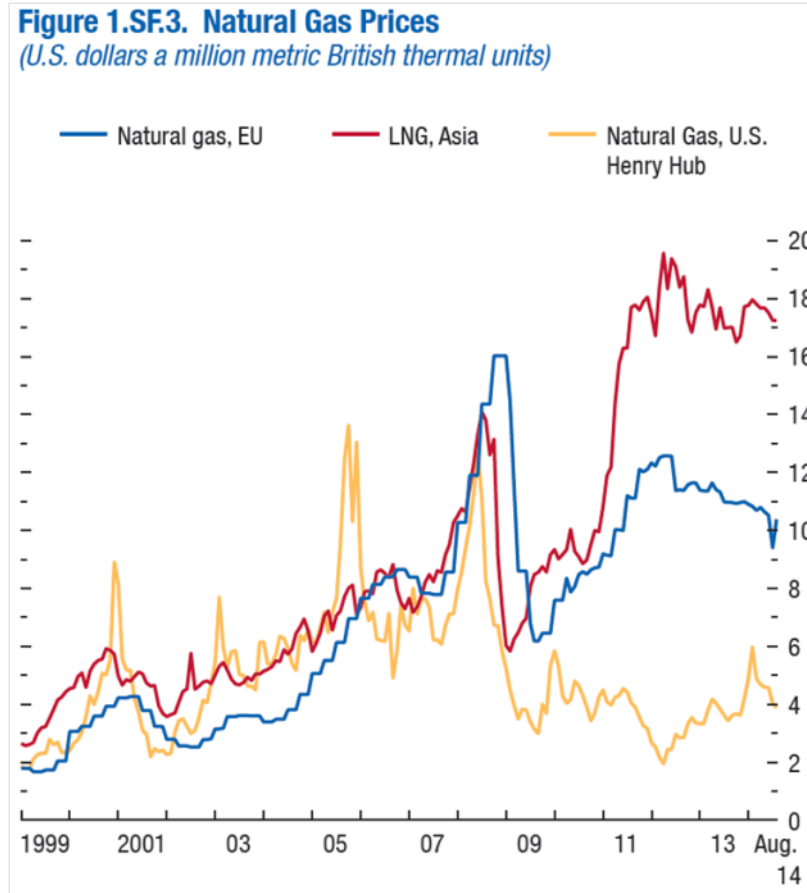
# Overview of this talk

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## Understanding global gas prices & LNG trade

- ① Global gas & LNG prices are the result of imperfect competition
- ② LNG shipping constraints create further limits to price arbitrage
- ③ A more “liquid” LNG market may, in parts, be bad for security of supply

# Global gas prices have diverged – irrationally?



**10 years ago:** Single global gas price due to LNG trade?

**2010s:** LNG exporters failing to arbitrage prices?

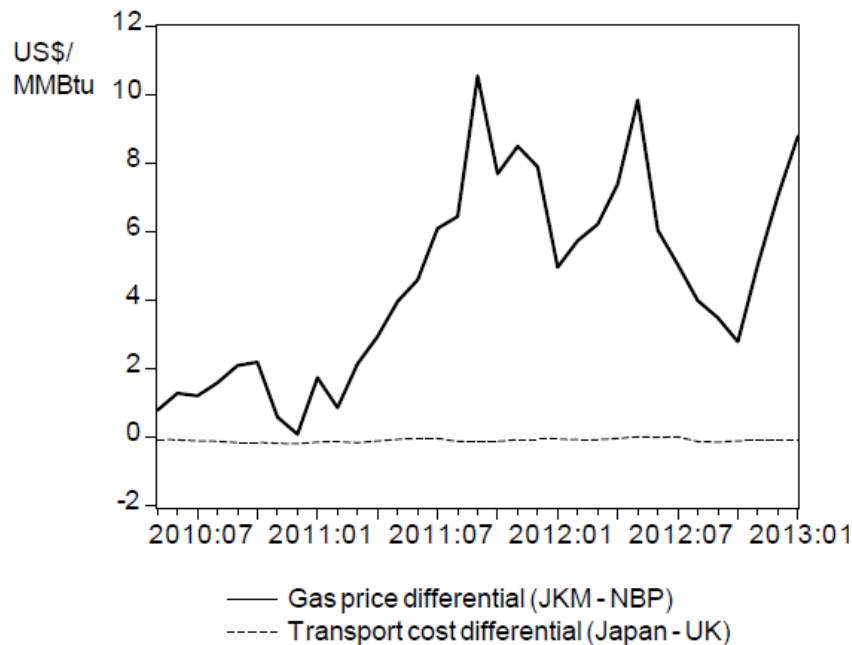
- **Qatar:** “Forgone profit” up to US\$100 million per day?
  - Estimates for short-term sales to UK vs Japan during 2011

Source: IMF World Economic Outlook (October 2014)

# Imperfect competition explains gas prices

**A competitive model fails to explain gas prices...**

***Key prediction:*** Netbacks equal across export markets



Source: Ritz, R.A. (September 2014, *Energy Economics*)

**... exporter market power rationalizes prices & trade**

Exporters with market power recognize impact on prices

- Price sensitivities of demand vary across regional markets

**BUT**

Market power *not* always bad: raises investment incentives

- Static vs dynamic perspective

# LNG shipping creates limits to arbitrage

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“Entry barriers to LNG trading are surprisingly high – new entrants ... must have access to cargoes, but the market's liquidity is typically held captive by the LNG liquefaction owners/upstream suppliers”

“Traders must also have access to shipping, via owned vessels or the charter market.”

## **Key role of shipping in the LNG value chain**

- ① Centre of vertically integrated ownership structure
- ② Does exporter market power raise transport distances?
- ③ Optimal timing & risk profile of shipping investments

Source: JP Morgan Cazenove – Global LNG (January 2012)

# High UK LNG imports projected for 2020s

Figure 123  
Annual supply pattern in No Progression

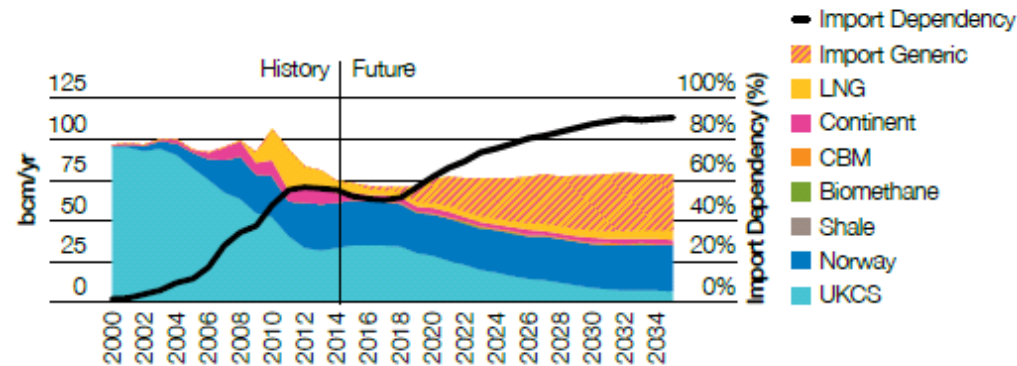
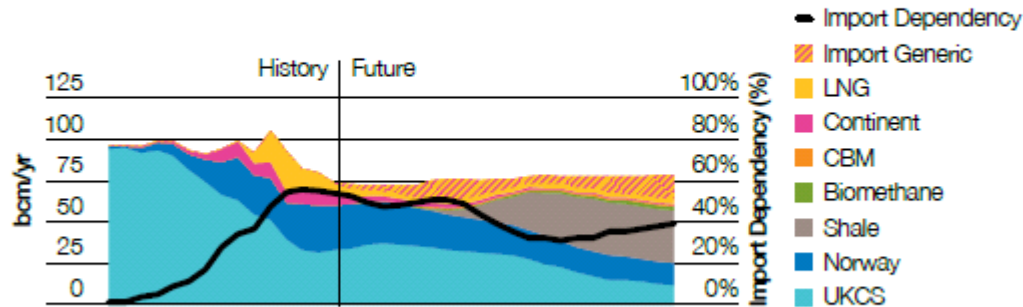


Figure 124  
Annual supply pattern in Low Carbon Life



Large-scale new entry  
across LNG value chain

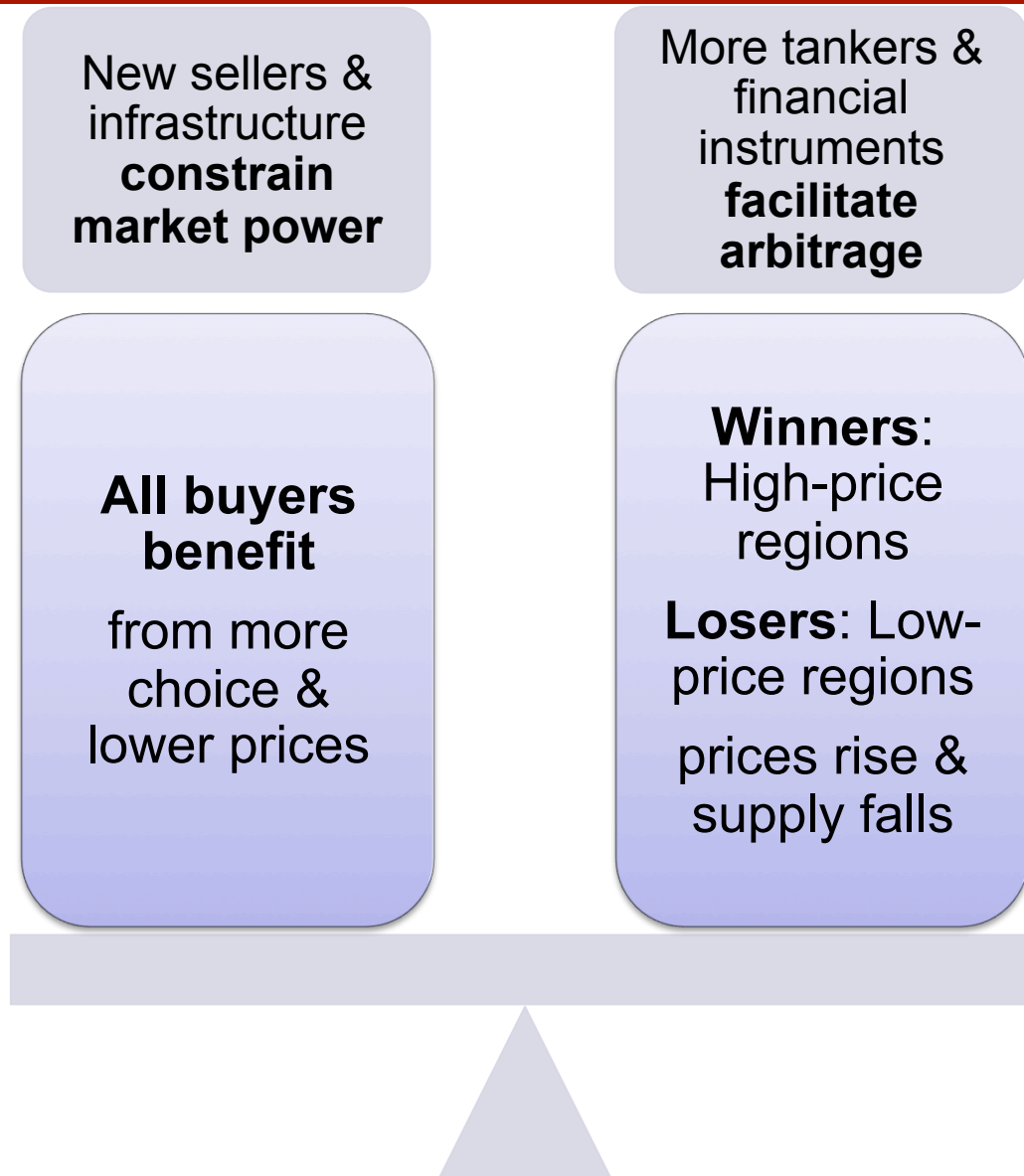


Fewer concerns about  
security of supply?

Source: National Grid UK Future Energy Scenarios (July 2014)

# More “liquid” LNG market – two-edged sword?

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# References

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**Thank you for listening!**

Feedback welcome:  
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## References

- Ritz, R.A. (2014), “Price discrimination and limits to arbitrage: An analysis of global LNG markets”, *Energy Economics* 45, September 2014, pp. 324–332
- Ritz, R.A. (2014), “A strategic perspective on competition in international gas markets”, EPRG Working Paper, in preparation for December 2014