



**FO**



**2015**

**Fertilizer Outlook &  
Technology Conference**

**Laura Cross**

**Senior Analyst, Integer Research Limited**



**Nitrogen Outlook**



*The*  
**Fertilizer Institute**  
Nourish, Replenish, Grow

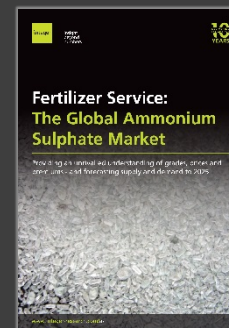
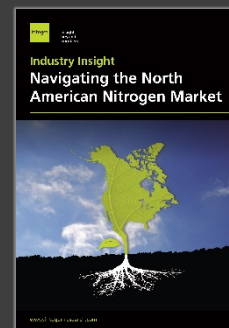
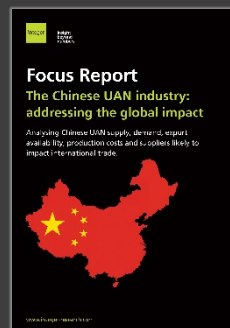
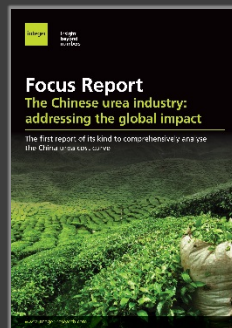
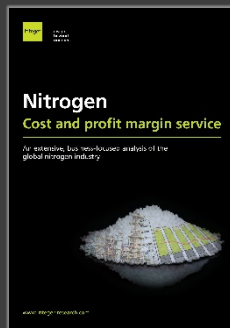
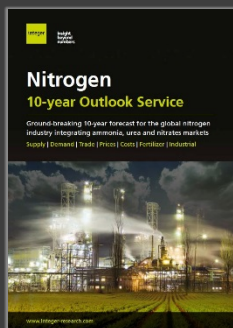


**Fertilizer Industry  
Round Table**

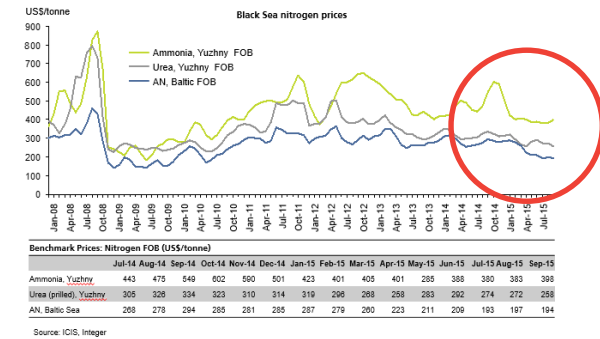
# The outlook for nitrogen

Laura Cross, Senior Analyst, Integer Research  
TFI Outlook and Technology Conference, Jacksonville FL  
Wednesday 11<sup>th</sup> November, 2015

[laura.cross@integer-research.com](mailto:laura.cross@integer-research.com)

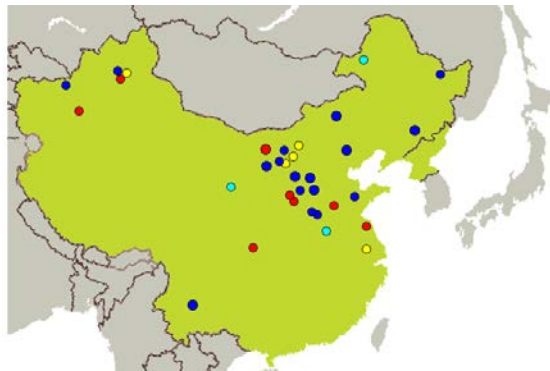


- Setting the scene – what is driving price developments?

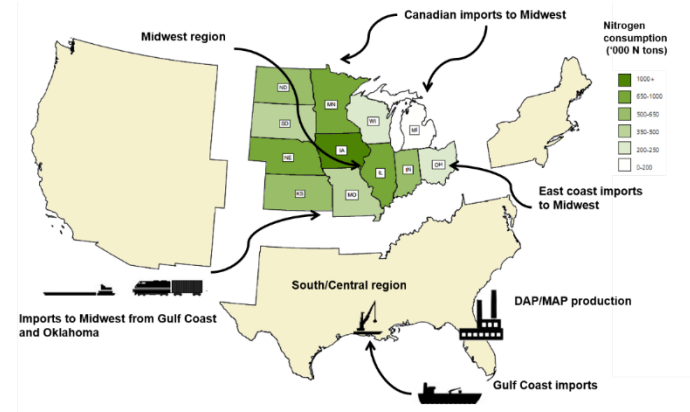


- Setting the scene – what is driving price developments?

- The impact of China



- Setting the scene – what is driving price developments?
- The impact of China
- Opportunities and outlook for North America



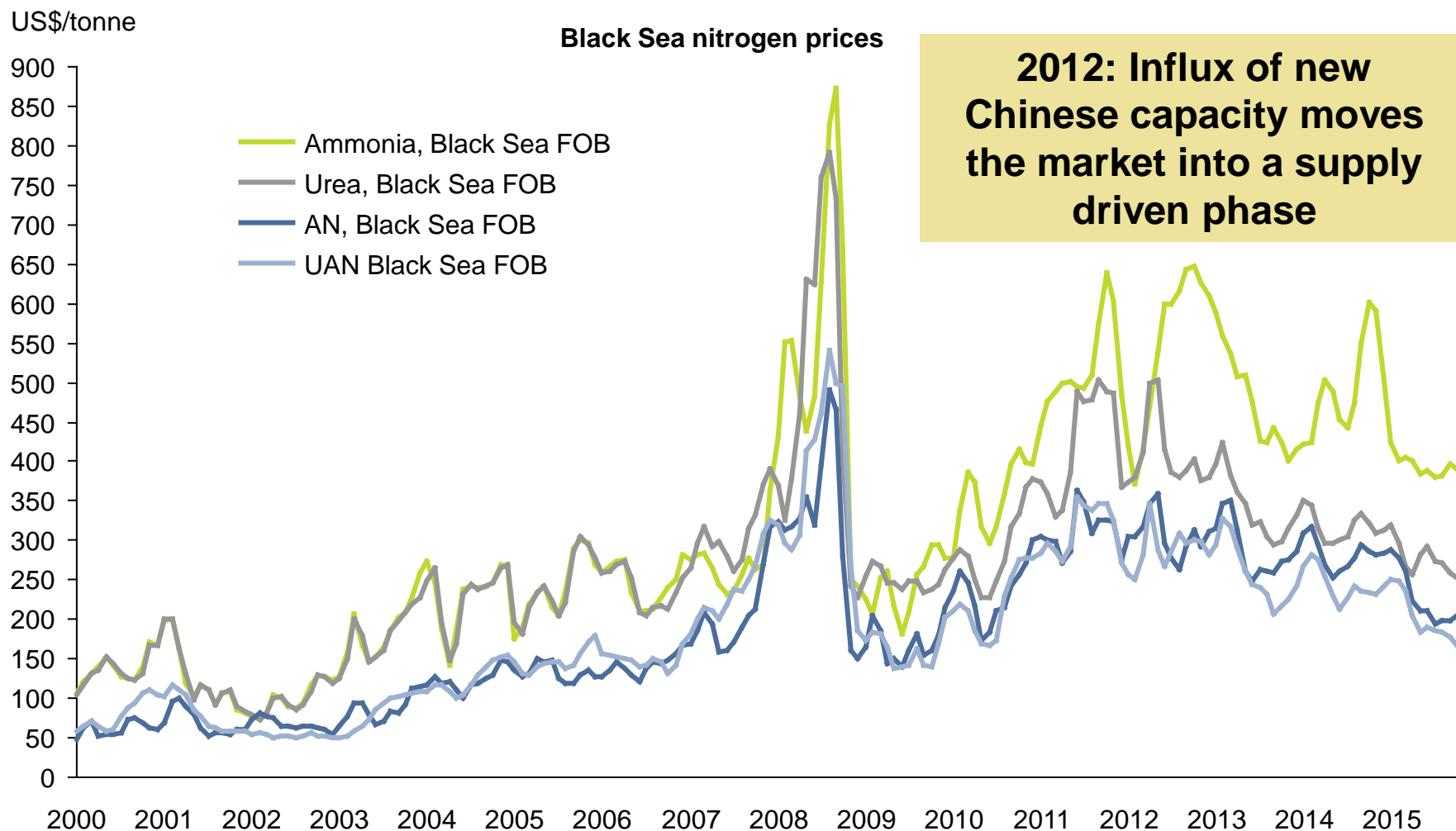
## **Setting the scene – what is driving price developments?**

The impact of China

Opportunities and outlook for North America

---

# The nitrogen market is in the throes of a supply-driven phase



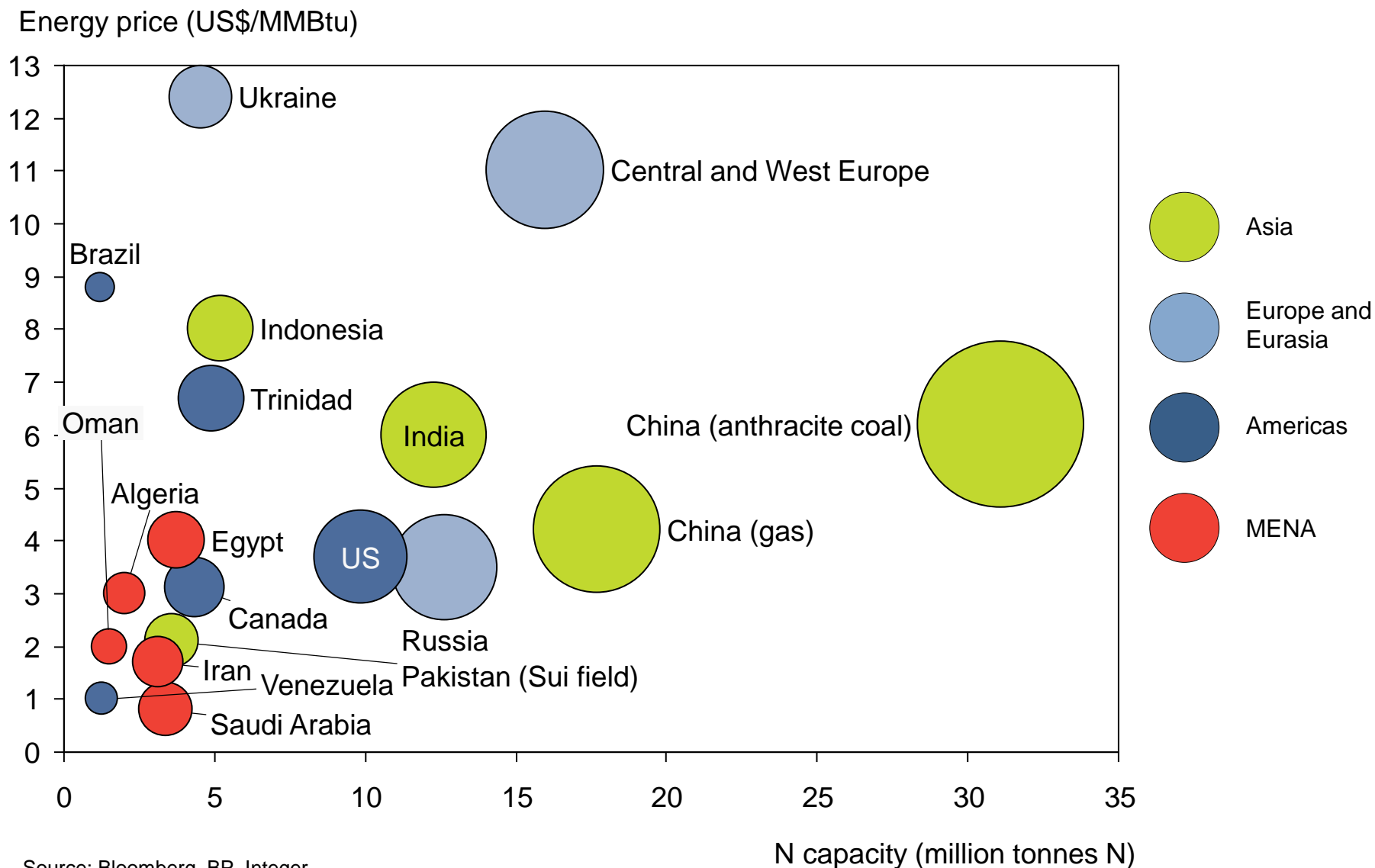
# Market weakness has been passed onto producers



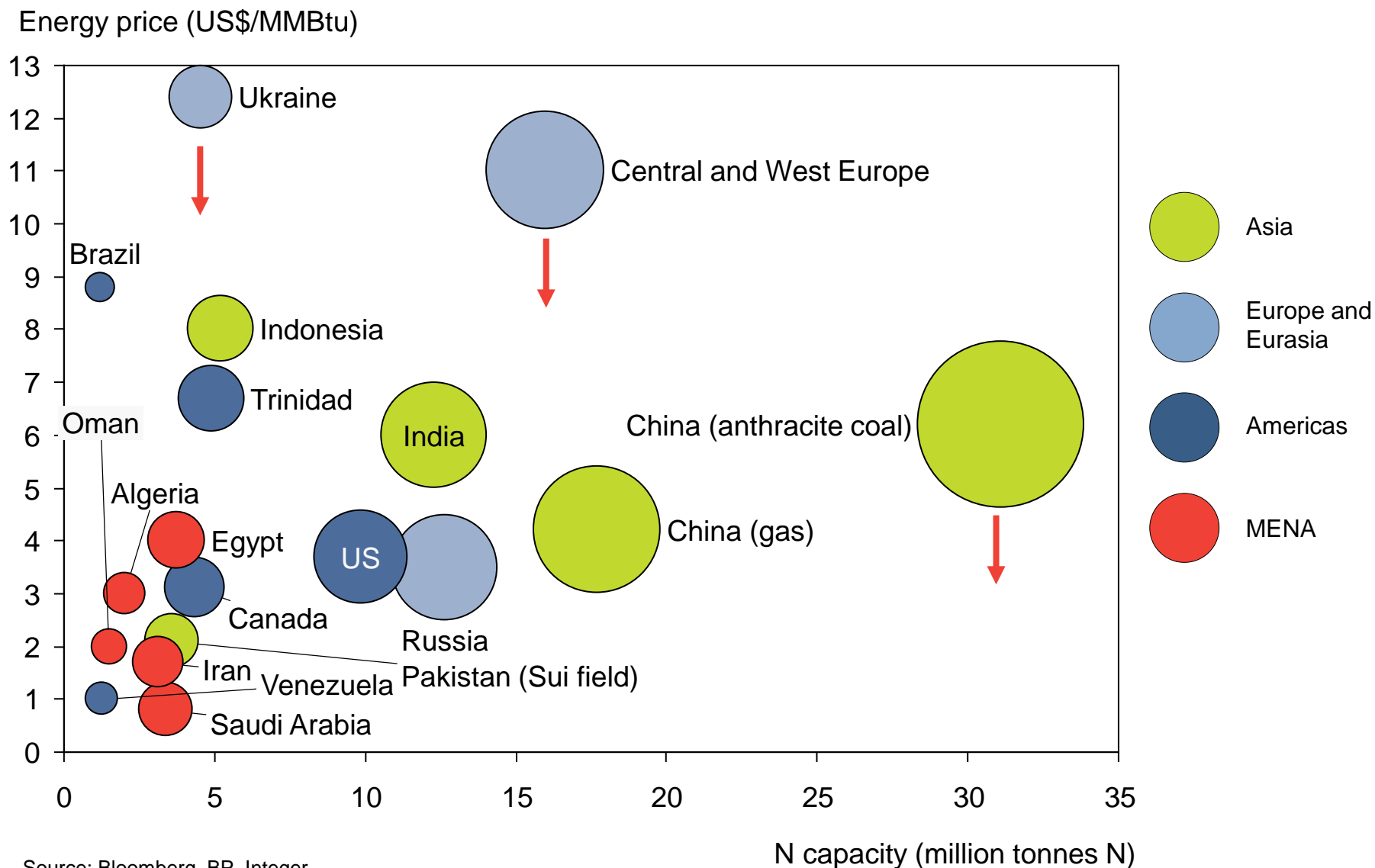
Source: Company sources, Integer



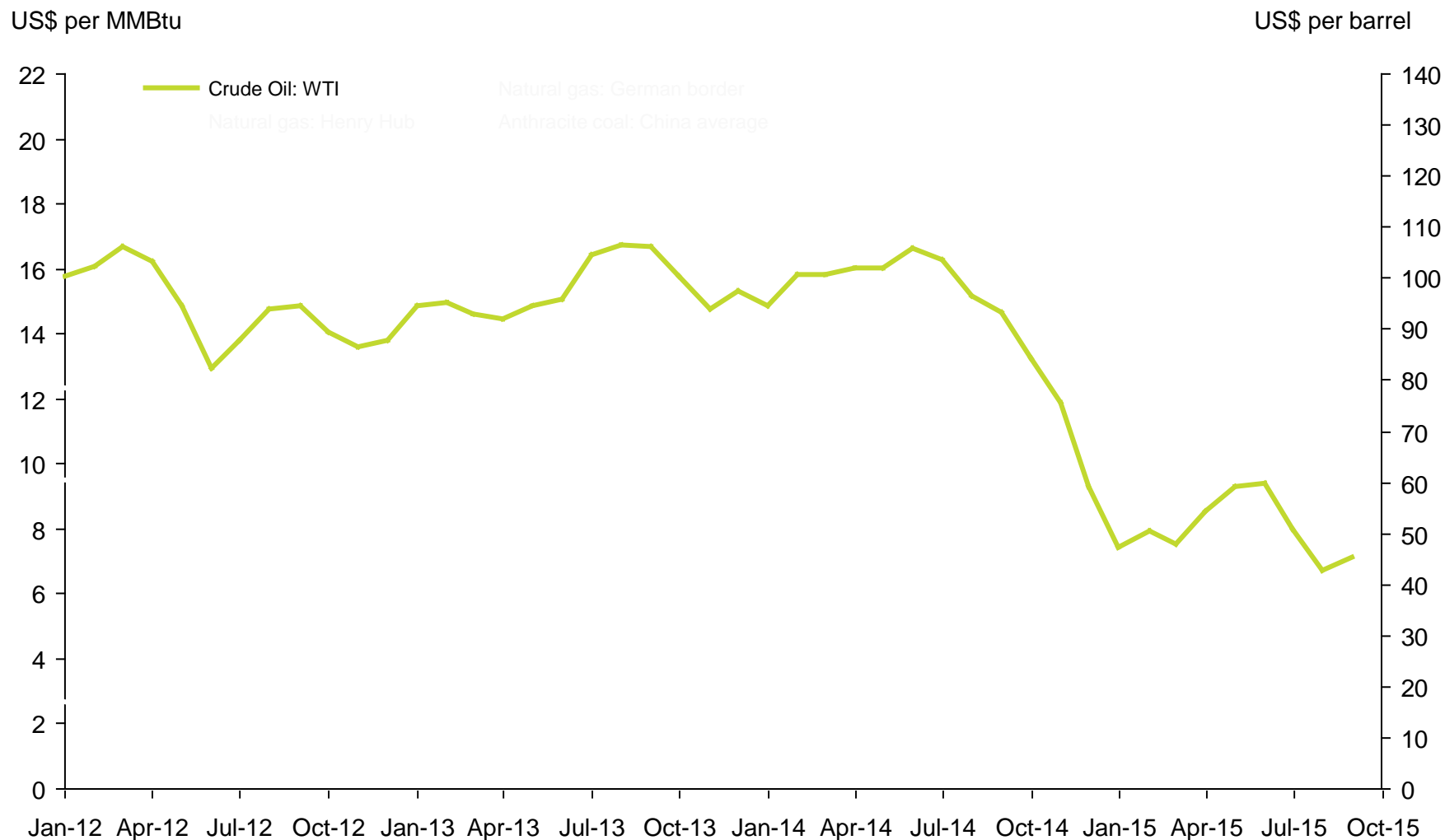
# Improvements in key countries' cost position have furthered the impact



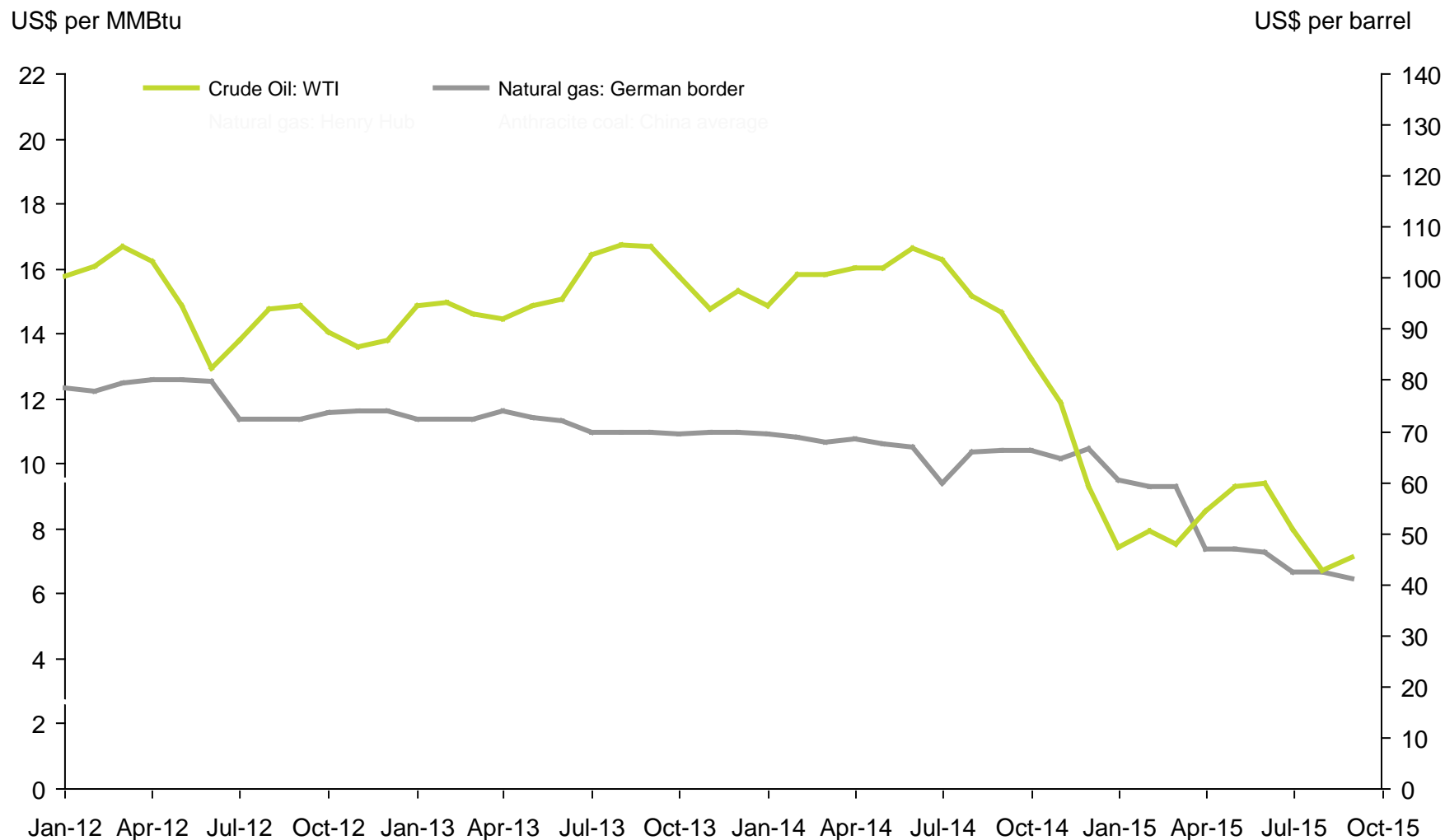
# Improvements in key countries' cost position have furthered the impact



## Global energy price developments



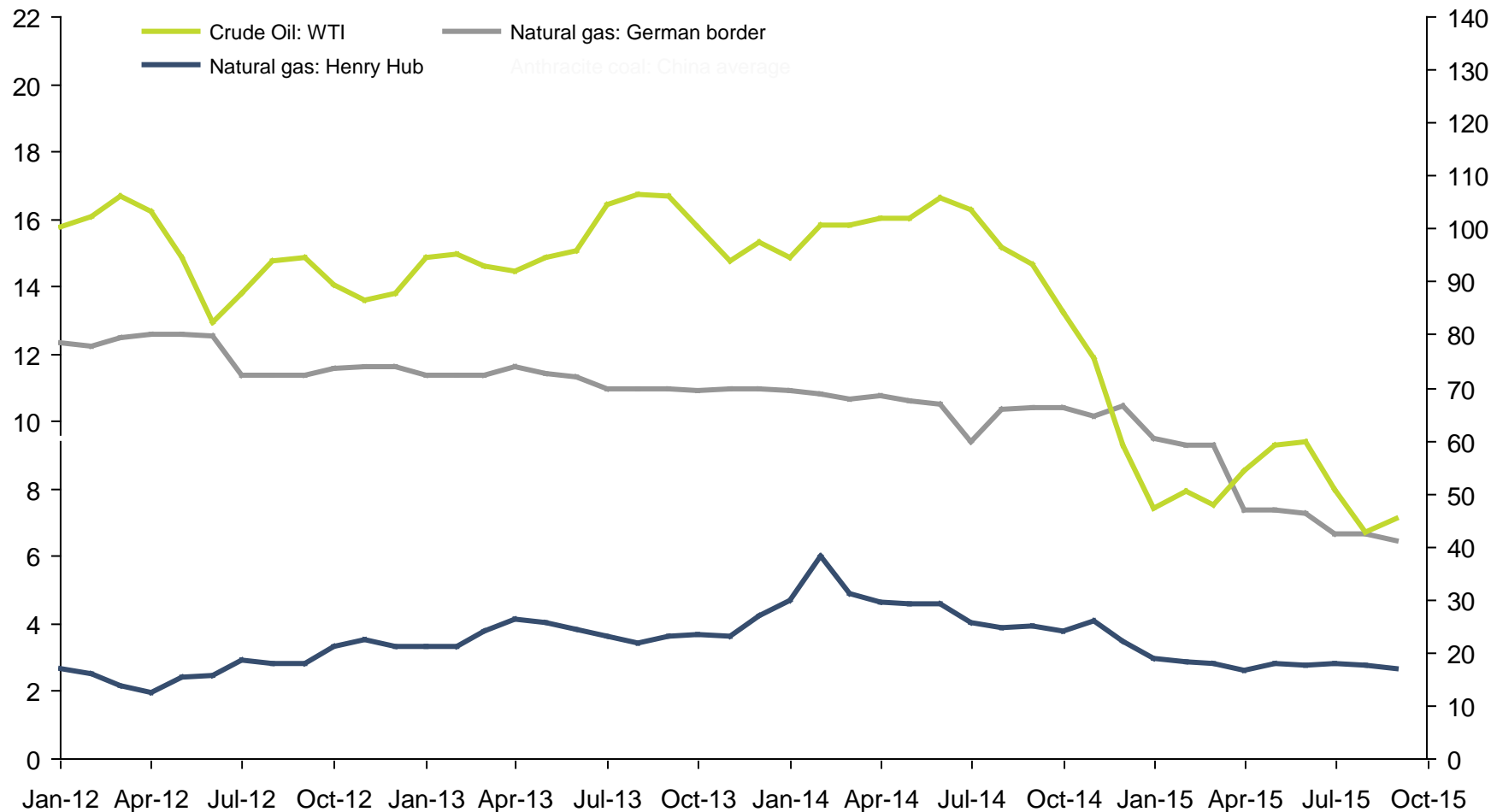
## Global energy price developments



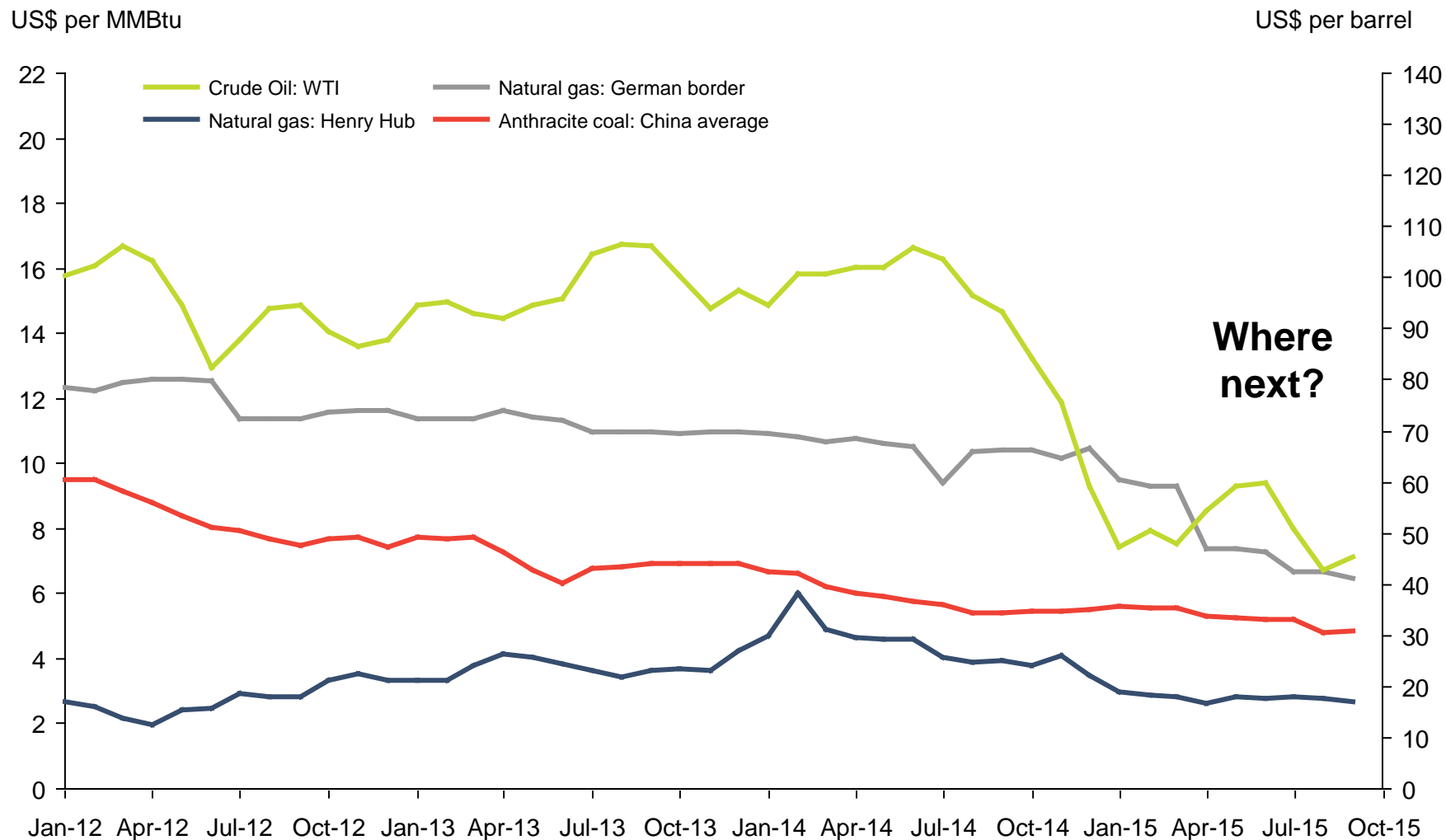
## Global energy price developments

US\$ per MMBtu

US\$ per barrel



## Global energy price developments



Setting the scene – what is driving price developments?

**The impact of China**

Opportunities and outlook for North America

---

# China's position on the global urea cost curve

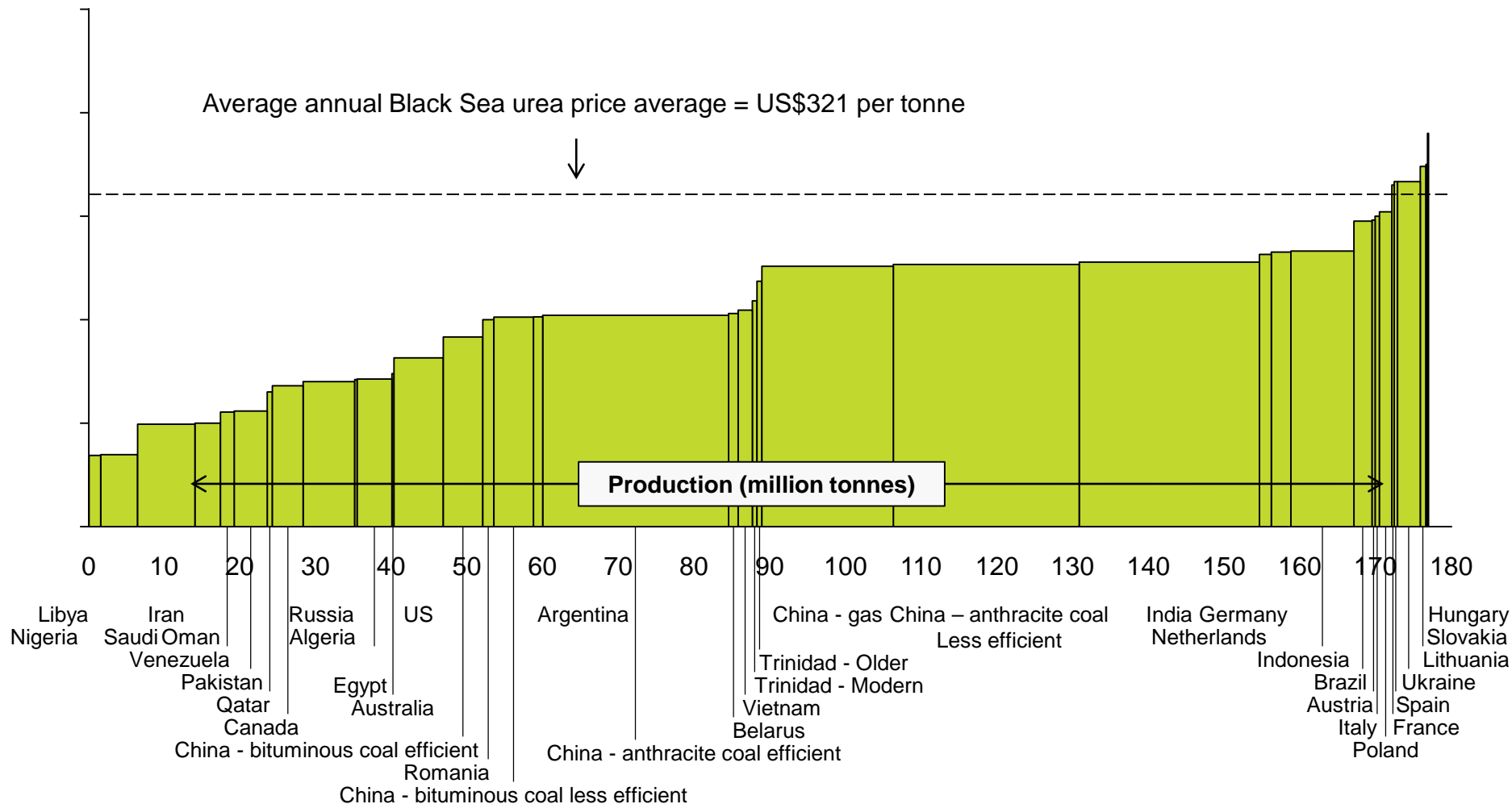
US\$ per tonne ex-works

Integer global urea cost curve, 2014

Average annual Black Sea urea price average = US\$321 per tonne



Production (million tonnes)



Source: Integer Nitrogen Cost and Profit Margin Service Issue 4

Note: Typical values based on average local input costs



# China's position on the global urea cost curve

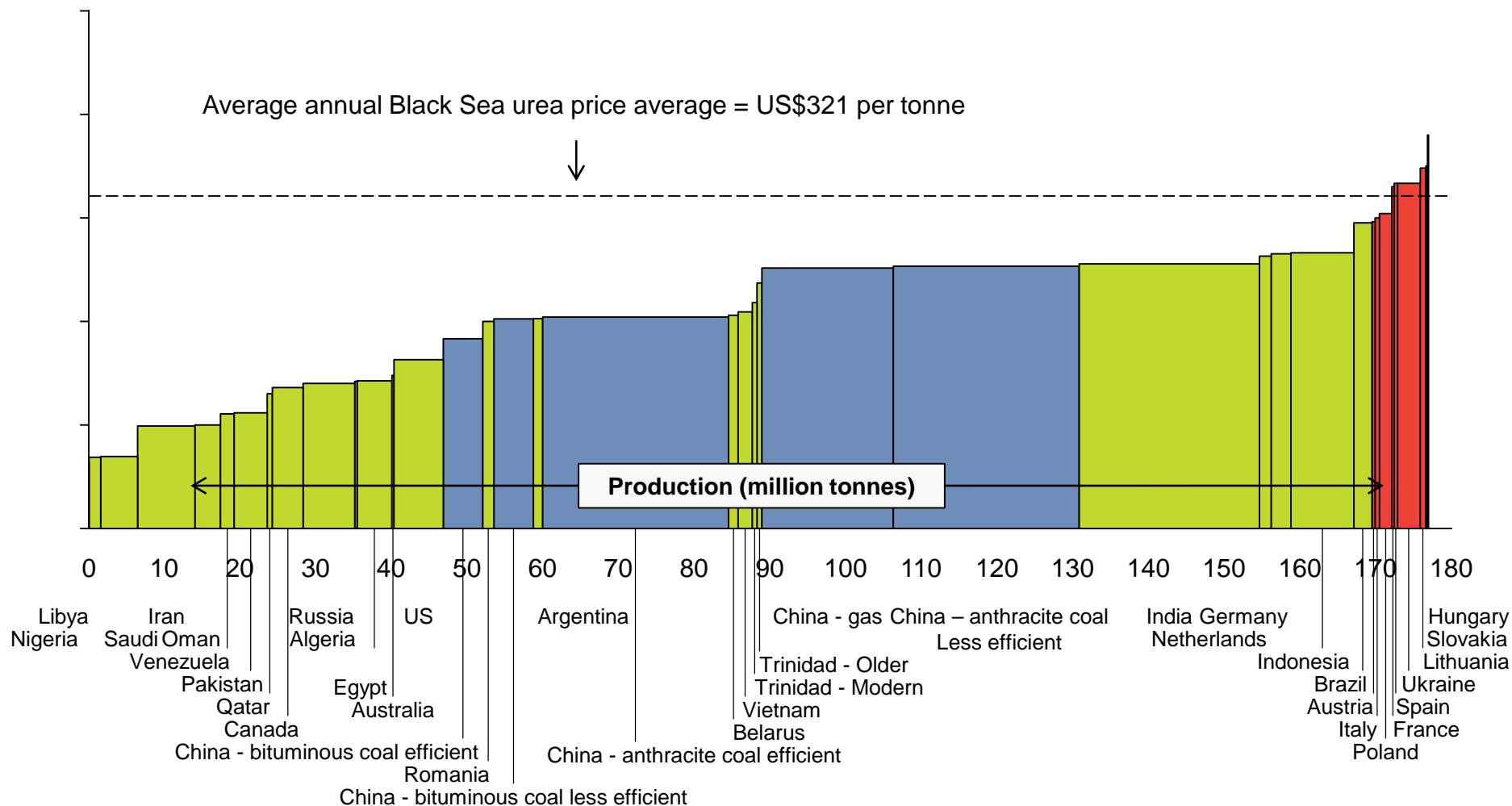
US\$ per tonne ex-works

Integer global urea cost curve, 2014

Average annual Black Sea urea price average = US\$321 per tonne



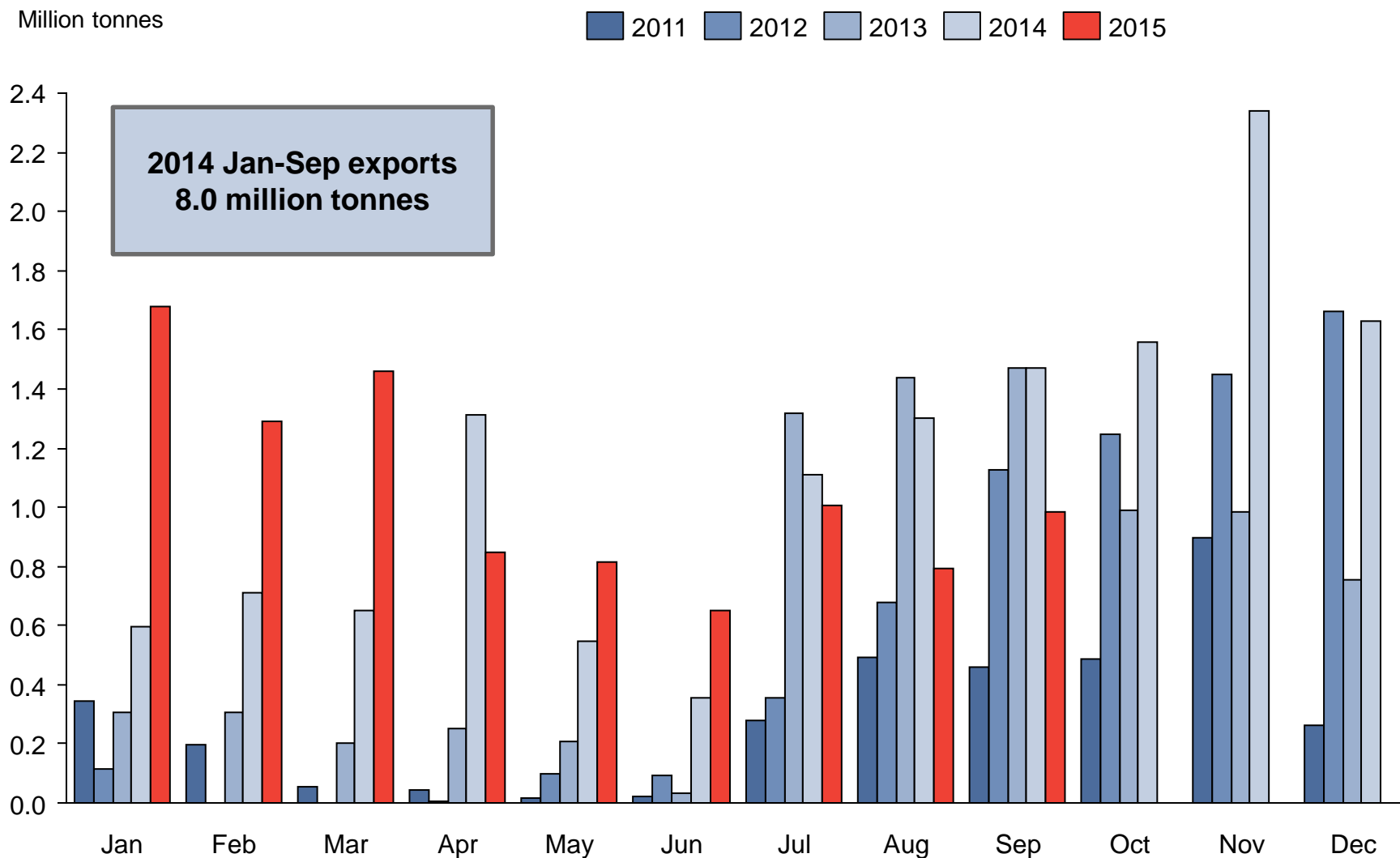
Production (million tonnes)



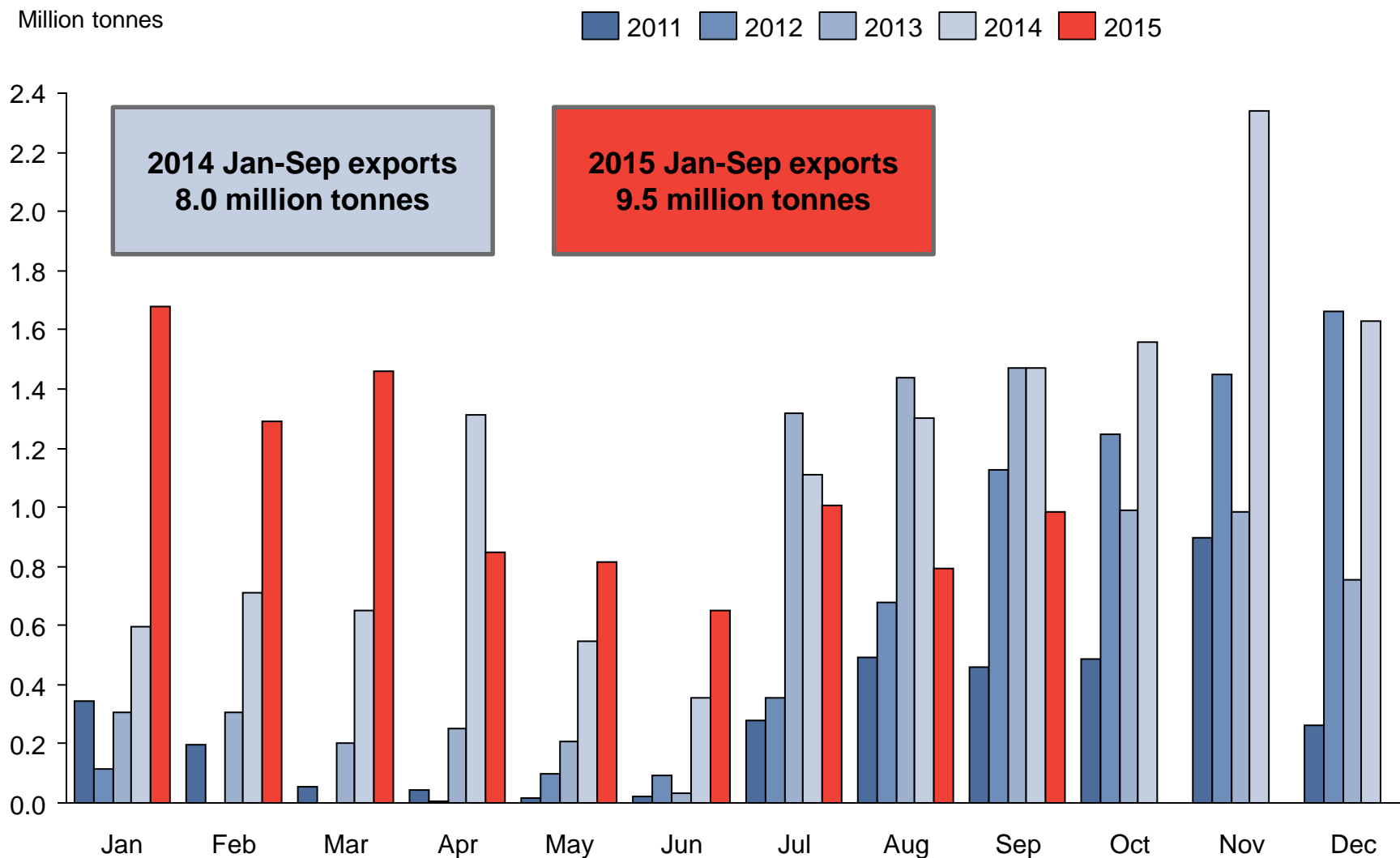
Source: Integer Nitrogen Cost and Profit Margin Service Issue 4

Note: Typical values based on average local input costs

## Monthly Chinese urea exports, 2011-2015

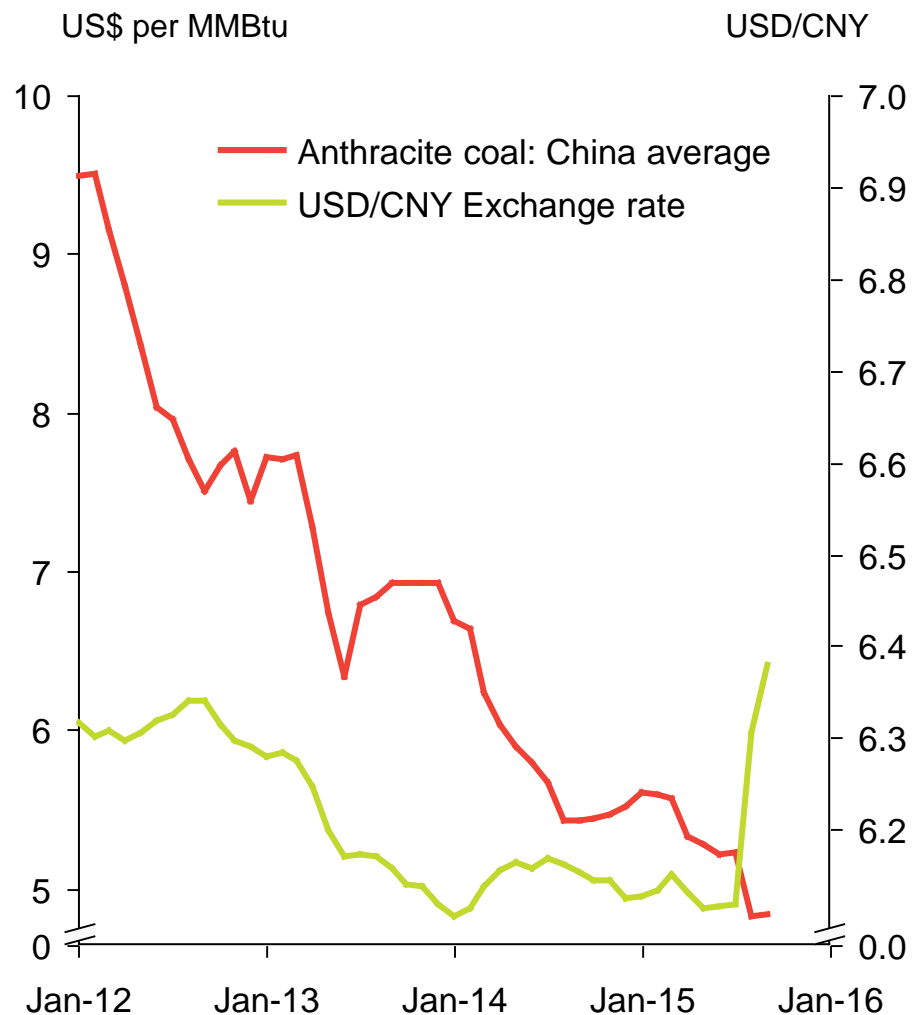


## Monthly Chinese urea exports, 2011-2015



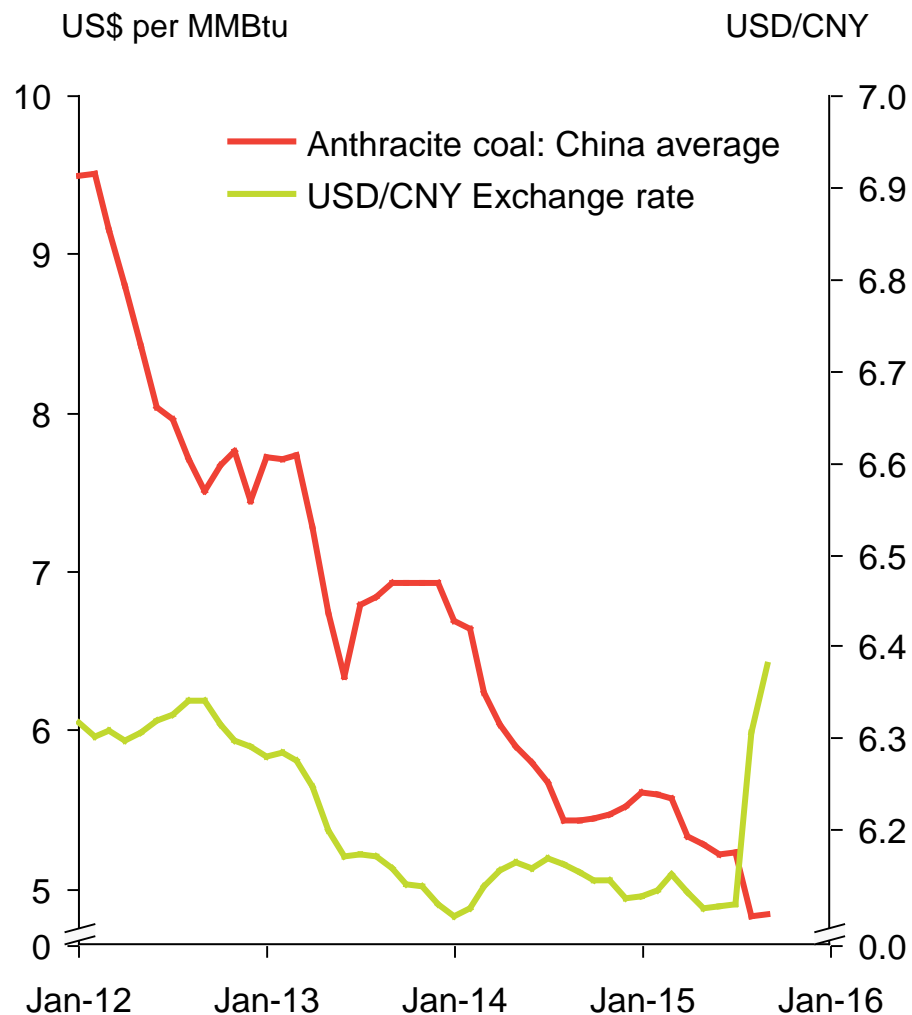
# Currency depreciation has furthered China's impact

Chinese currency and energy prices

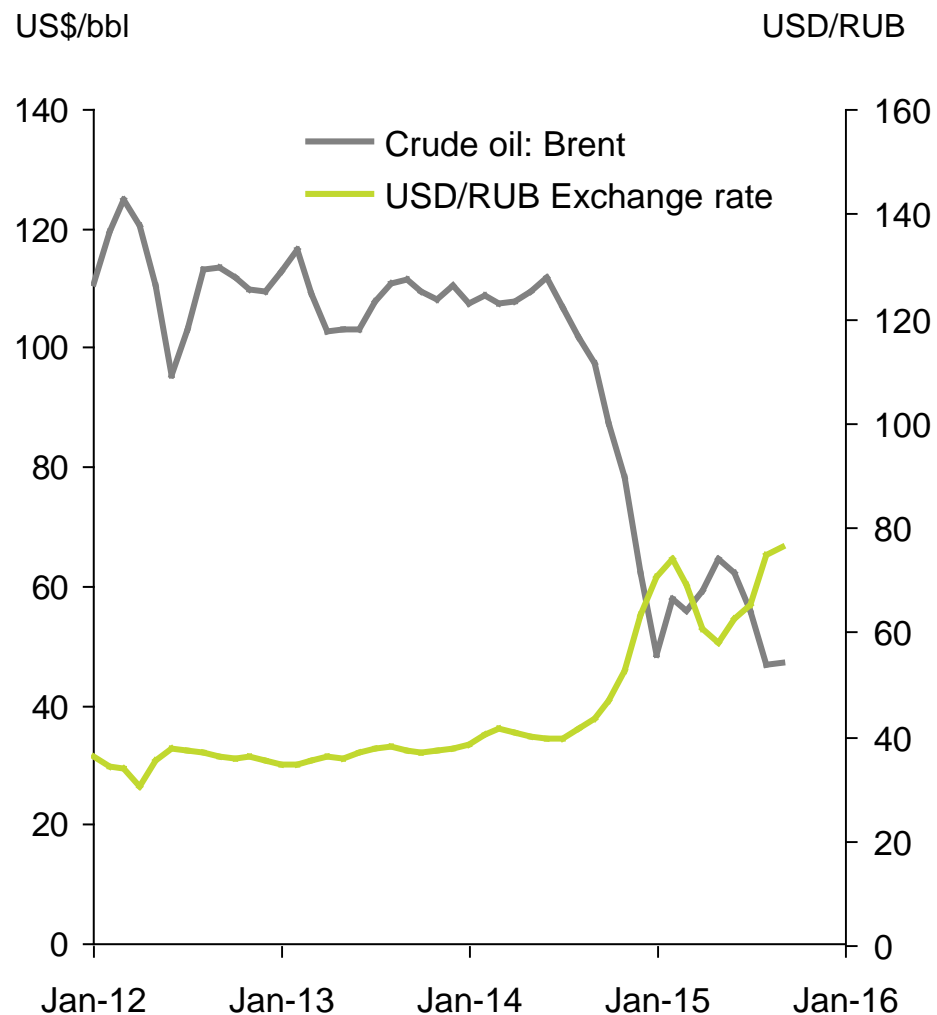


# Currency depreciation has furthered China's impact

## Chinese currency and energy prices

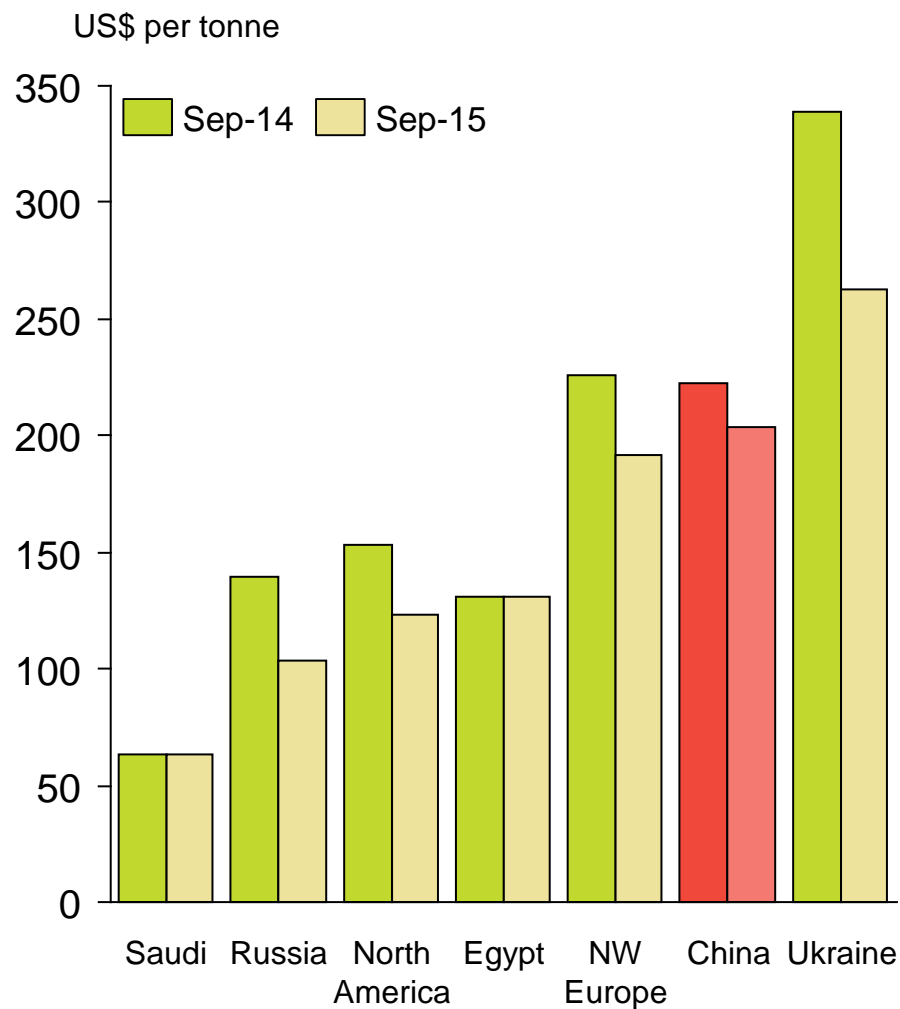


## Russian currency and energy prices



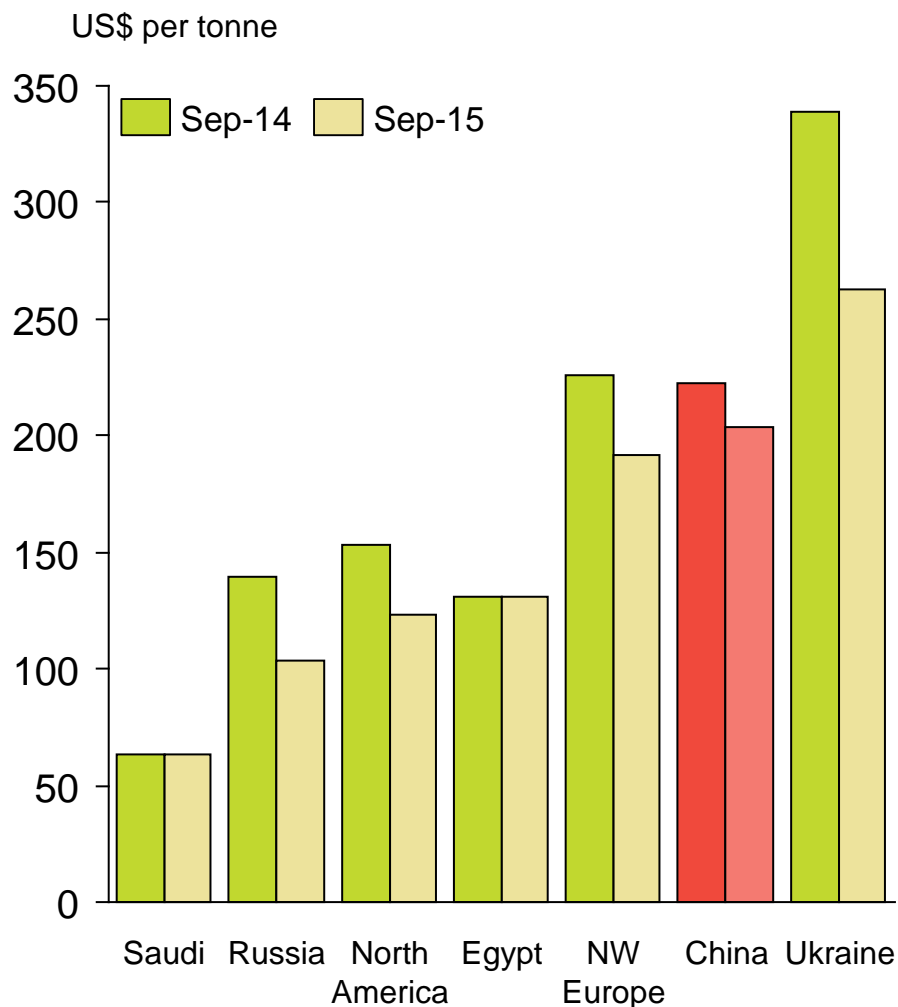
However, China is also caught in a cycle - margins are likely to suffer further

Typical urea ex-works cost per tonne

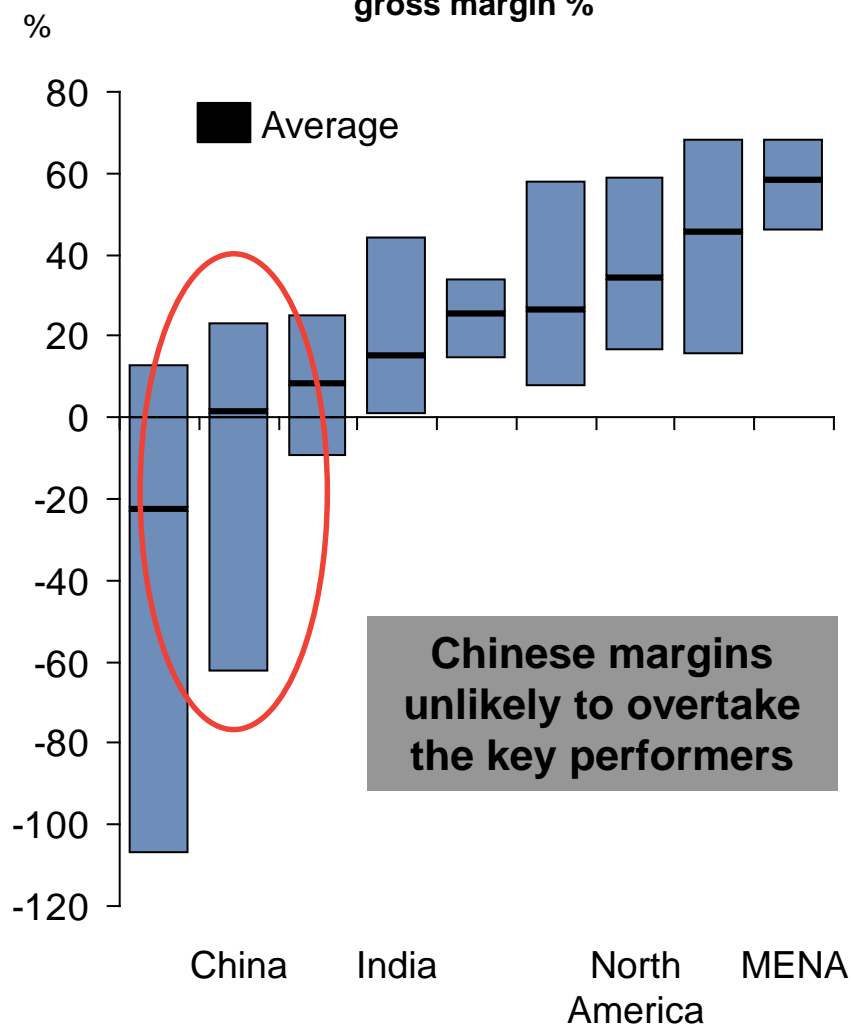


## However, China is also caught in a cycle - margins are likely to suffer further

### Typical urea ex-works cost per tonne



### Regional comparison of nitrogen industry gross margin %



Setting the scene – what is driving price developments?

The impact of China

**Opportunities and outlook for North America**

---

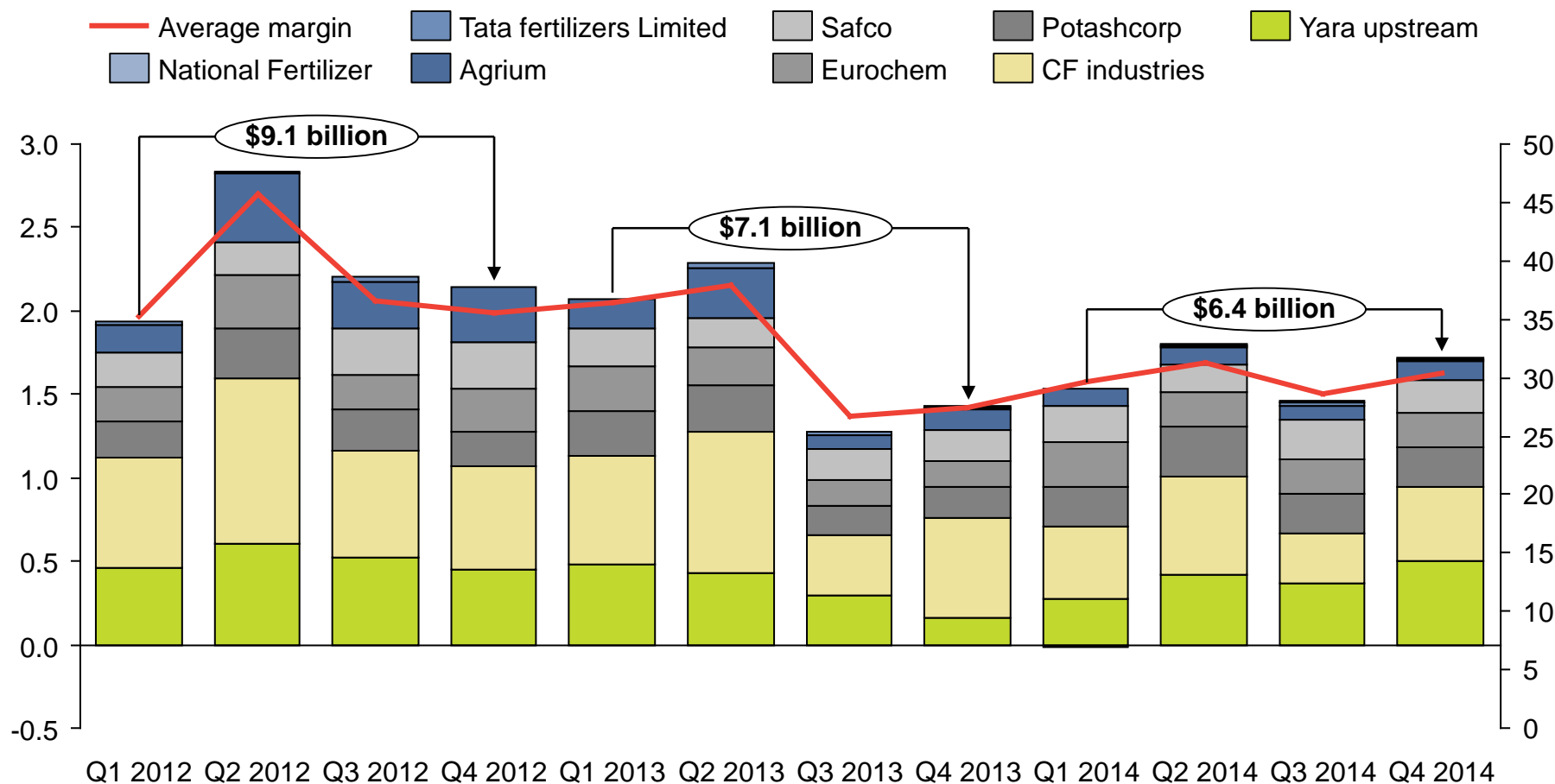


# Revenues have fallen year-on-year since 2012, but North America has been more sheltered than other regions

## Sample nitrogen gross profits

US\$ billion

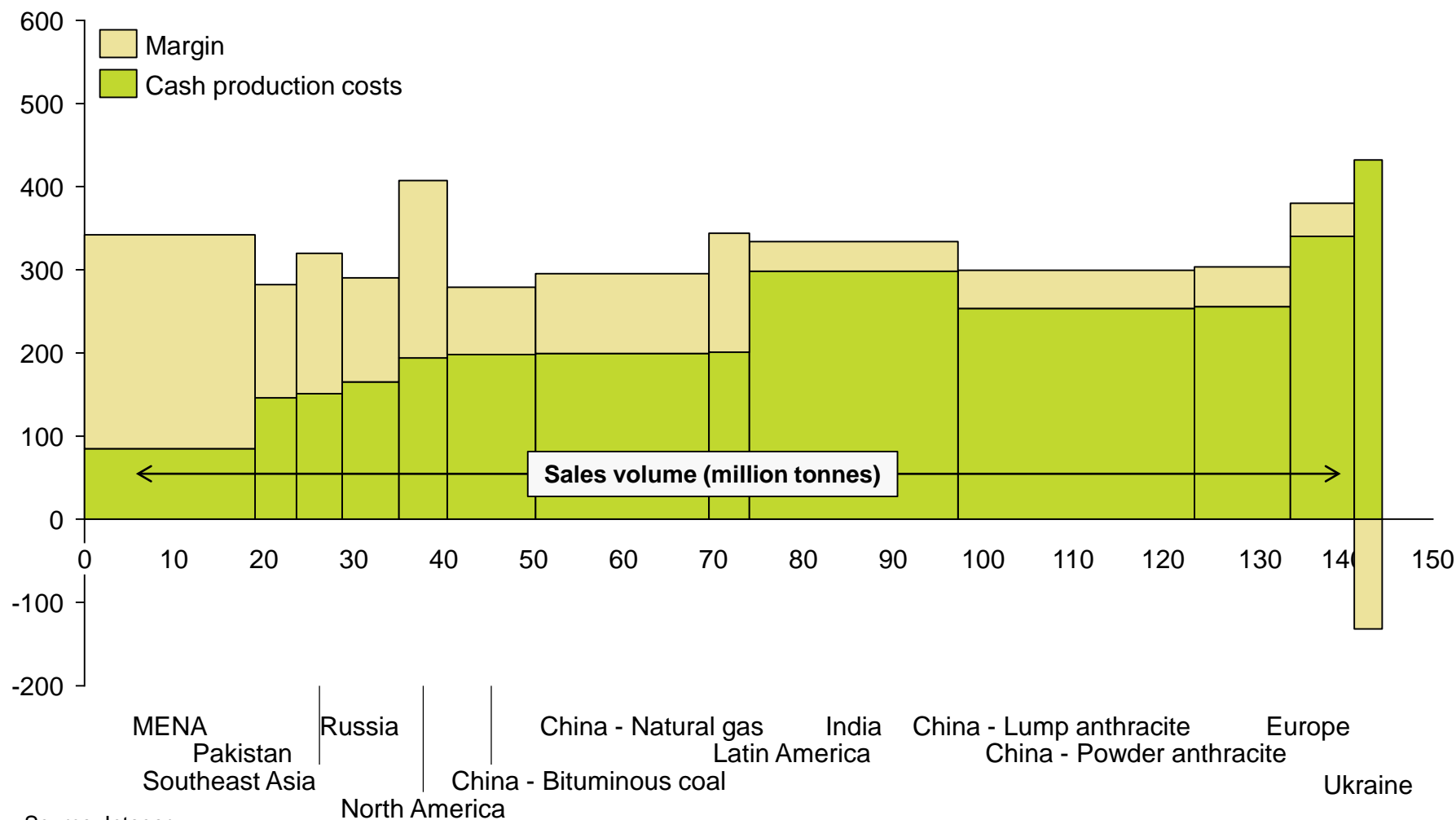
Average margin %



# The two factors for success in the nitrogen market: costs and prices

US\$/tonne

Combined total = average selling price

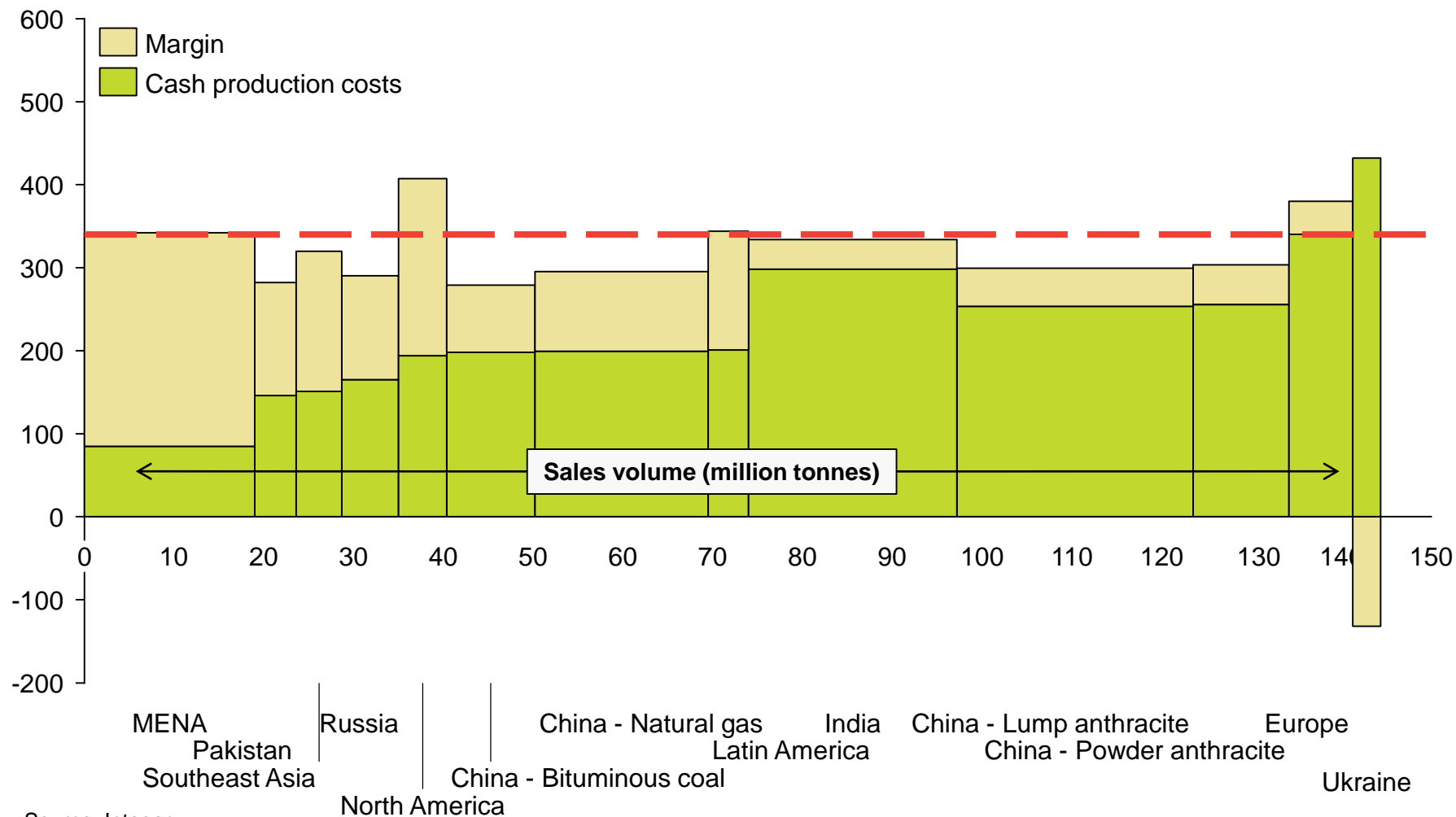


Source: Integer

# The two factors for success in the nitrogen market: costs and prices

US\$/tonne

Combined total = average selling price

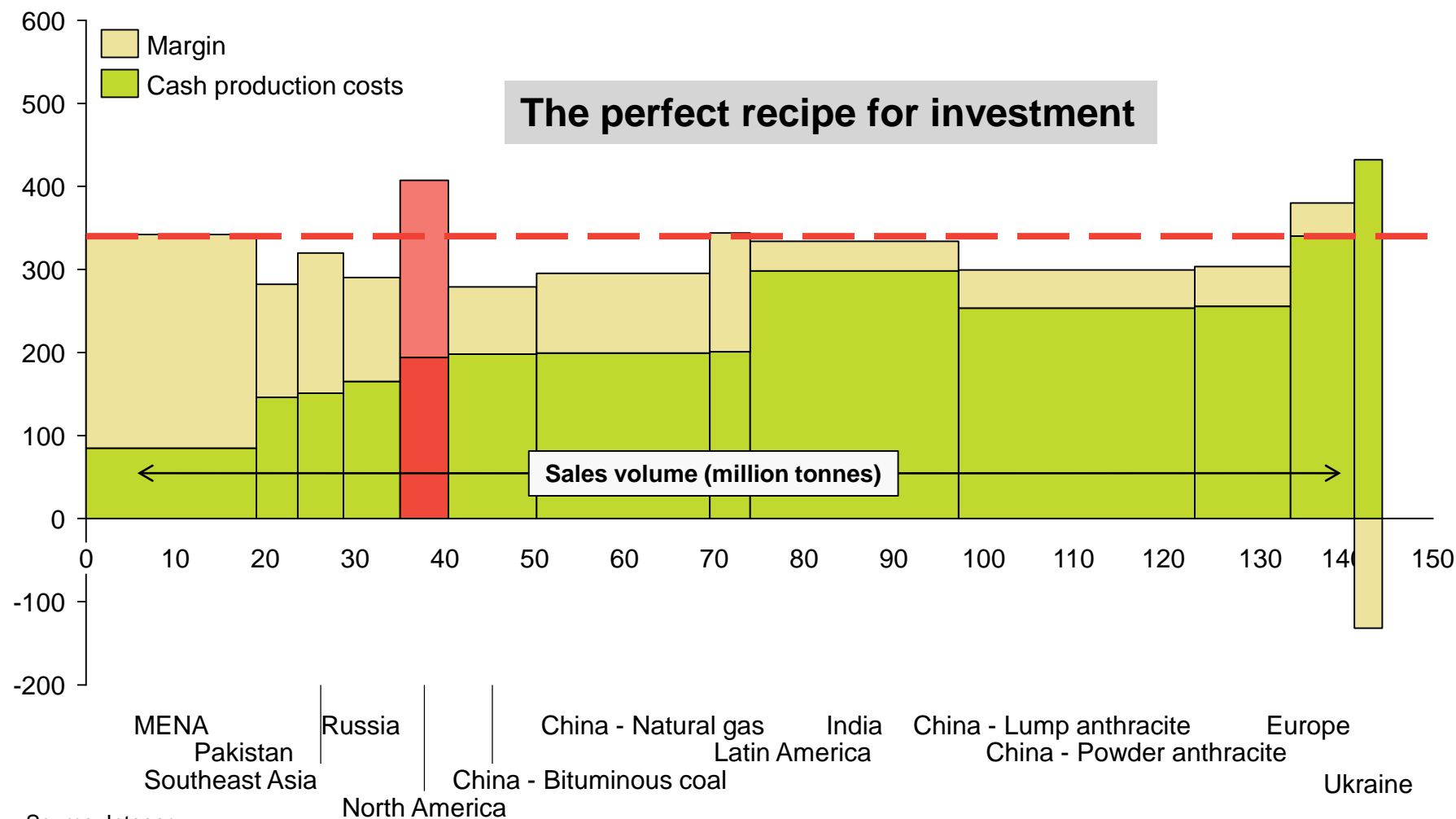


Source: Integer

# The two factors for success in the nitrogen market: costs and prices

US\$/tonne

Combined total = average selling price

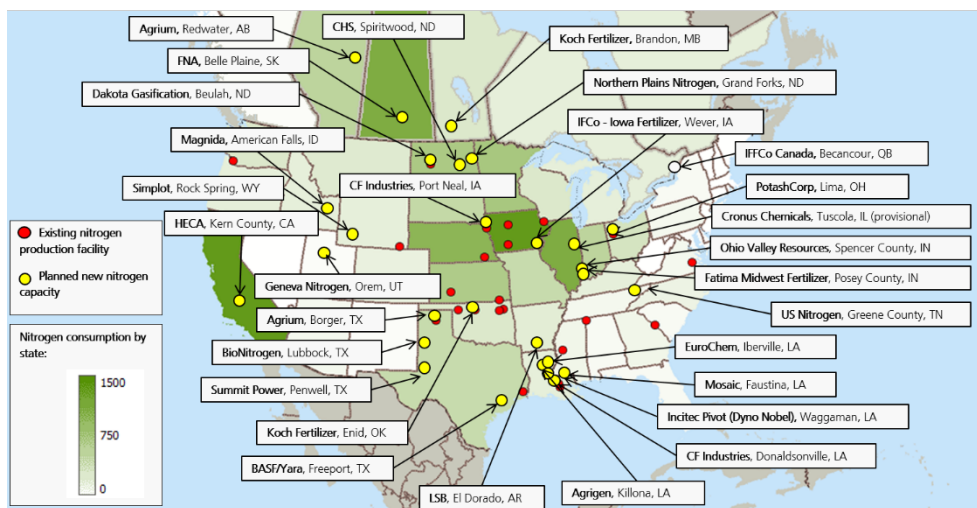


# Investment update: it seems a conservative view on greenfield projects was best

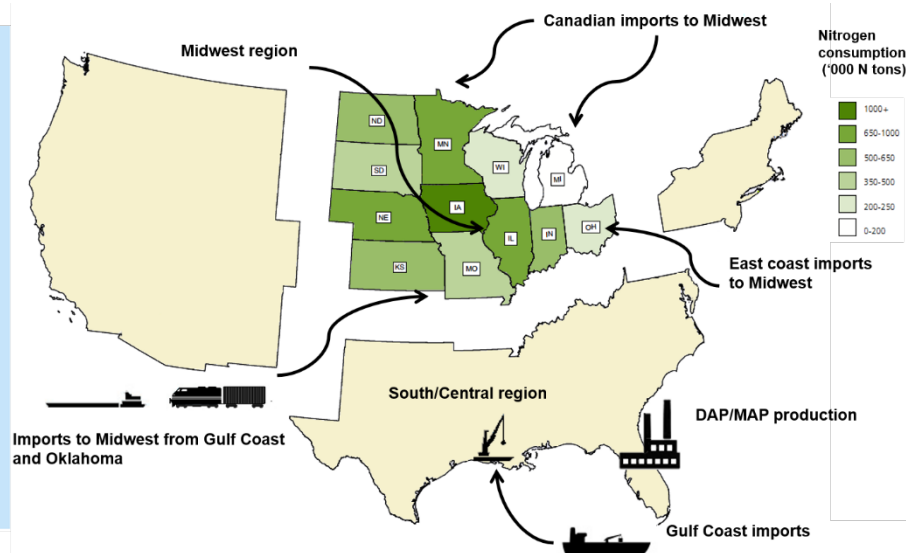
## Comparison of world scale greenfield nitrogen projects projected start up dates

Sponsor	Location	Country	Ammonia capacity (thousand tpy)	Market view start-up date in 2013	Integer projected start date in 2015 where known/firm
Agrigen	LA	US	800	NK	NK
Agrium	Midwest	US	800	2017	Cancelled
CHS	ND	US	840	2016	Cancelled
Cronus	IL	US	800	2016	NK
FNA	SK	Canada	800	NK	NK
IFFCO	Quebec	Canada	800	2017	Delayed indefinitely
Magnida	ID	US	800	2016	NK
Midwest Fertilizer	IN	US	800	2016	NK
ND Corn Growers	ND	US	NK	2016	NK
IFCo (OCI)	IA	US	850	2015	2015/2016
Ohio Valley	IN	US	800	2016	NK
SCS Energy	CA	US	NK	2017	NK
Summit Power	TX	US	400	2017	NK

North American nitrogen investment projects

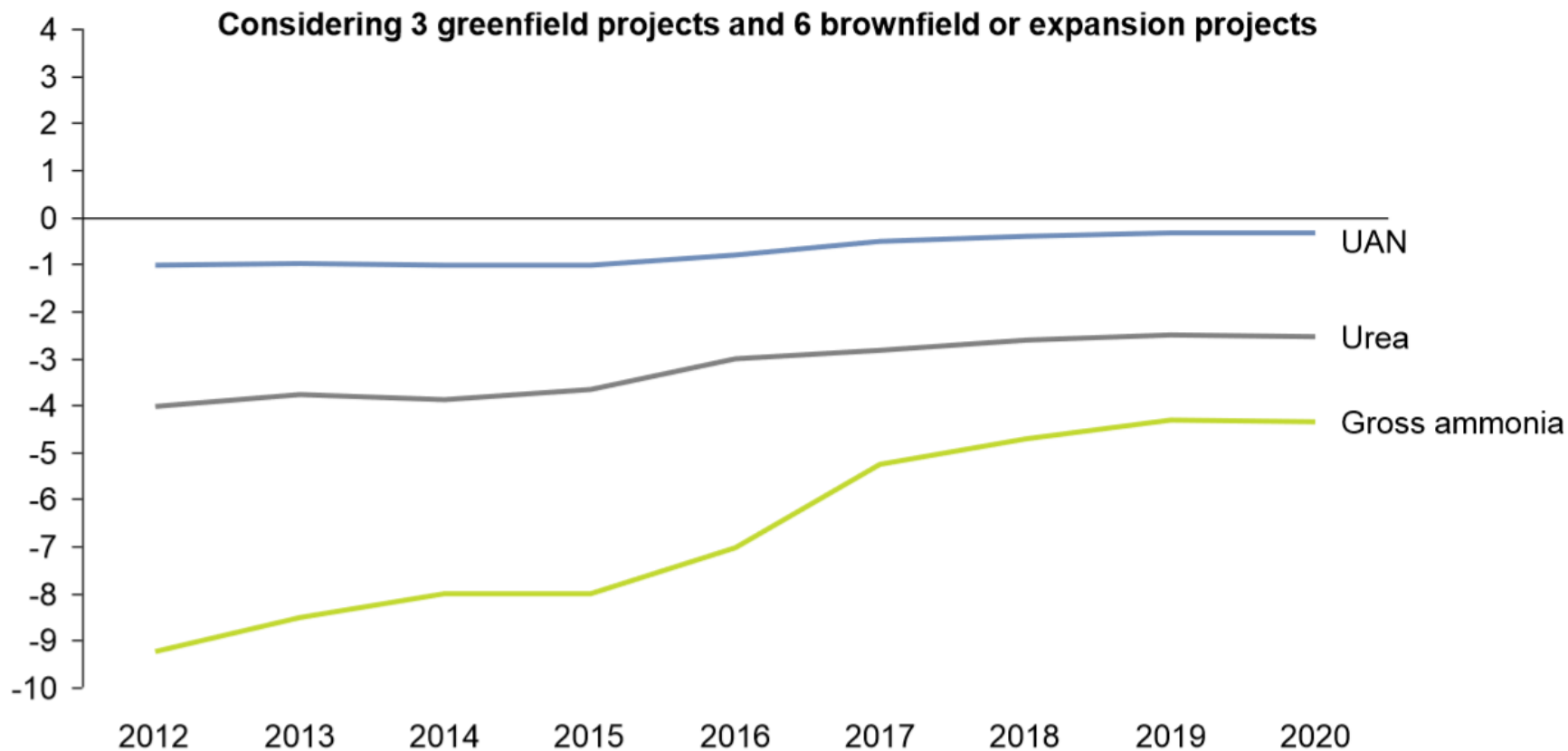


Source: Integer Nitrogen Cost and Profit Margin Service Issue 4, company sources

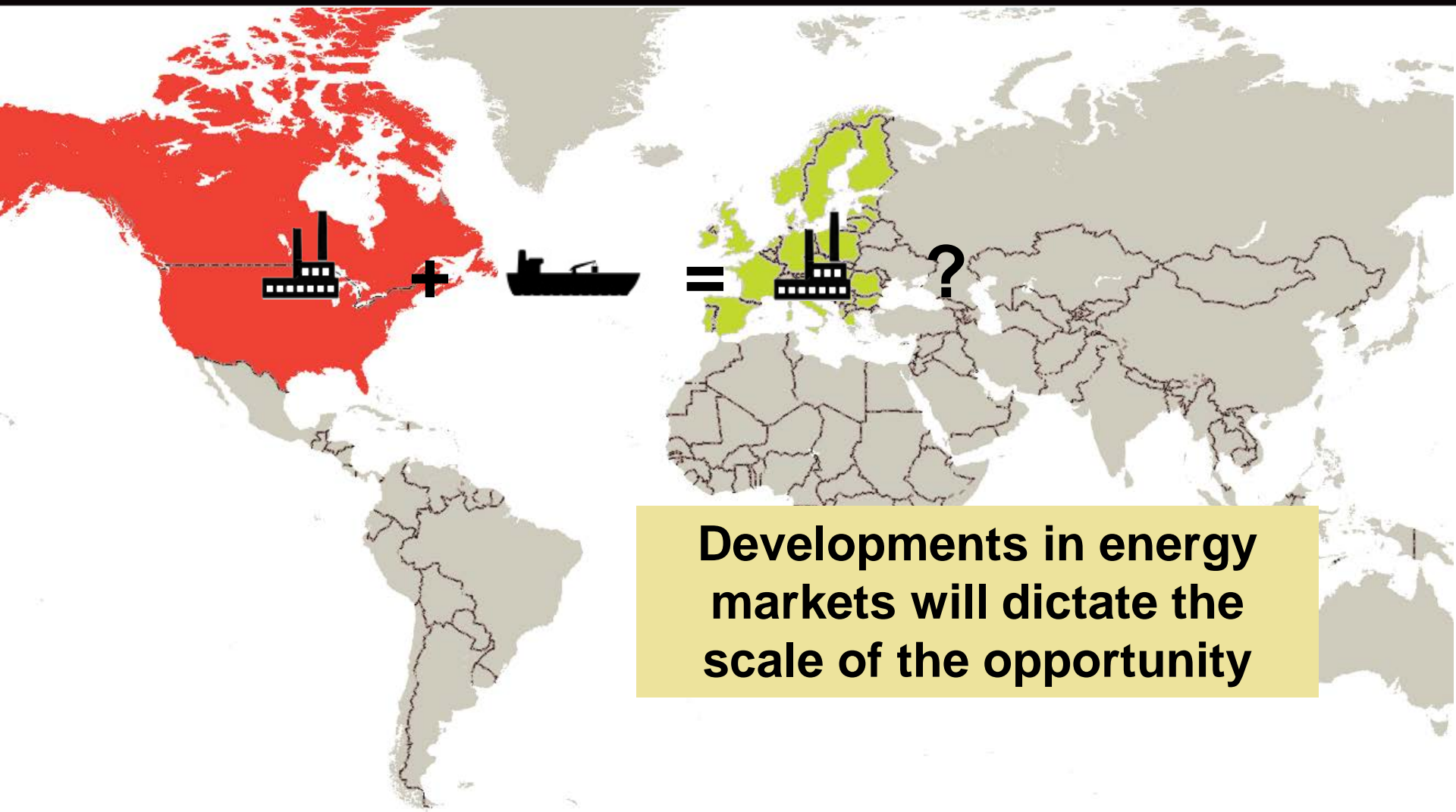


# US supply-demand balance if we only include “committed” projects

Million nutrient tonnes



Is there an arbitrage opportunity for North American producers to export?





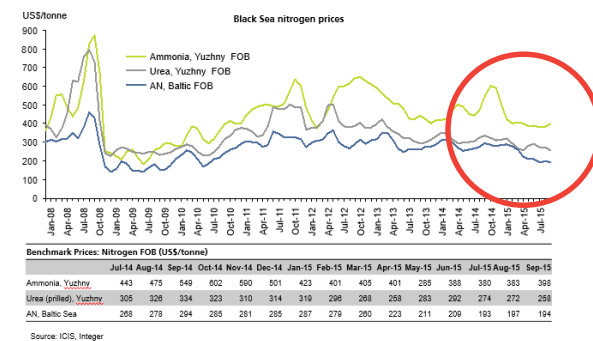
insight  
beyond  
numbers

## Conclusions

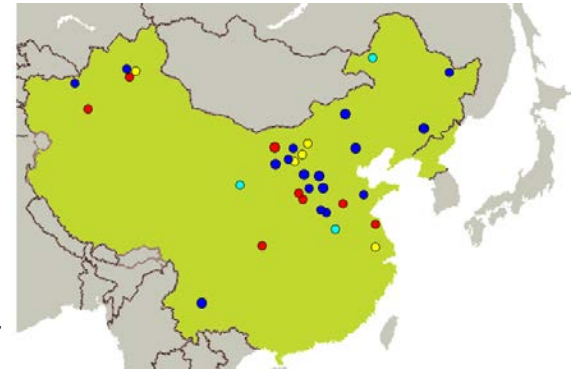
---



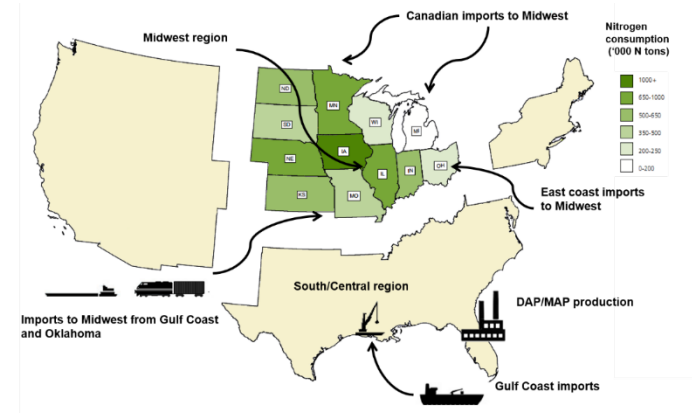
- The cyclical nature of the nitrogen market will soon kick in
  - *High-cost capacity will begin to close at current prices, reducing oversupply*



- The cyclical nature of the nitrogen market will soon kick in
- China is at the peak of its nitrogen cost competitiveness
  - *Developments in coal prices and the global economy will dictate how long Chinese producers can stay afloat*



- The cyclical nature of the nitrogen market will soon kick in
- China is at the peak of its nitrogen cost competitiveness
- North America remains the hub of investment
  - *Although the scope for new capacity beyond currently announced plans is tight*
  - *The arbitrage potential for North American producers to export depends entirely on energy price developments, both home and away!*



integer

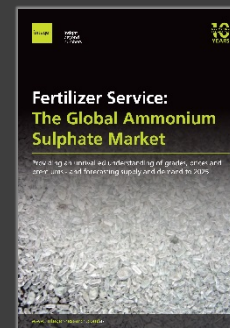
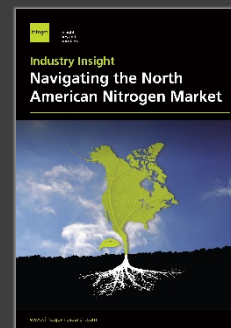
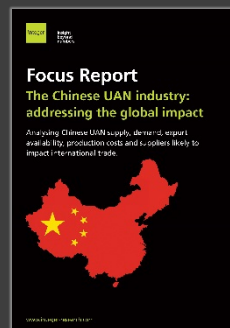
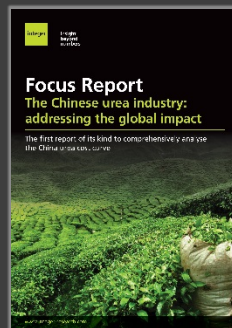
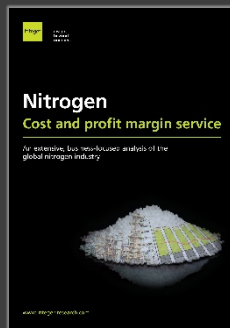
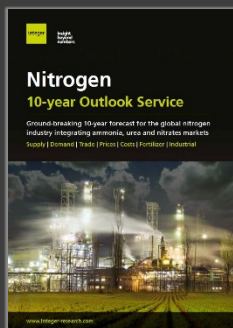
insight  
beyond  
numbers

# Thank you

Laura Cross, Senior Analyst, Integer Research

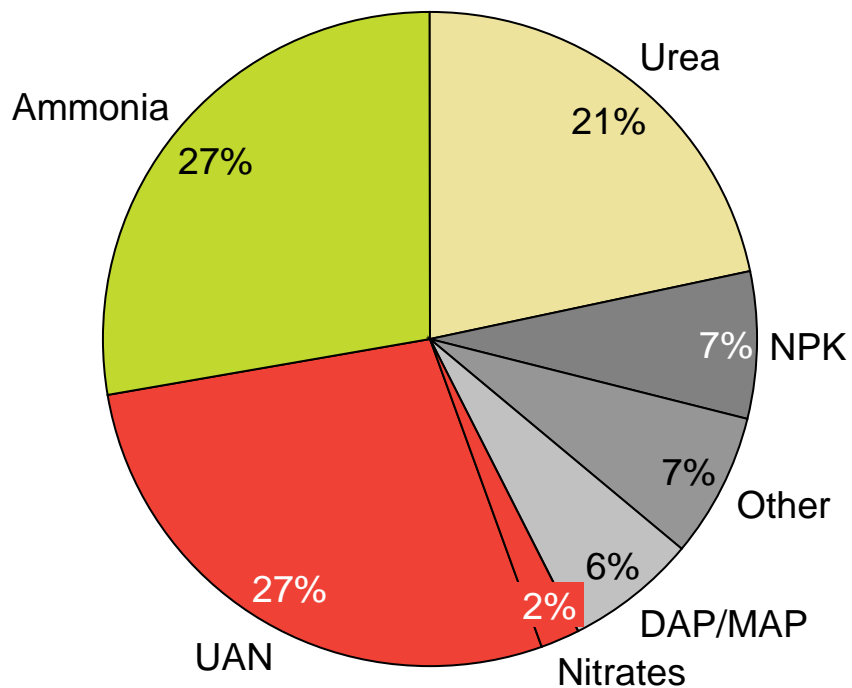
[laura.cross@integer-research.com](mailto:laura.cross@integer-research.com)

[twitter.com/Laura\\_Integer](https://twitter.com/Laura_Integer)

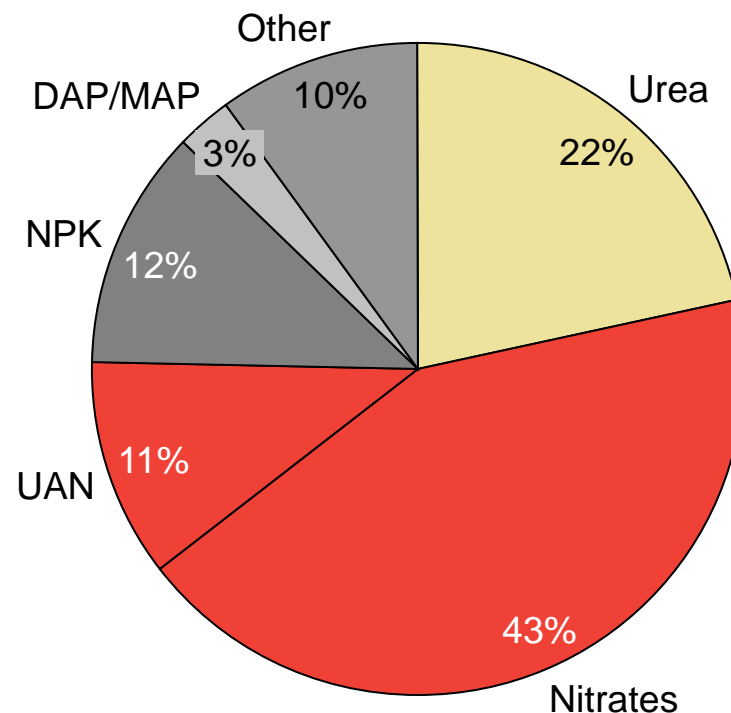


# Industry consolidation is accelerating changing product markets

## US nitrogen demand



## European nitrogen demand



And there is still room for further consolidation following recent M&A activity: