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# The Persian Gulf and Cascading Commodities Risk

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# The chokepoint: no hard security solution

- 4-mile corridor: Iran's asset
- Shore-based missiles: ~60-90s flight time; roughly equal to Aegis response time in open water
- Phalanx: auto-targeted last resort around highly flammable cargo; Iran's strategy is swarm to exhaust
- Tankers answer to insurers, not admirals
- Announced US counter-blockade would hinder US force projection capabilities
- *Endgame: negotiation, not naval power*



# Oil and LNG: the first shock

- Supply uncertainty premium compounds physical shortage
  - WTI and Brent prices inverted → flight to supply chain safety
  - Last sustained inversion was 2010/11
- LNG particularly exposed given limited alternatives
  - Europe, East Asia already played their diversification cards
  - Qatar (THE backup plan) declared *force majeure* on 17% of capacity for **3-5 years**
  - Most direct effects for Italy, Belgium, Rep. Korea and China
- Greatest near-term risks
  - Food & fuel import-dependent countries
  - LMICs with limited (in some cases zero) reserves

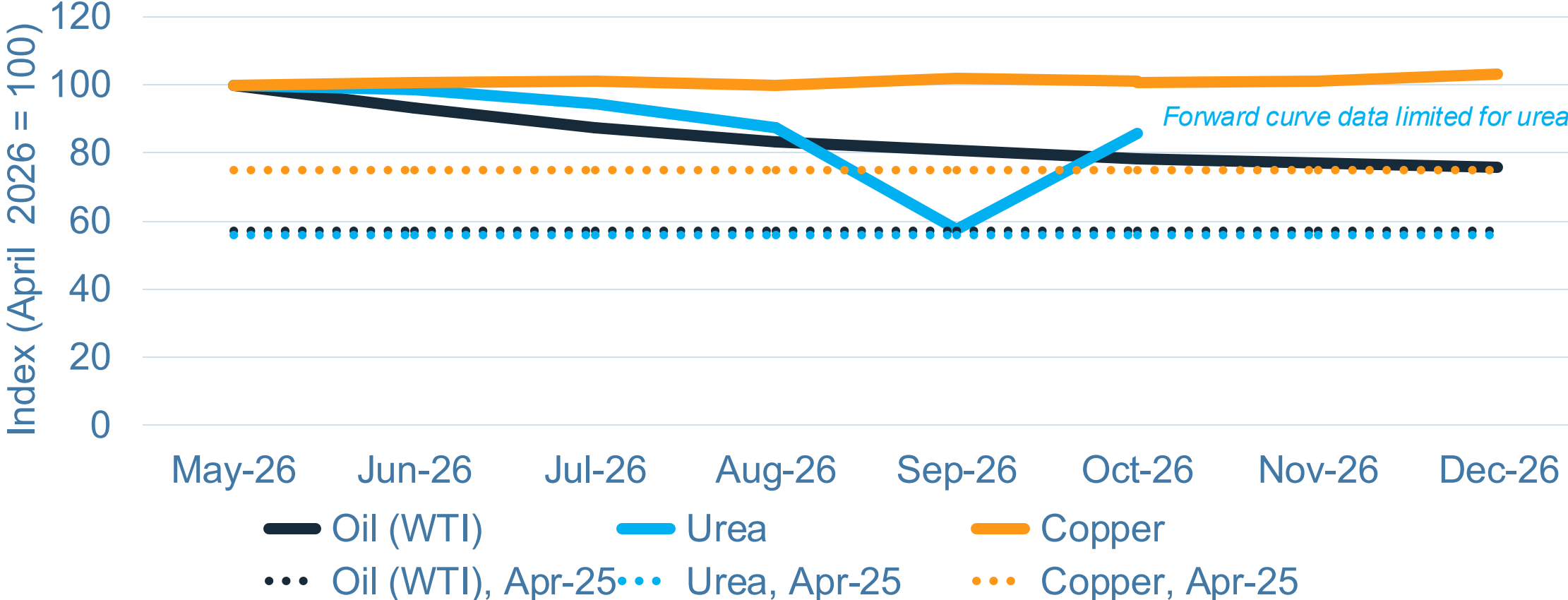
# Cascade mechanisms

- Energy: the master price that moves all others – through cost and through chemistry
- Two transmission lines
  - Petrochemicals and fertilizers
  - Sulfuric acid and mineral processing
- Connective tissue between energy shocks to food prices and industrial inputs



*Sulfuric acid containment tanks, Qatar Acids Company (image courtesy of Qatar Acids)*

# One shock, three markets

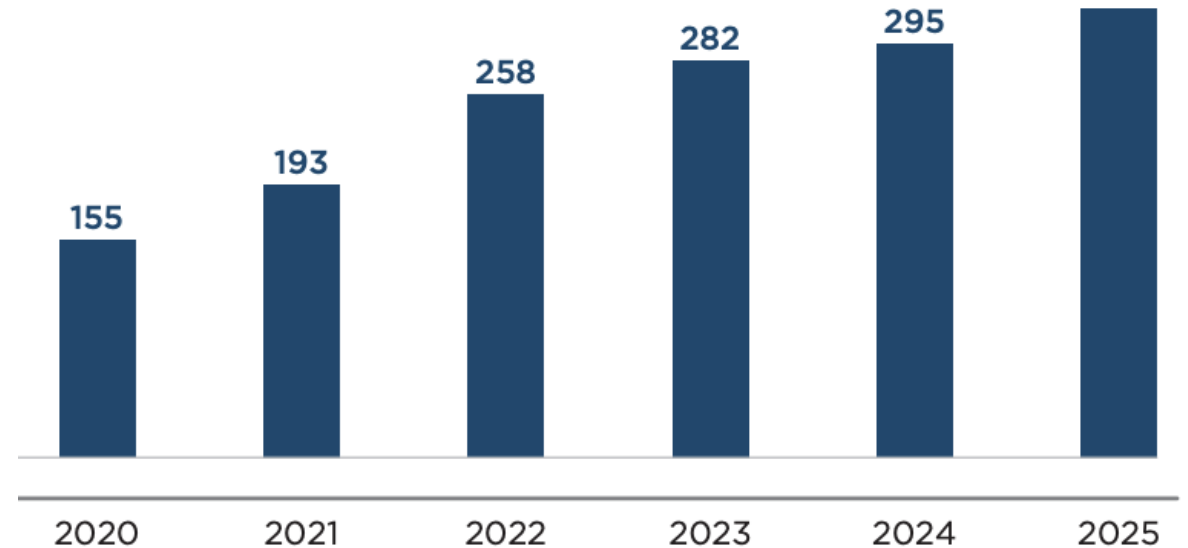


# Food and food security

- Natural gas is feedstock for ammonia synthesis → fertilizer production
- Sulfuric acid essential to phosphate processing — same supply chain stress
- Transmission to food prices lagged but reliable: planting decisions made on input cost expectations
- Food and fuel commodity shocks → inflation in AEs, instability in LMICs

Size of global population facing acute hunger, 2017–25

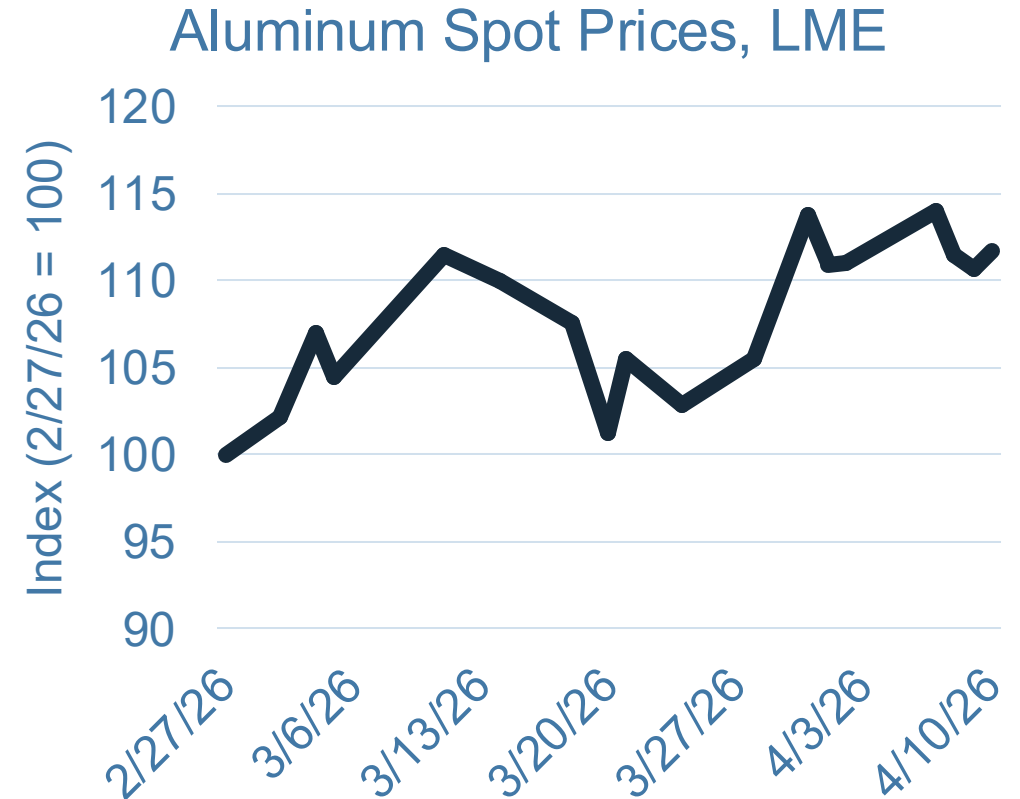
millions of people



Sources: Author's calculations based on FSIN, GNAFC, and WFP (2018–25).

# Critical minerals and industrial metals

- Refining/processing energy intensity dwarfs extraction
  - GCC: 23% of ex-China aluminum smelting capacity
- Sulfuric acid links energy shock to copper, nickel and rare earth processing
- Demand side compounds supply risk: re-armament, AI, energy transition all pulling simultaneously



# Take-home points

- One geopolitical shock, three markets, two transmission mechanisms
- Cascade is occurring rapidly, in real time
- Vulnerabilities are structural – they won't resolve as cleanly as oil when the conflict stops/navigation of Hormuz normalizes

COMMODITY/FACTOR	MONTHS TO NORMALIZATION
Oil (spot)	1-2
War risk insurance	2-4
LNG (undamaged)	3-6
LNG (damaged)	36-60
Sulfuric acid	3-6
Aluminum (undamaged)	4-8
Aluminum (damaged)	24-60
Fertilizer/urea	6-12
Copper/nickel processing	6-12
Food prices (Q1 2027 shock)	12-18



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**Thank you! Questions?**

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