



# IS THE MINING SUPERCYCLE GONE ALREADY?

# A 20 year commodity bear market?

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- Did Zoltan the Magnificent call a 20 year top?
- China turning Japanese
- Other factors for demand and supply
- Specific commodities: iron ore, copper, lithium, oil
- Investment implications

## Did Zoltan call a 20 year top? The bull case

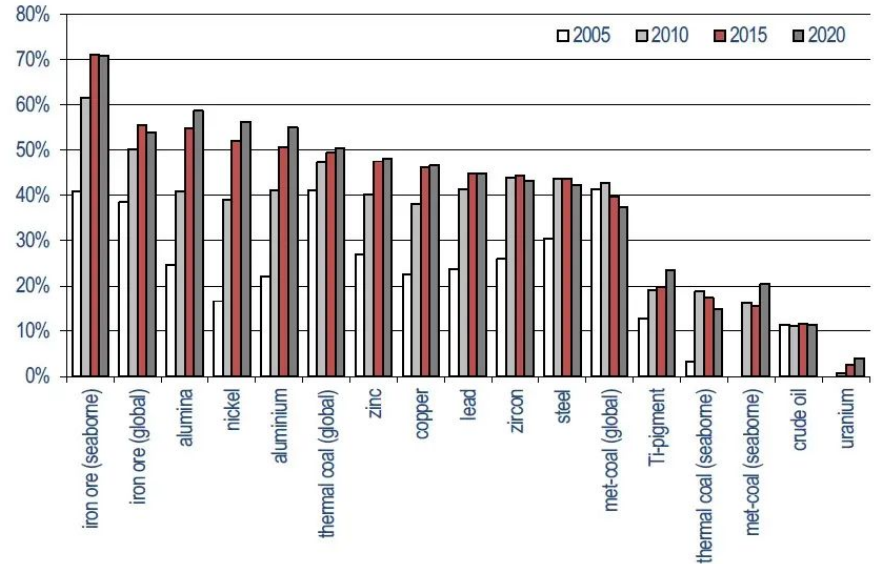
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- Bretton Woods III and Goldman fluffers
- Decarbonisation to boost demand
- ESG to limit supply
- Chussia to shift yuan to commodity reserve
- Cold War 2.0 to distort trade and lift inflation

# China turning Japanese

- There is no bull market without China
- Chinese demand is peaking in all kinds of commodities as working age population slumps
- This is a normal part of the development process
- Nothing can stop it and China does not want to
- Decline is accelerated by non-linear events
- Japan!

**Exhibit 2:** China's %-share of global commodities' demand

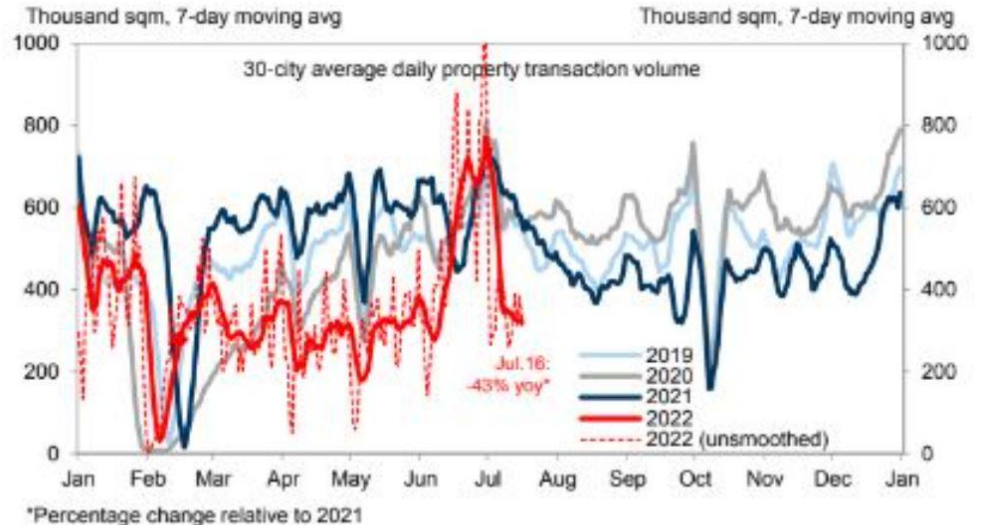


Source: WM, WBMS, IHS, Platts, Bloomberg, Morgan Stanley Research; sorted on 2015 data

# China turning Japanese: Short term

- Key component is real estate development
- Three red lines
- Property sales halved
- Mortgage strike and COVID
- Land sales crash inhibits fiscal
- Monetary still firm but will break

**Exhibit 11: 30-city daily property transaction volume was 43% below the 2021 level**

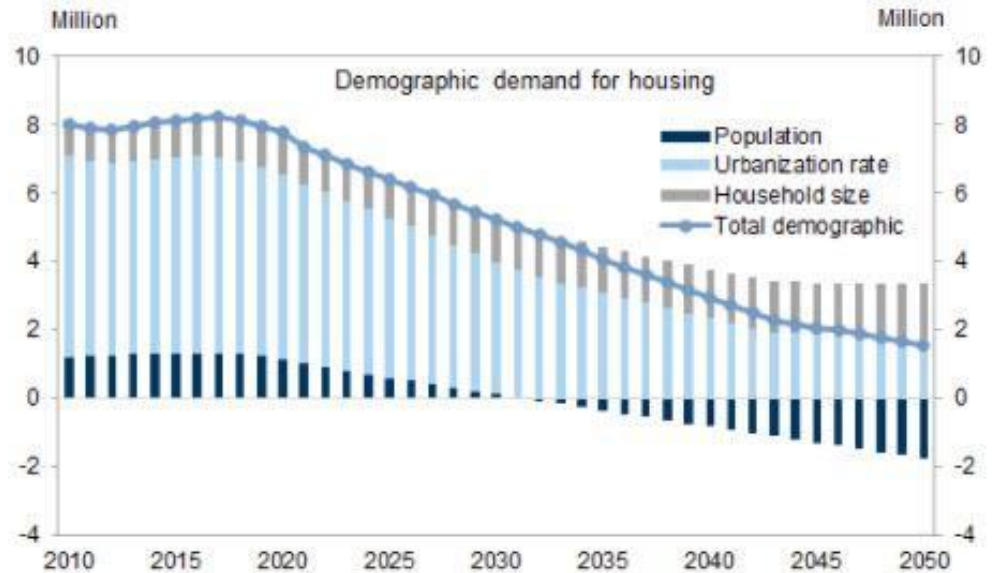


Source: Wind, Goldman Sachs Global Investment Research

# China turning Japanese: Long term

- Now way out as demographics slide
- Massive surplus and overbuilding
- 40% of steel demand
- 20% of copper demand

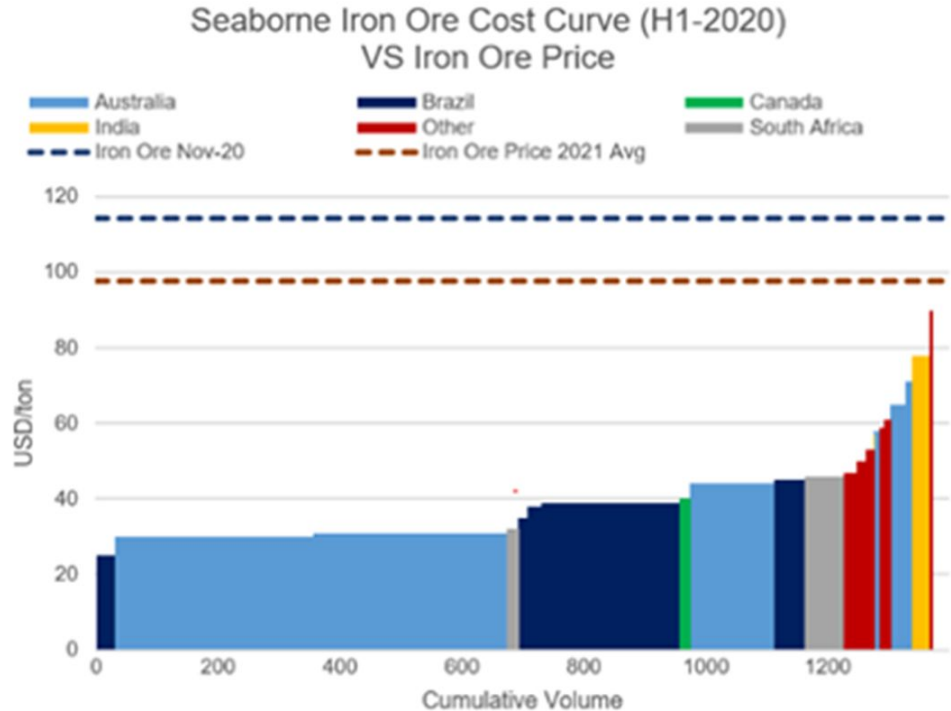
**Exhibit 6 : Demographic demand for housing is likely to decline in the coming decades**



Source: Haver Analytics, Wind, Goldman Sachs Global Investment Research

# Other factors for supply and demand

- Global infrastructure but not enough post-inflation burst
- Decarbonisation
- Energy shortages for a few years as supply chain readjusts
- Cold War 2.0 and resource nationalism
- India?

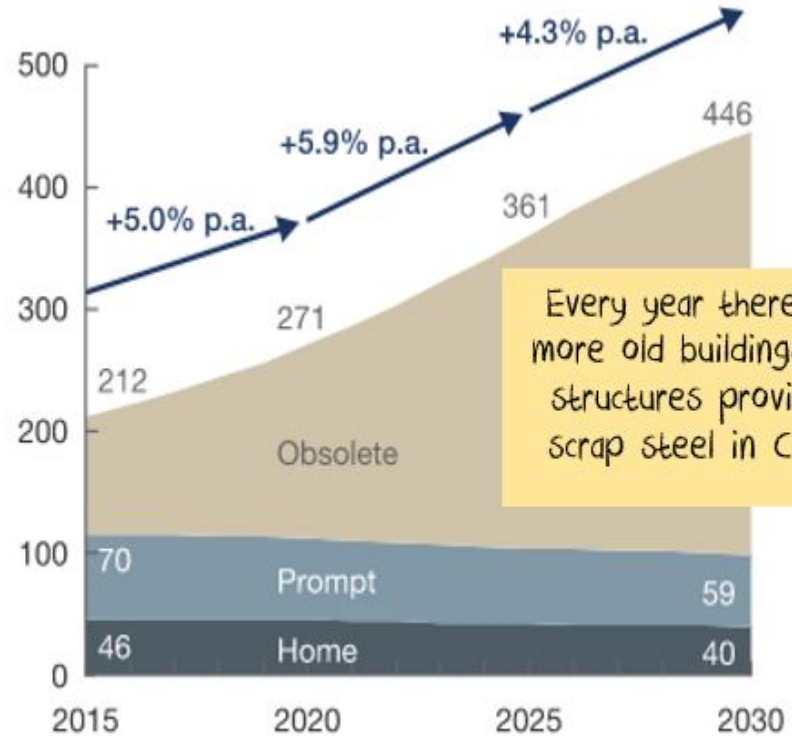


Source: Macquarie Commodities Strategy/ Klaveness Research, 62% basis

# Specific commodities: Iron Ore

- Peak Chinese demand
- Push for scrap
- Simandou and supply surge
- Worst placed

Million  
metric tons



Every year there are more old buildings and structures providing scrap steel in China.

Source: McKinsey, Nucleus Wealth



# Specific commodities: iron ore



# Specific commodities: Copper



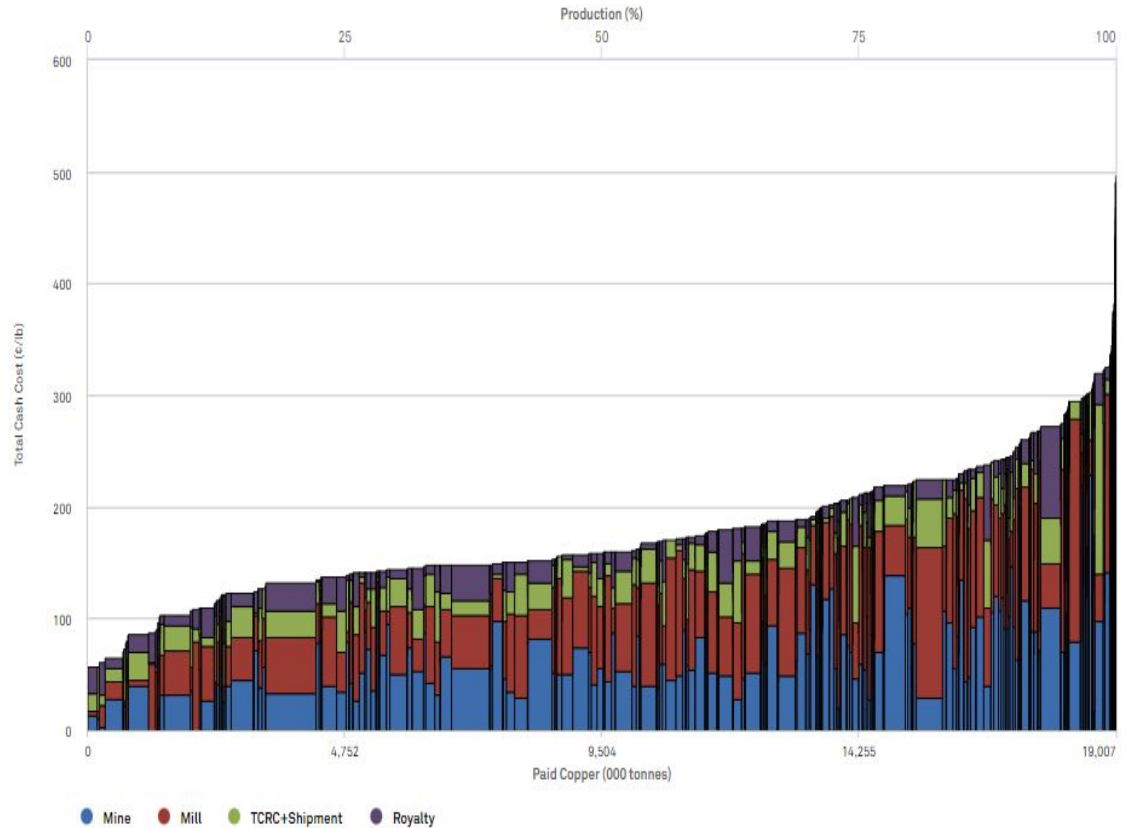
Source: USGS, IMF, Comex, Nucleus Wealth

# Specific commodities: Copper

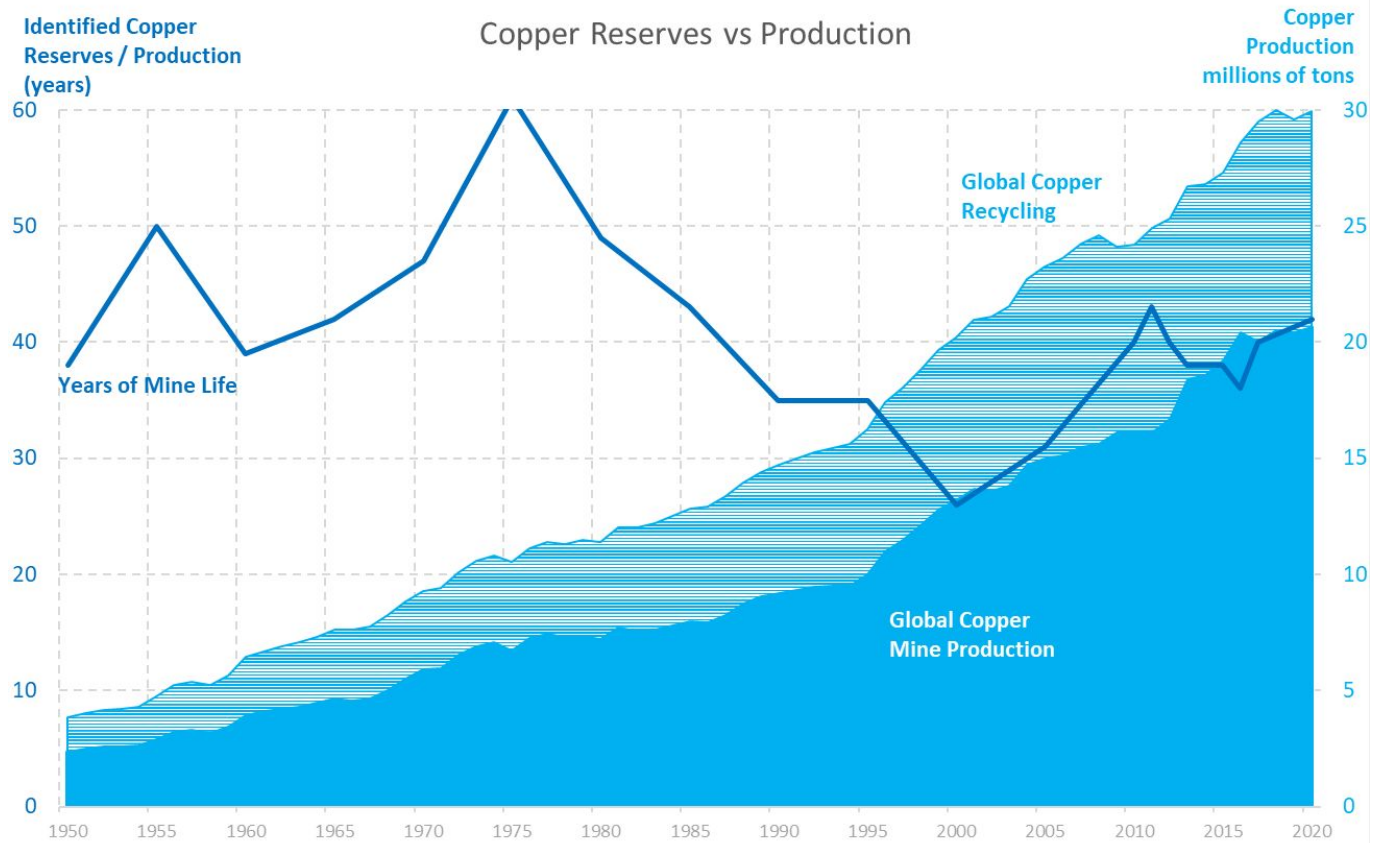
- EVs. 100m cars per year, 35kg more copper
- Driverless cars. Taxis used 5-10x more than car
- Grid transformation. Centralised or decentralised
- Infrastructure boom. \$1T = 110kt of extra copper
- Recycling rate has been falling

2022 Copper Production Ranked on Total Cash Cost\*

Scenario: Market Intelligence 2021 Constant USD

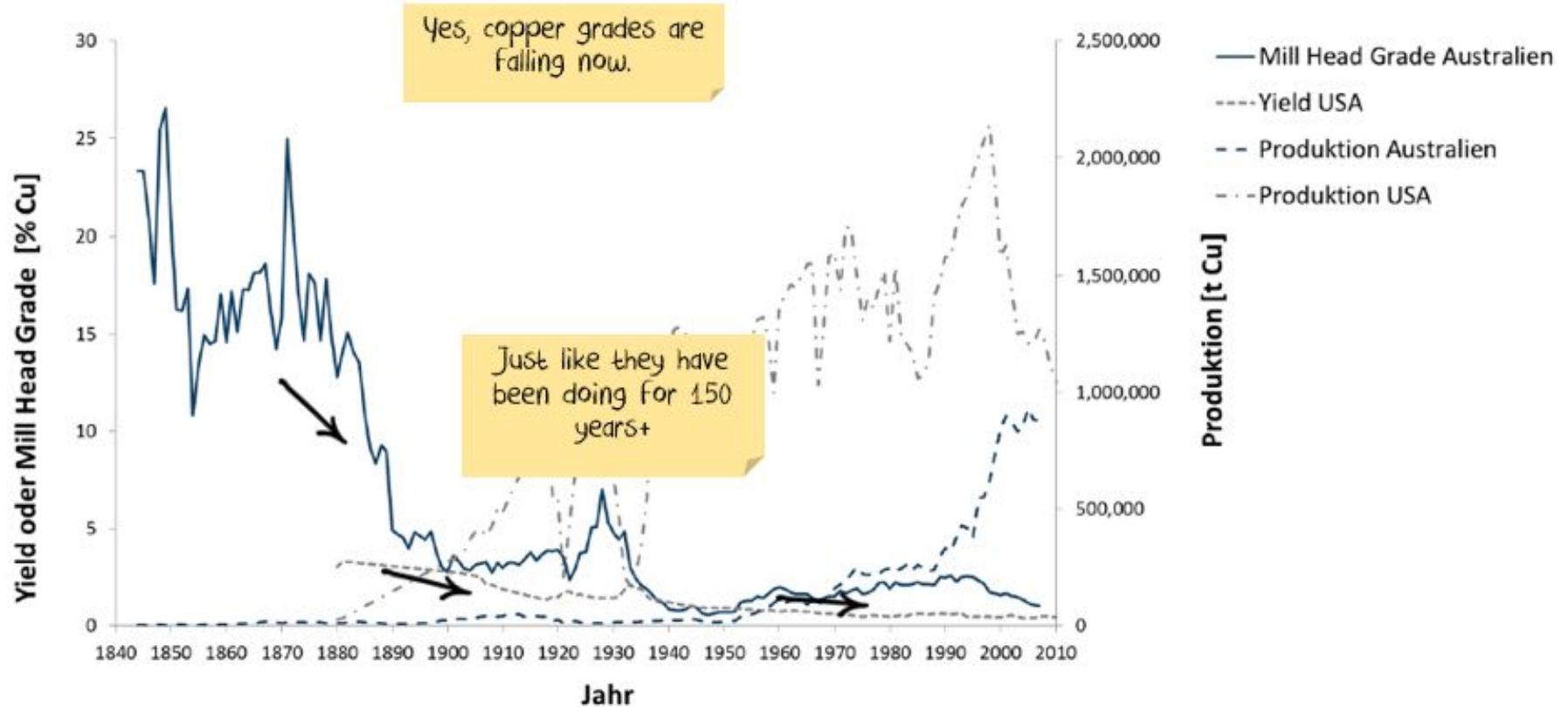


# Specific commodities: Copper



Source: USGS, IMF, Comex, Nucleus Wealth

# Specific commodities: Copper



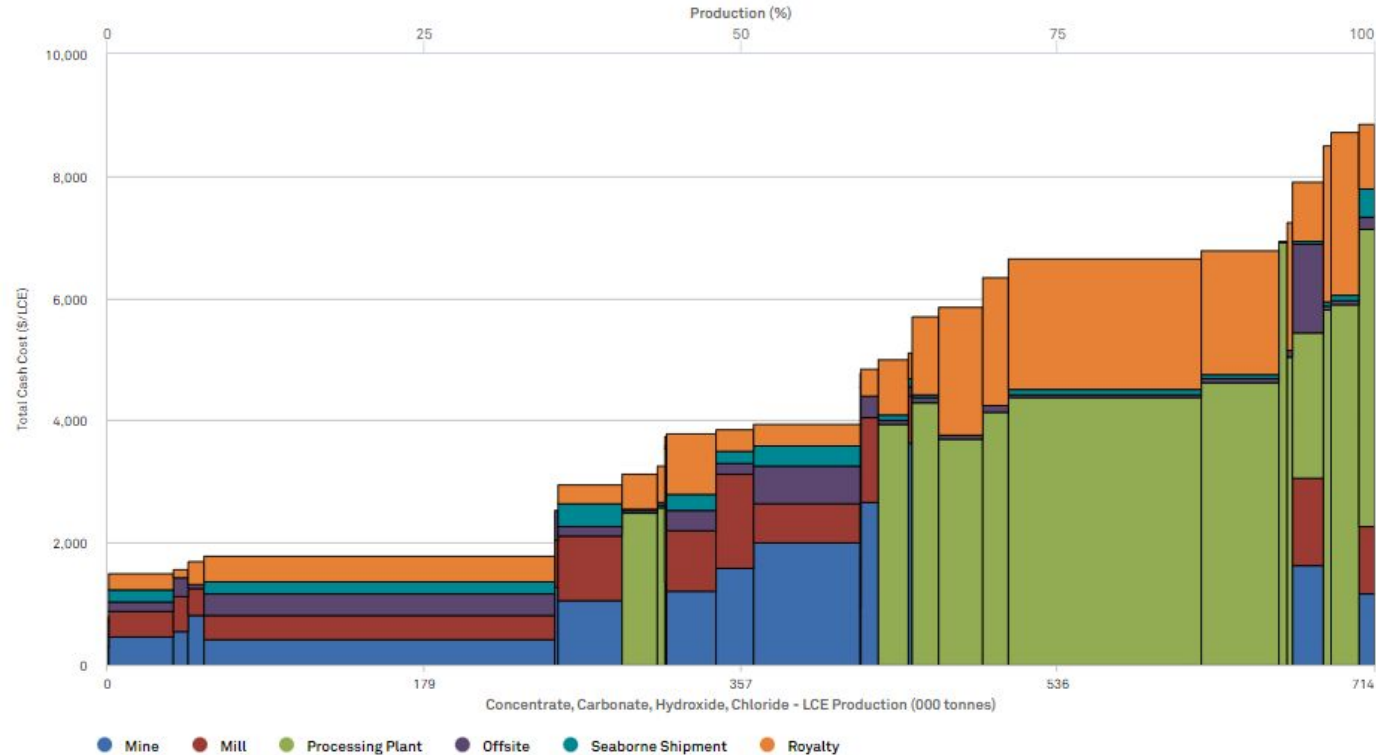
## Specific commodities: Lithium

<i>Property</i>	<i>Country/Region</i>	<i>Development Stage</i>	<i>Primary Reserves and Resources (t)</i>
Uyuni Salt Flat	Bolivia	Construction Started	39,000,000
Cauchari-Olaroz	Argentina	Construction Started	9,938,000
Alberta	Canada	Prefeas/Scoping	9,878,000
Bonnie Claire	USA	Prefeas/Scoping	8,358,700
Lithium Nevada	USA	Feasibility Started	7,321,000
Manono	Dem. Rep. C	Feasibility Complete	6,640,000
<b>Salar de Olaroz</b>	<b>Argentina</b>	<b>Expansion</b>	<b>6,600,000</b>
Vulcan	Germany	Feasibility Started	6,415,046
<b>Chaerhan Lake</b>	<b>China</b>	<b>Operating</b>	<b>5,600,000</b>
McDermitt	USA	Prefeas/Scoping	5,373,000
Cuenca Centenario-Ra	Argentina	Feasibility Started	4,015,000
<b>Greenbushes</b>	<b>Australia</b>	<b>Operating</b>	<b>3,716,327</b>

# Specific commodities: Lithium

## 2022 Lithium Production Ranked on Total Cash Cost\*

Scenario: Market Intelligence 2021 Constant USD

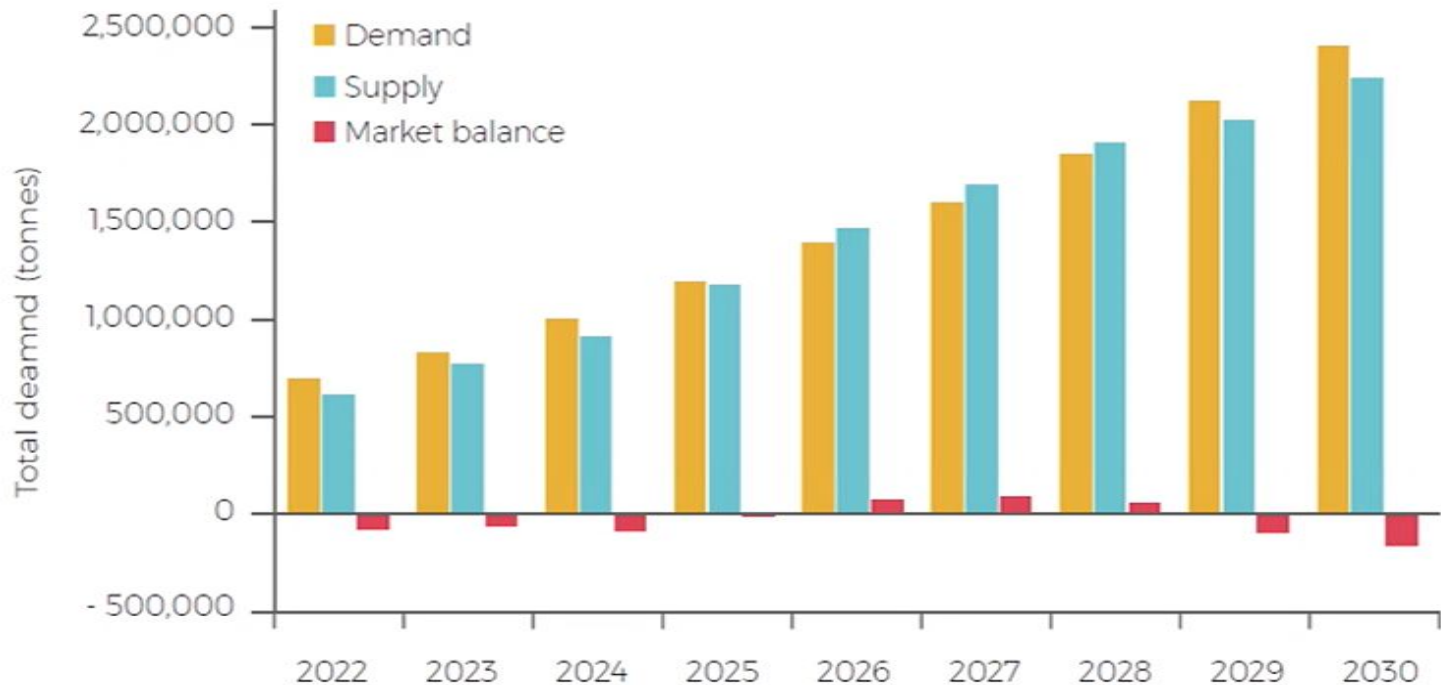


\*Figures pre-2022 are based on reported/actual data where available. Figures from 2022 and later are based on S&P Global Market Intelligence's estimates and forecasts. For Market Intelligence's Constant scenario, all forecasts for prices are in constant 2021 US dollars (e.g. wage rates, electricity prices, reagent or fuel costs and metal prices).

# Specific commodities: Lithium

## Industry deficits over medium to long term

Lithium supply forecast 2022-2030





# Specific commodities: Oil

**Figure 1: Volume-weighted average pack and cell price split**

real 2021 \$/kWh

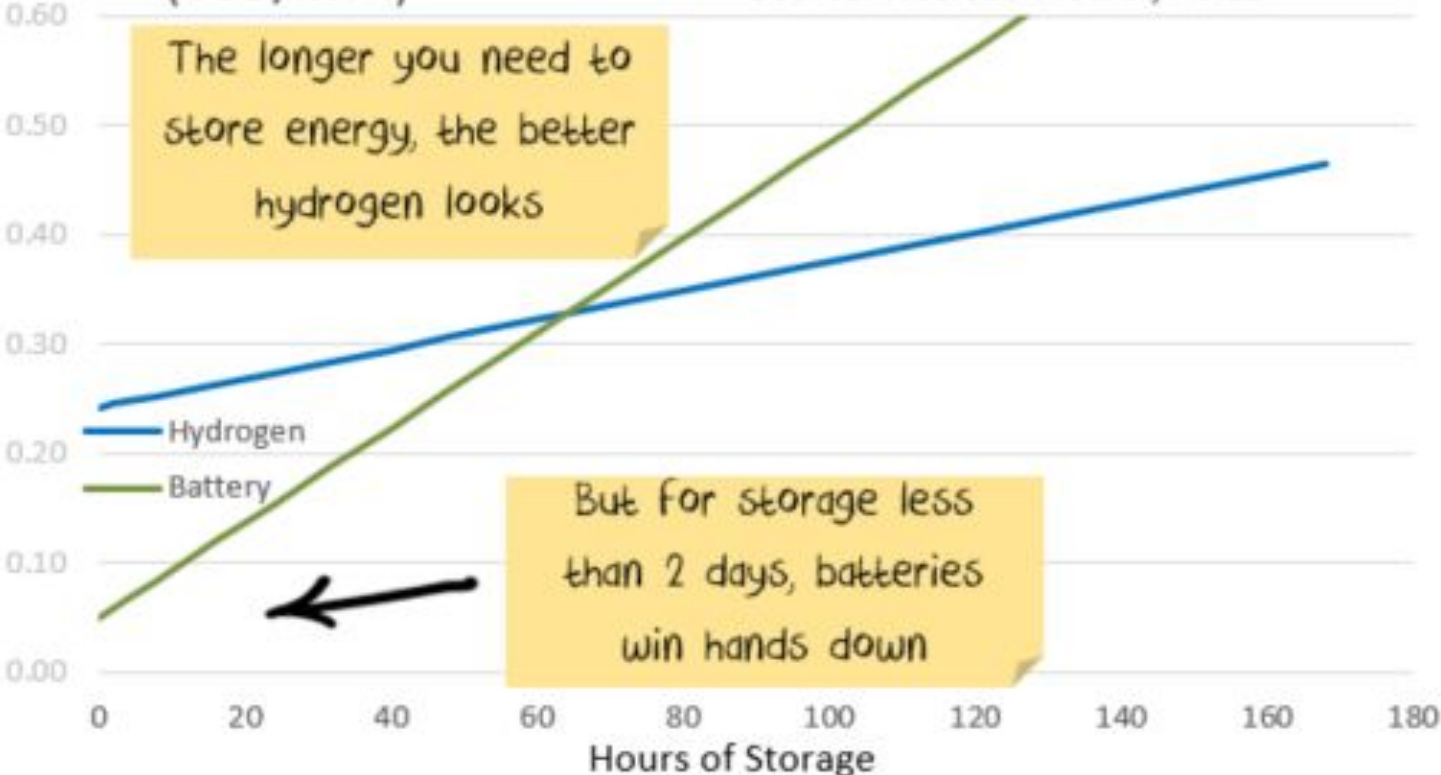


Source: BloombergNEF.

# Specific commodities: Oil

Cost of Large Scale Storage: Batteries vs Hydrogen (USD/kWh)

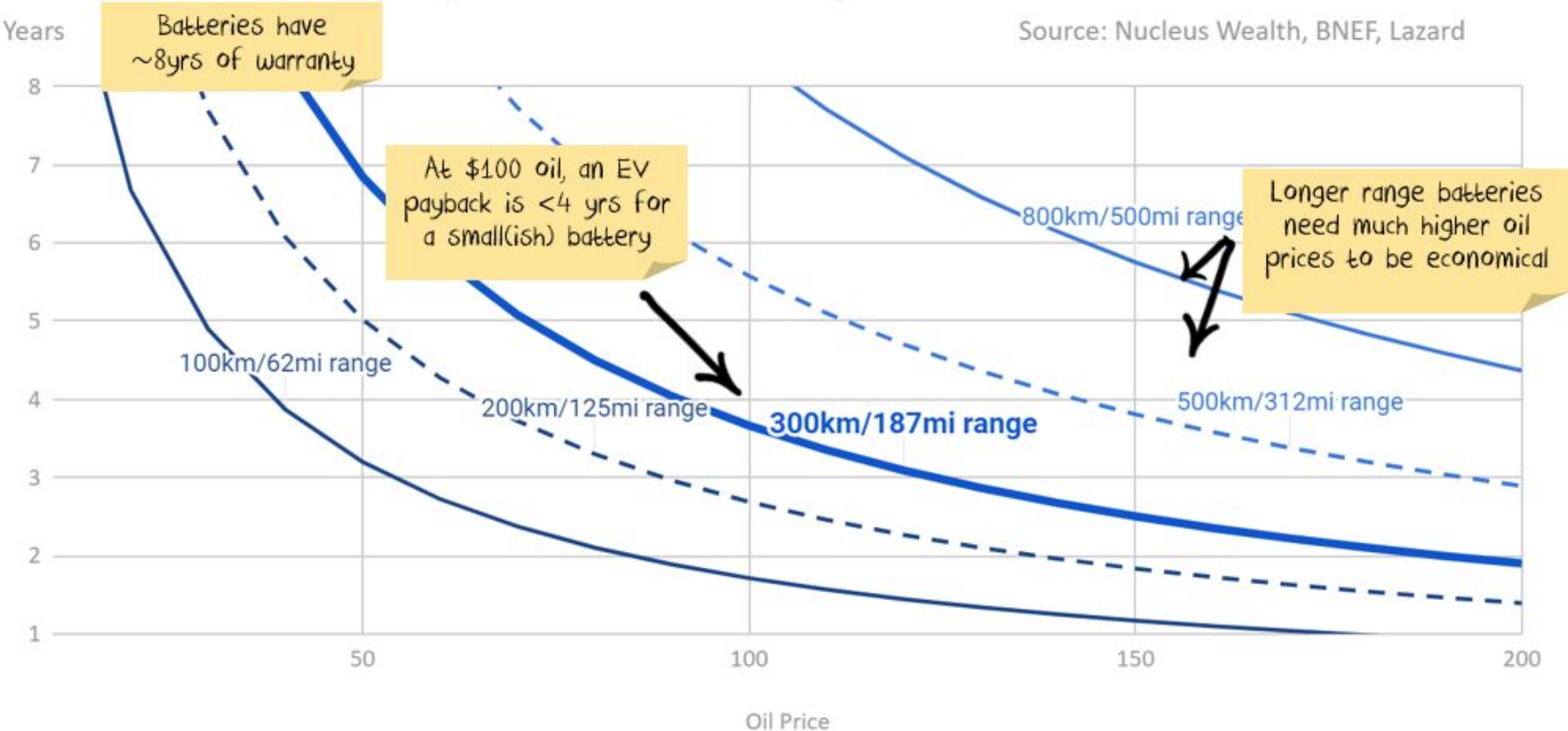
Source: Nucleus Wealth, NREL



# Specific commodities: Oil

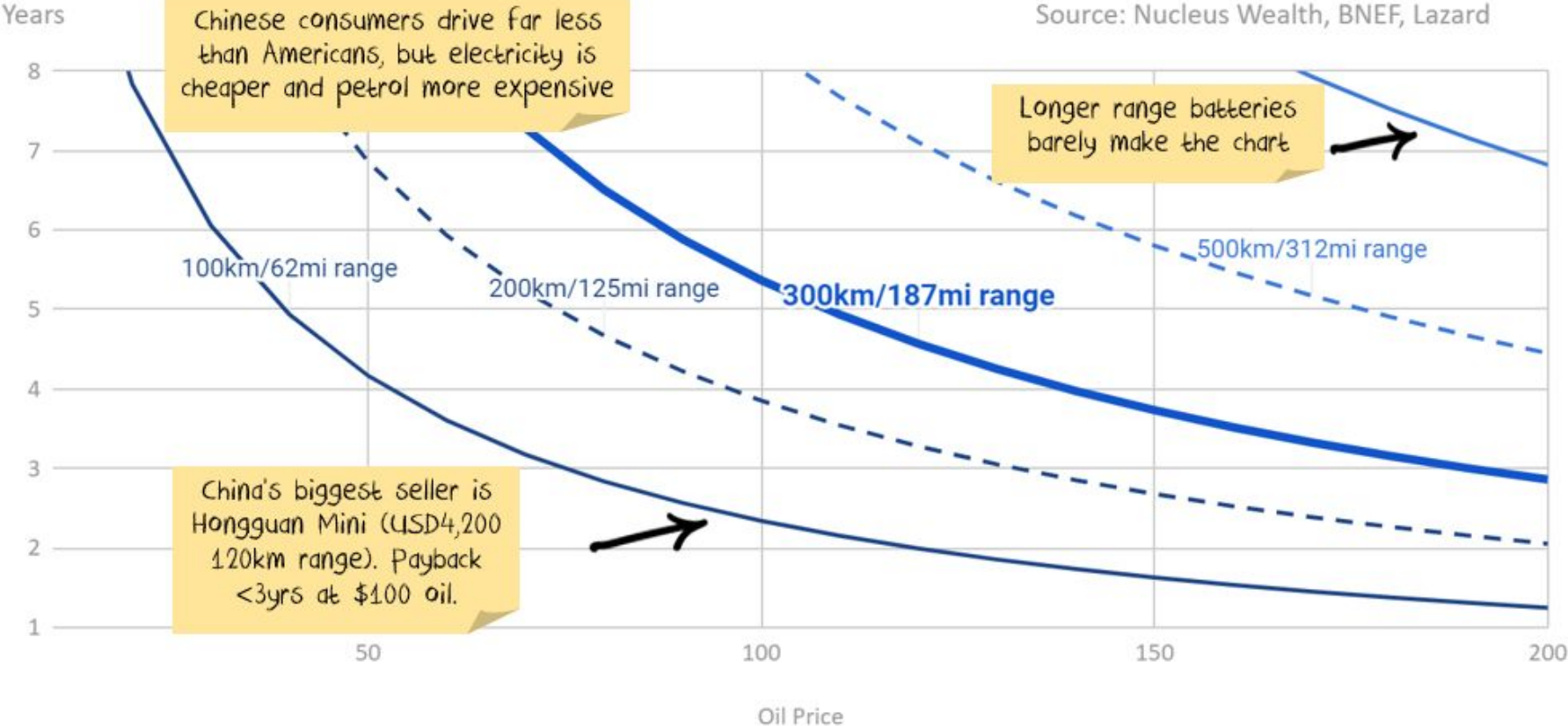
## Electric Vehicle Battery Payback Period: US Average Consumer

Source: Nucleus Wealth, BNEF, Lazard



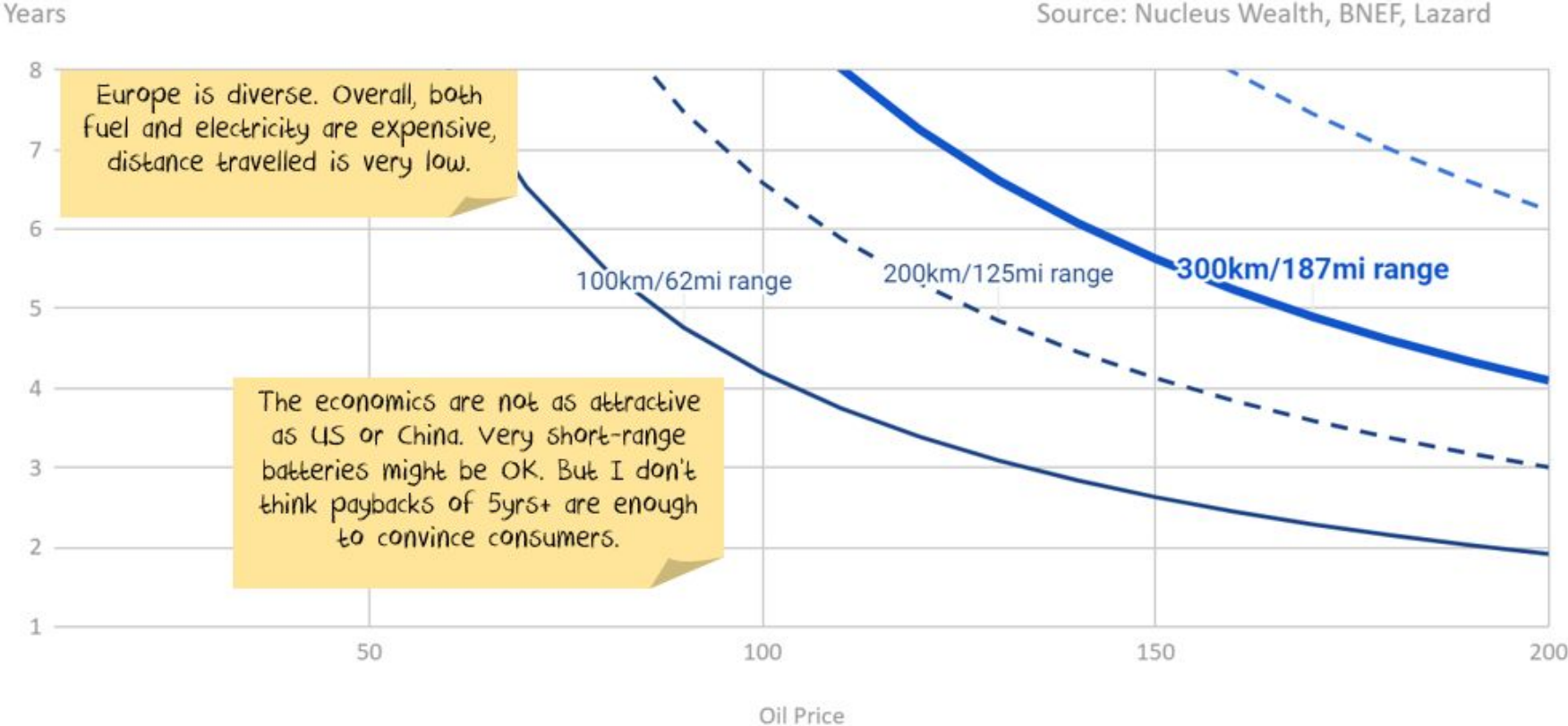
# Specific commodities: Oil

## Electric Vehicle Battery Payback Period: China Average Consumer



# Specific commodities: Oil

## Electric Vehicle Battery Payback Period: Europe Average Consumer

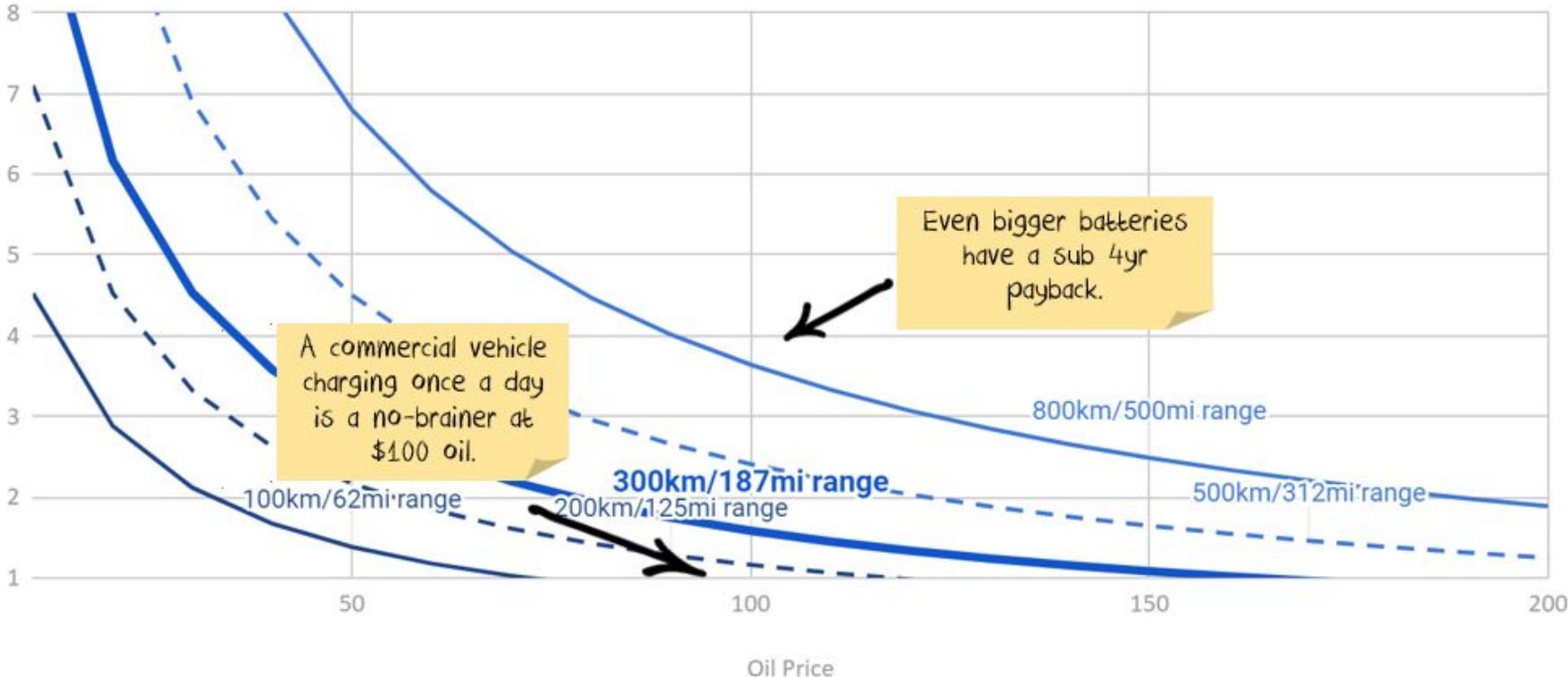


# Specific commodities: Oil

Electric Vehicle Battery Payback Period: US 31,000mi/50,000km per year

Years

Source: Nucleus Wealth, BNEF, Lazard



# Investment implications

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- As China slows with realty, as much as 10% of global commodity demand disappears
- Metals and bulks in trouble
- Some decarbonisation super cycle
- Cold War 2.0 will keep energy high for a few years as supply readjusts
- Pick your commodities carefully
- Too volatile for a good inflation hedge!

## Viewer question of the week:

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**Which commodity price is most at risk?**

**Drop your answers in the comments**



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