

Commodity supercycle or financialization



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Introduction

- Commodity prices are historically elevated.
- Ongoing debate: macroeconomic fundamentals versus financial speculation
- Concerns have been raised about the impacts of financialization and speculation on commodity prices, especially on oil prices
- However, current commodity supercycle which started around the beginning of the century can explain high commodity prices

Outline

1. Stylized facts
2. Financialization of commodities
3. Fundamentals and commodities
4. Conclusions

1. Stylized Facts

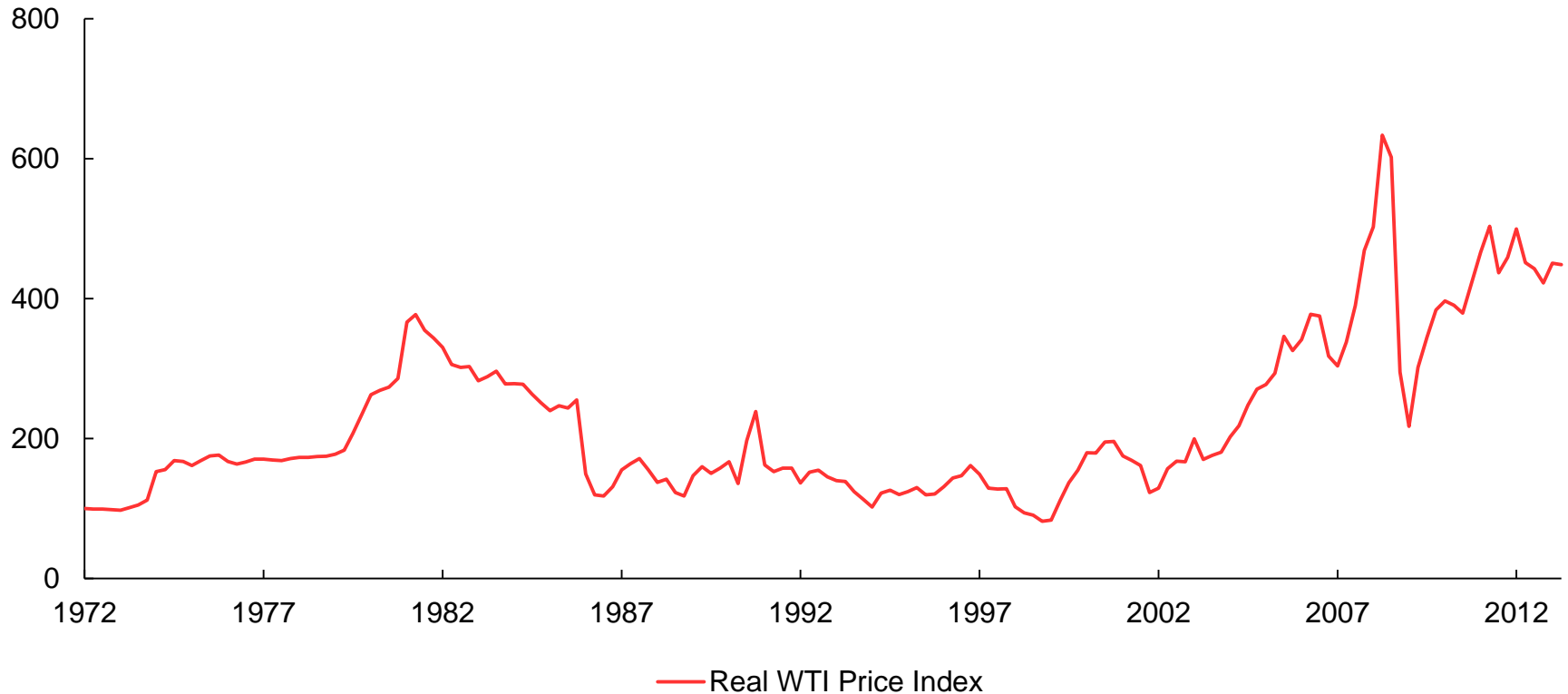


Fact 1: Elevated price levels

Real WTI Price Index

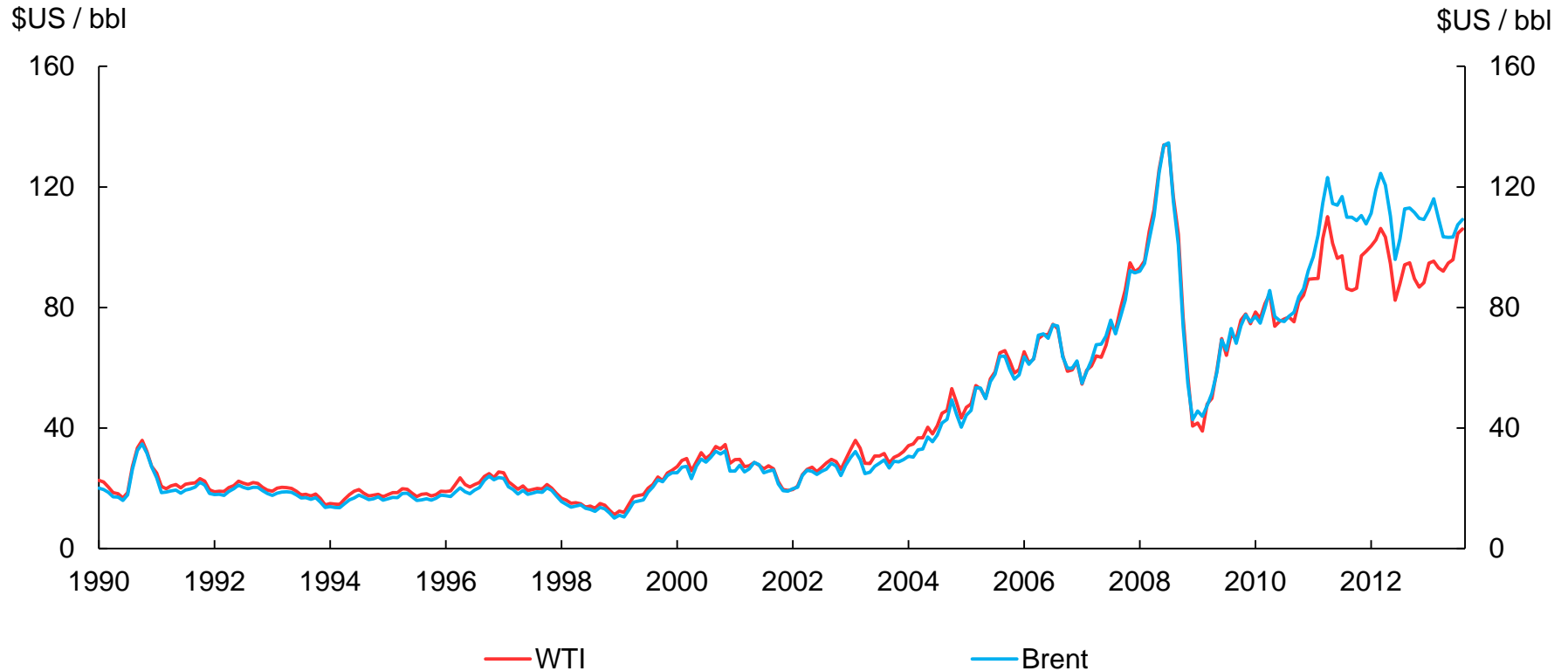
Index Jan 1972 = 100, quarterly data

Index



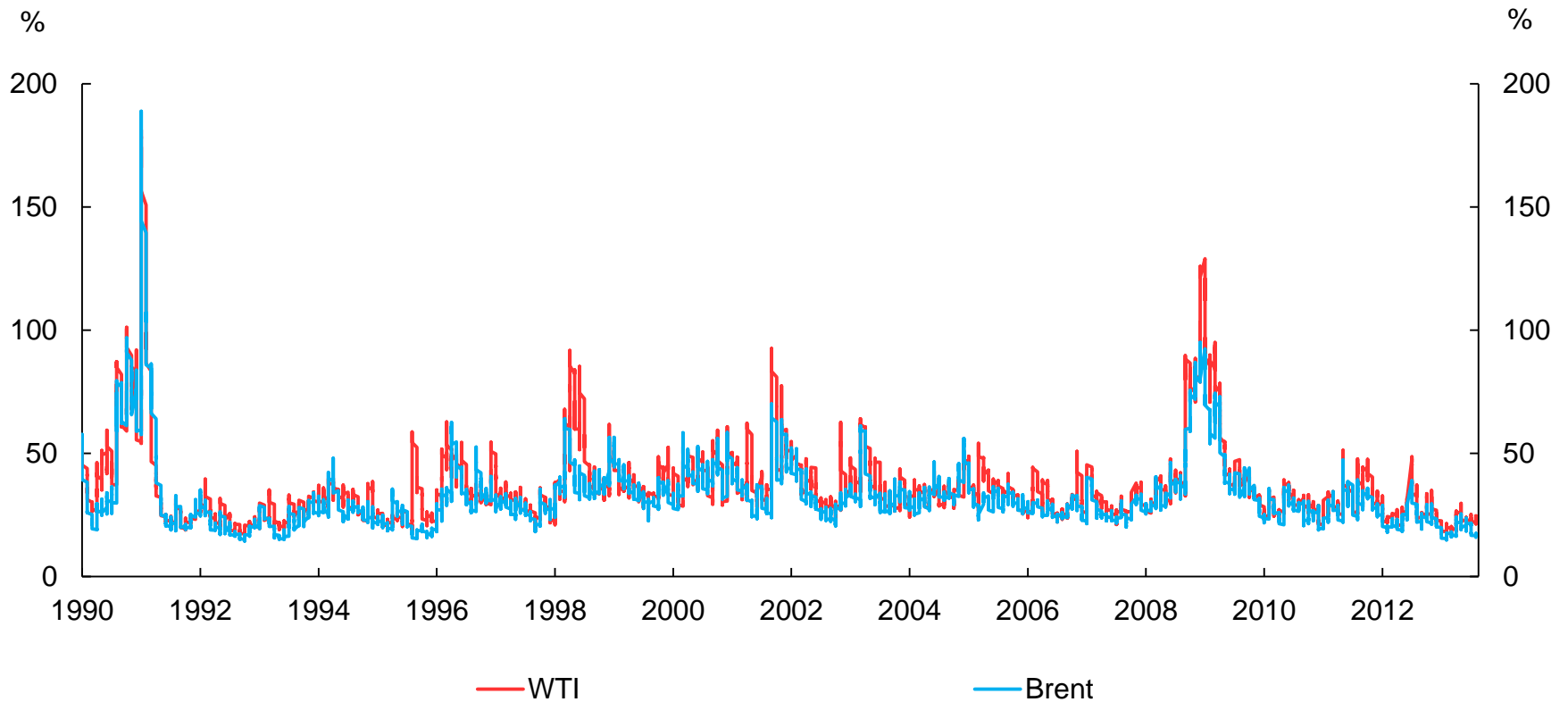
Fact 1: Elevated price levels

WTI and Brent Prices



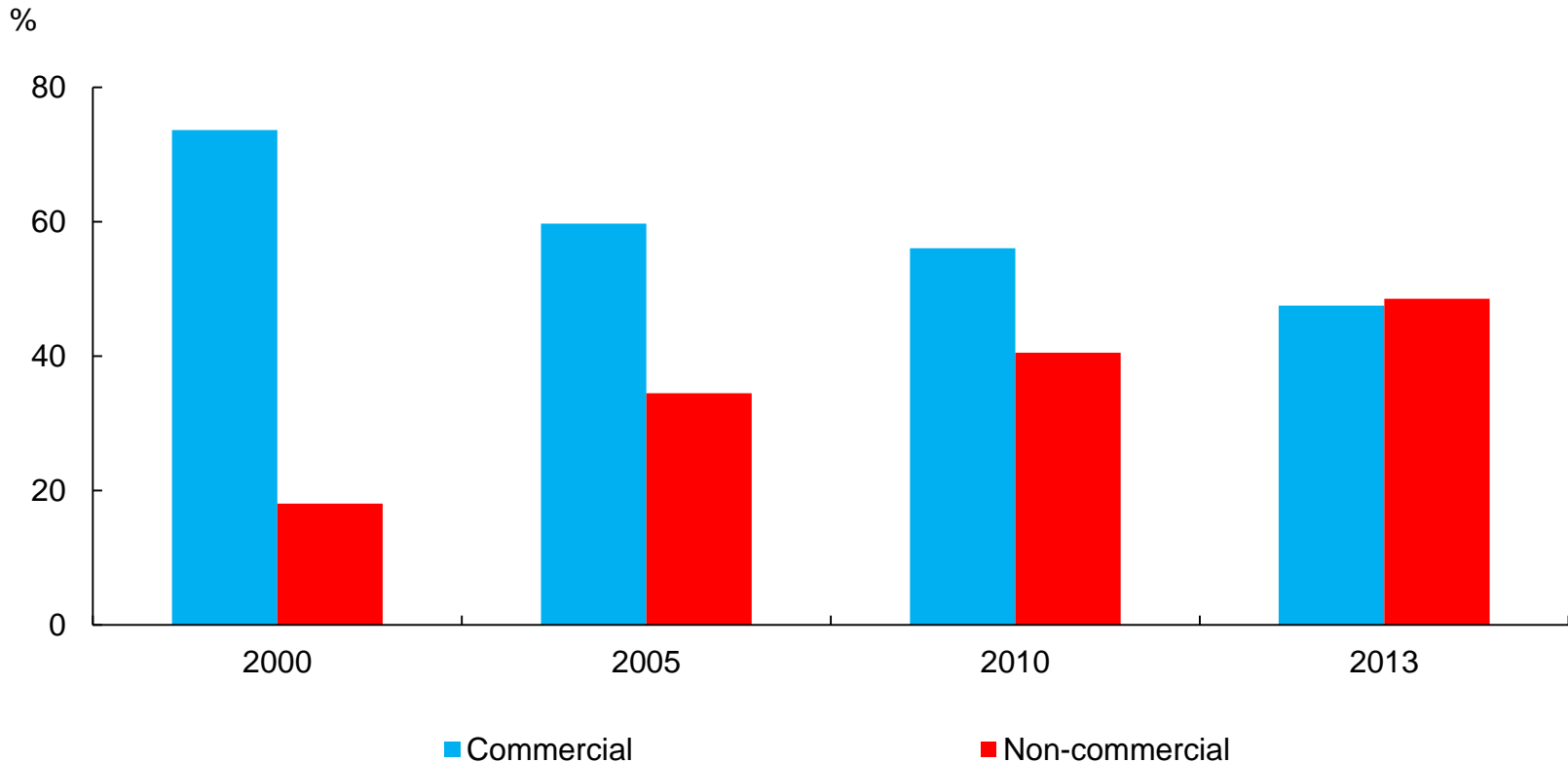
Fact 2: Perception of increased volatility

Annualized volatility of oil prices



Fact 3: Increased participation of non-commercial traders

Evolution of WTI futures market shares since 2000

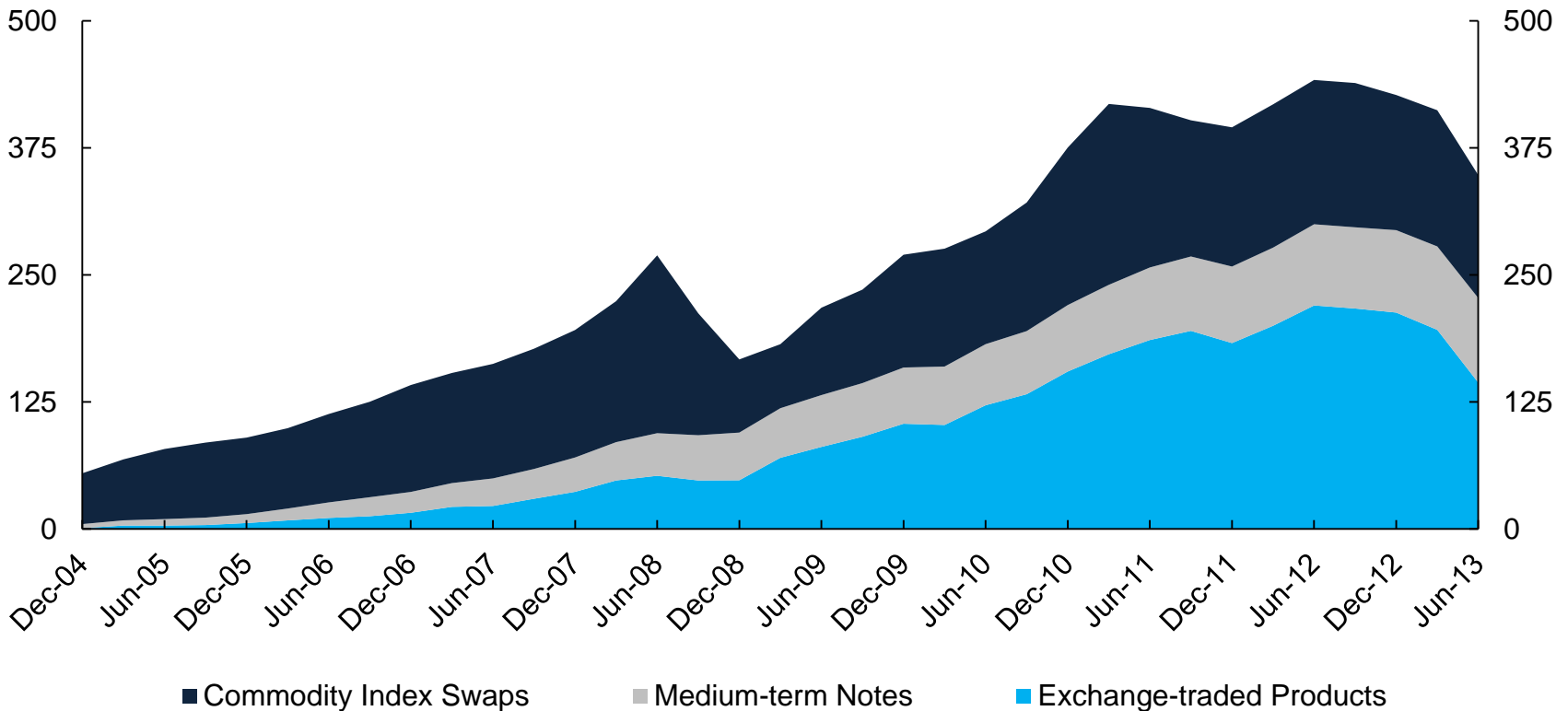


Fact 4: Increased participation of index traders

Institutional and retail commodity assets under management

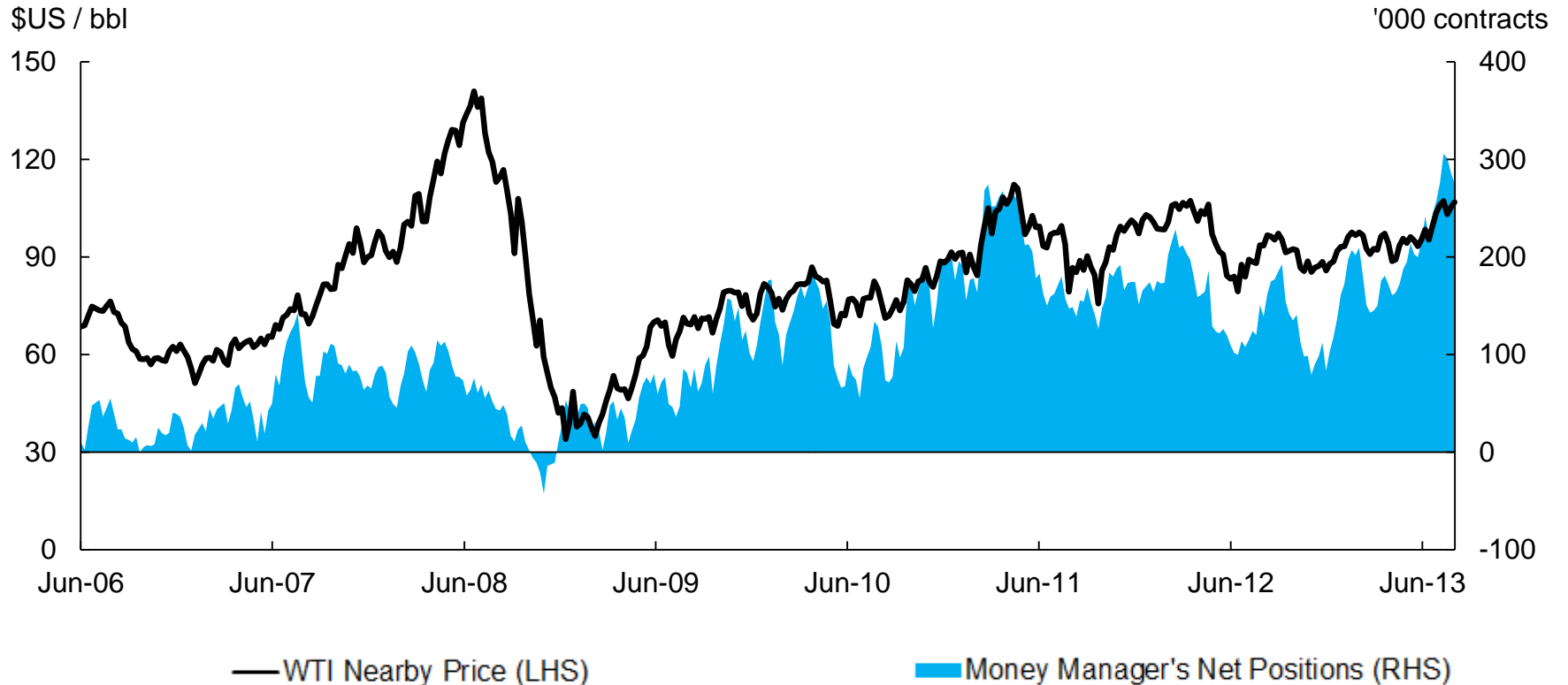
Quarterly data

\$US bln



Fact 5: Strong correlation between net money managers' positions and prices

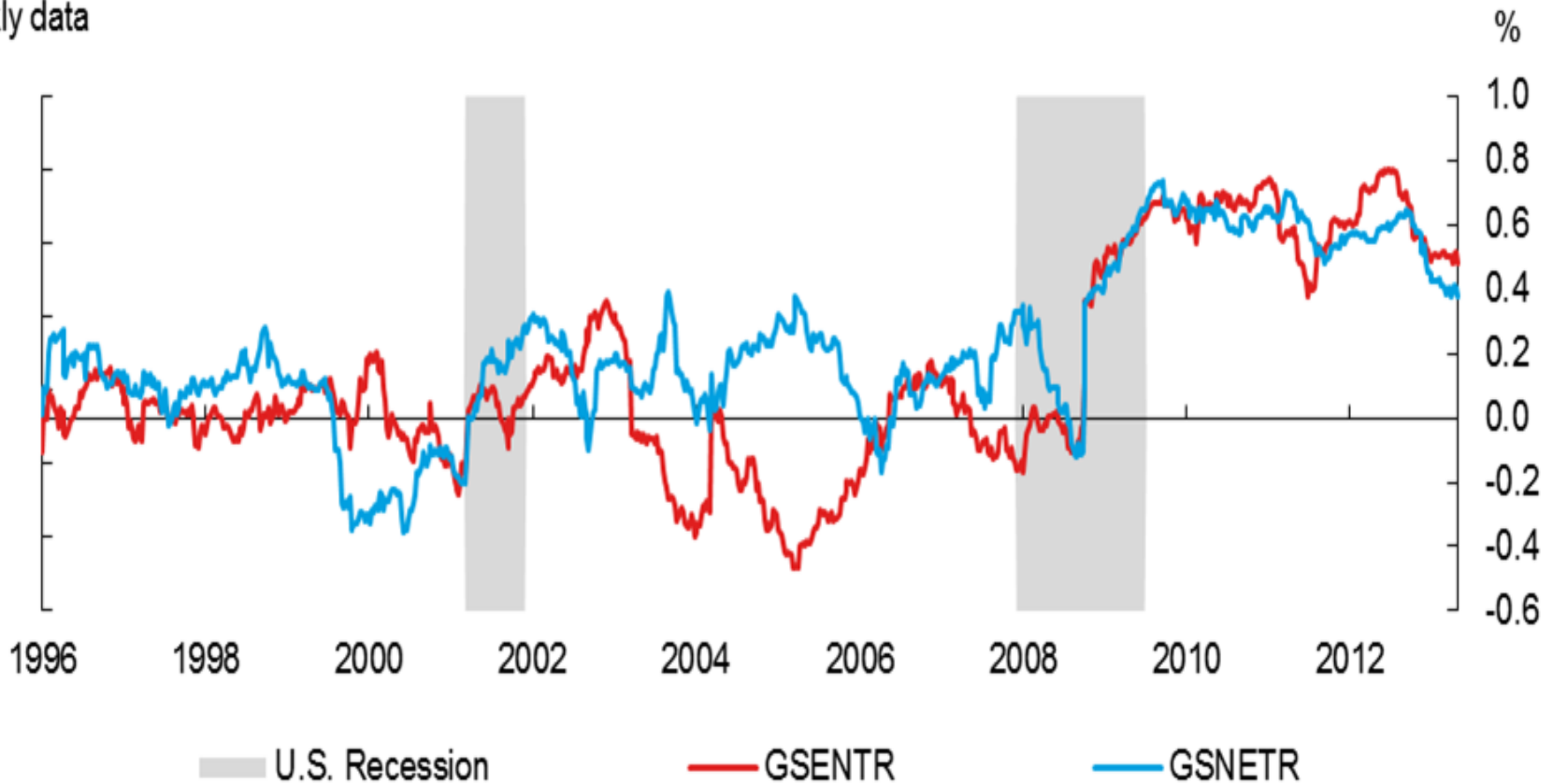
Money managers' net positions and WTI nearby futures price



Fact 6: Increased correlation between asset classes

Correlation Between Weekly Return on S&P 500 and Goldman Sachs Energy Total Return Index (GSENTR) and Goldman Sachs Non-Energy Total Return Index (GSNETR)

Weekly data



2. Financialization of Commodities



Potential benefits and costs of financialization

■ Benefits

- More efficient derivative pricing methods - price discovery generally takes place in derivatives markets (Buyuksahin et al., 2008)
- Integration of physical crude oil markets (Fattouh, 2010)
- Reducing the market price of risk (Pirrong, 2011)

■ Costs

- Divergence of prices from “fundamentals”
- Excessive volatility
- Erosion of long-run diversification benefits

Correlation does not imply causation

- Limited evidence of link between speculators' positions and prices

No impact:

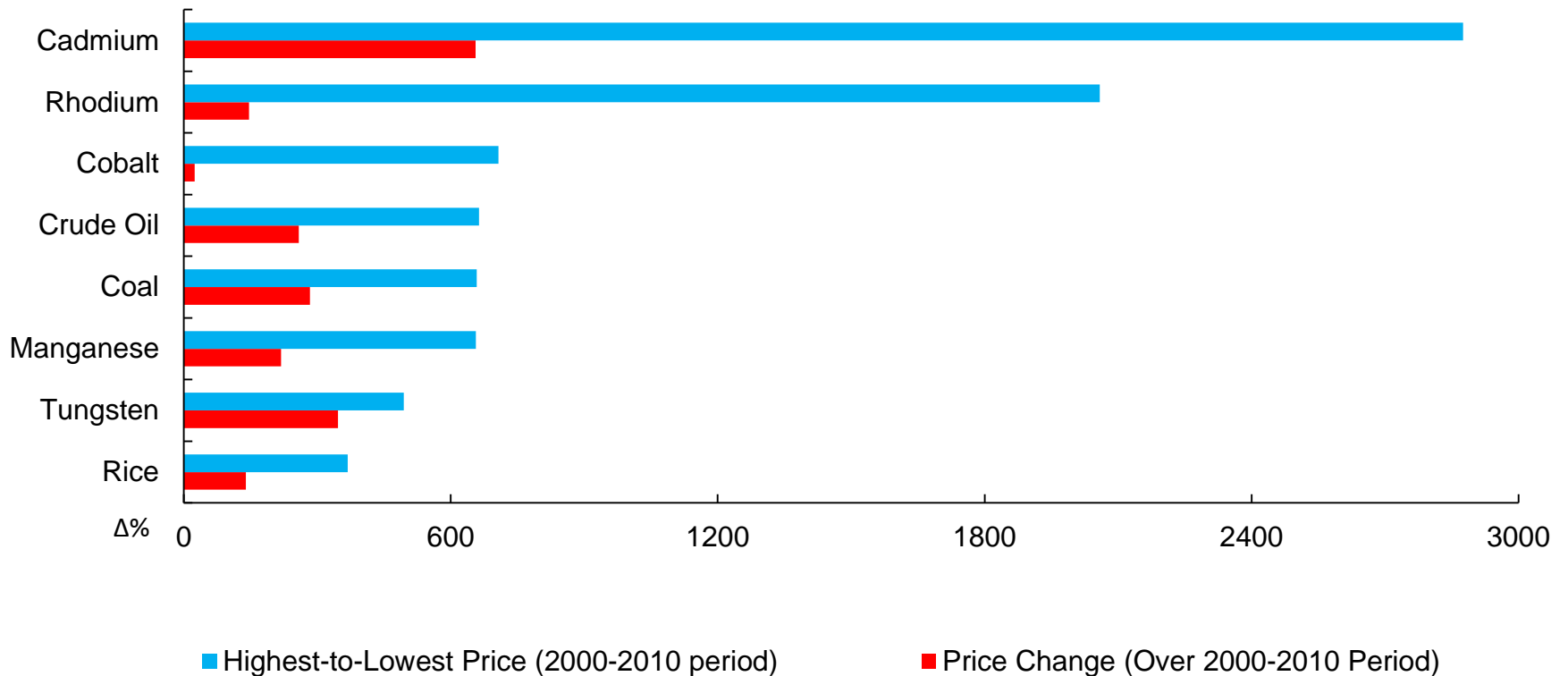
- Buyuksahin and Harris (2011)
- Alquist and Gervais (2013)
- Buyuksahin, Brunetti and Harris (2013)
- Irwin and Sanders (2011, 2013)

Some impact:

- Singleton (2011)
- Tang and Xiong (2010)
- Mou (2010)

Increase in prices is not unique to exchange-traded commodities

Performance of crude oil and non-exchange-traded commodities

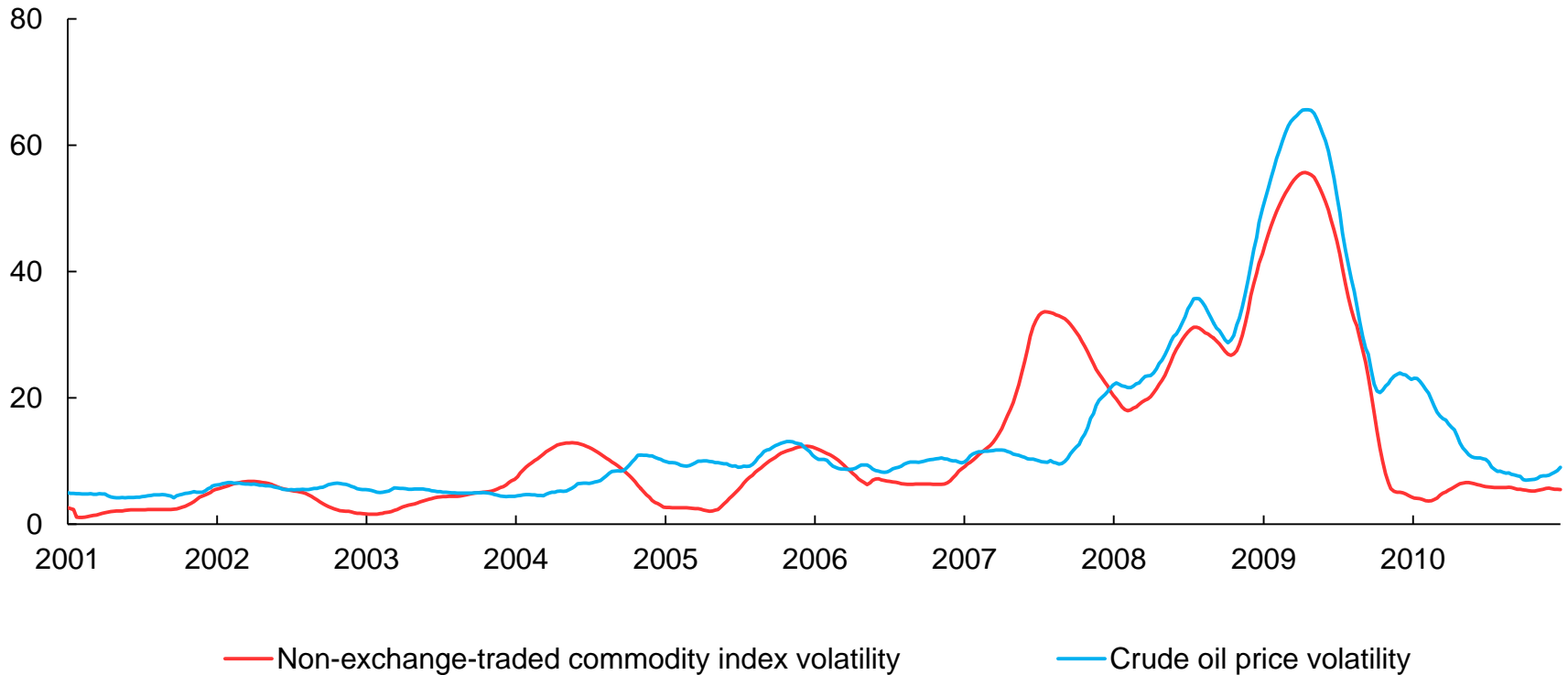


Increase in volatility is not unique to exchange traded commodities

Price volatility in crude oil and non-exchange-traded commodities

Weekly data

Index



Herding and Speculation in Crude Oil Market

- Herding behaviour might be destabilizing
- But (Buyuksahin et al. 2013a,b)
 - Herding in futures markets is comparable to what we see in the stock market
 - Herding has stabilizing effect

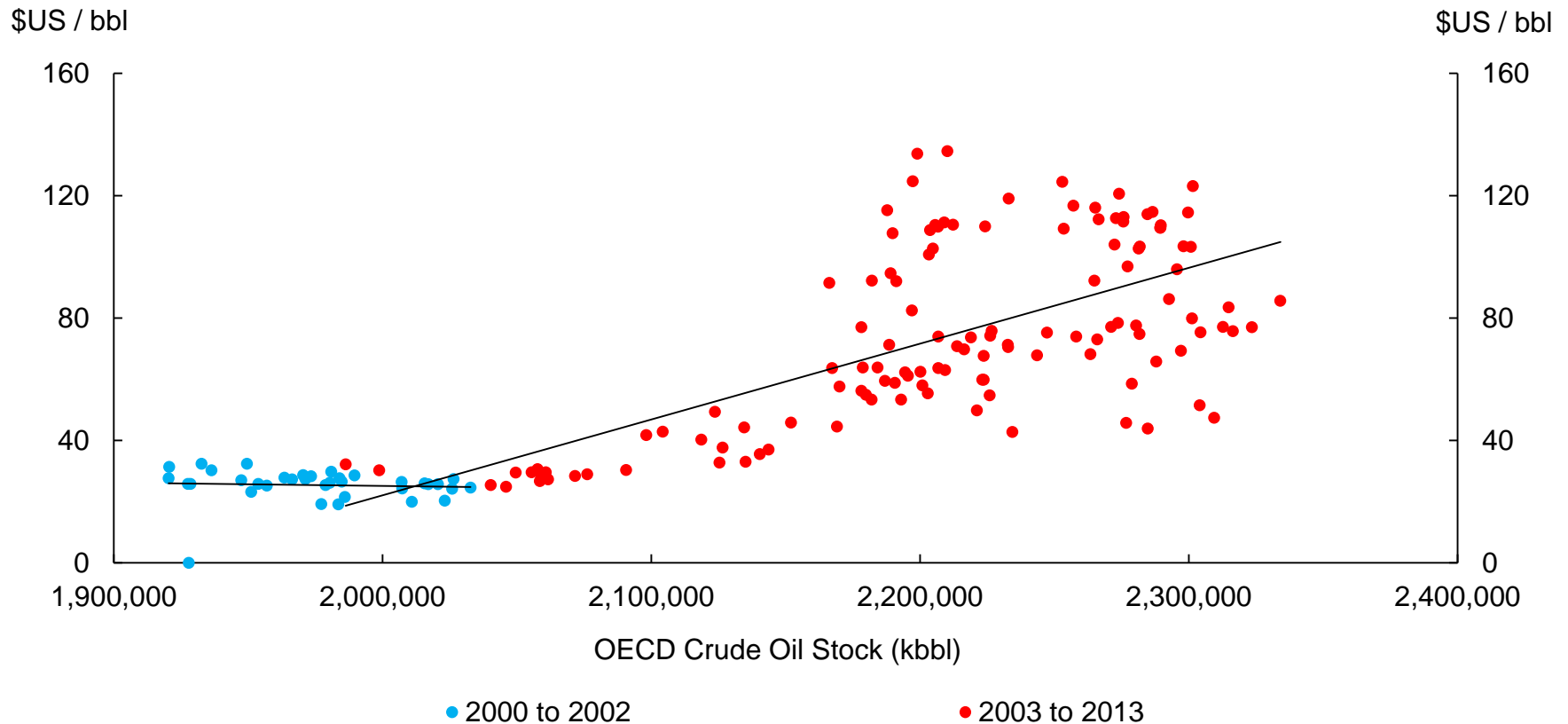
Broken Relationship between inventories and prices

- Financialization broke the negative relationship between inventories and prices
 - Upward slope in the post 2003 data
- But, this can be explained by
 - Structural changes or changes in expectations
 - Missing inventories from non-OECD

Broken relationship between prices and stocks?

Relationship between Brent and OECD stock levels

Monthly data



Increased correlation between commodities and equities

- Increase in correlation between commodities and other assets due to financialization
- But (Buyuksahin, Robe and Bruno (2013), Buyuksahin and Robe (2013, 2012), Alquist and Coibion (2013))
 - Activities of financial players, commodity prices and other asset prices appear to be increasingly responding to global business conditions
- Temporary prevalence of the common factor (the risk on factor)

3. Fundamentals and Commodities



What explains elevated commodity prices?

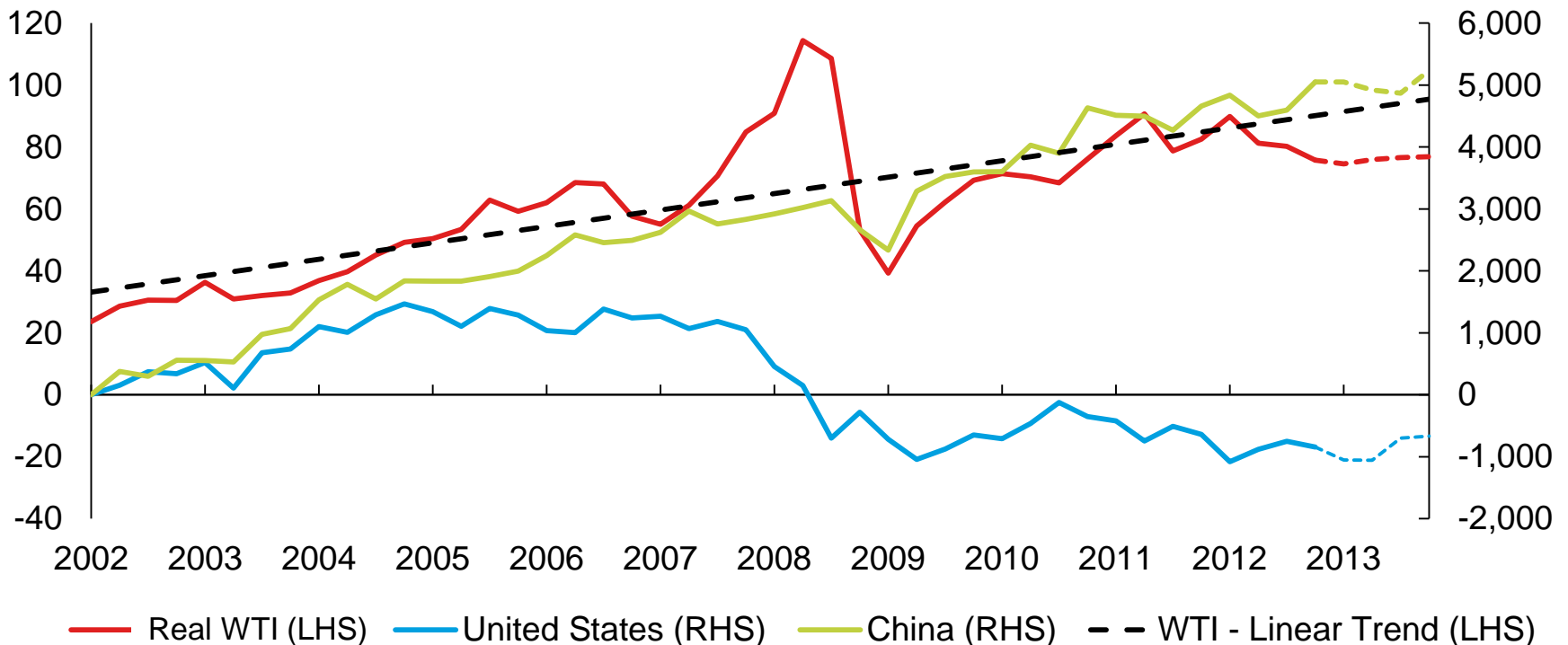
- Low price elasticities of supply and demand
- Persistent demand shocks

Chinese demand is driving oil prices

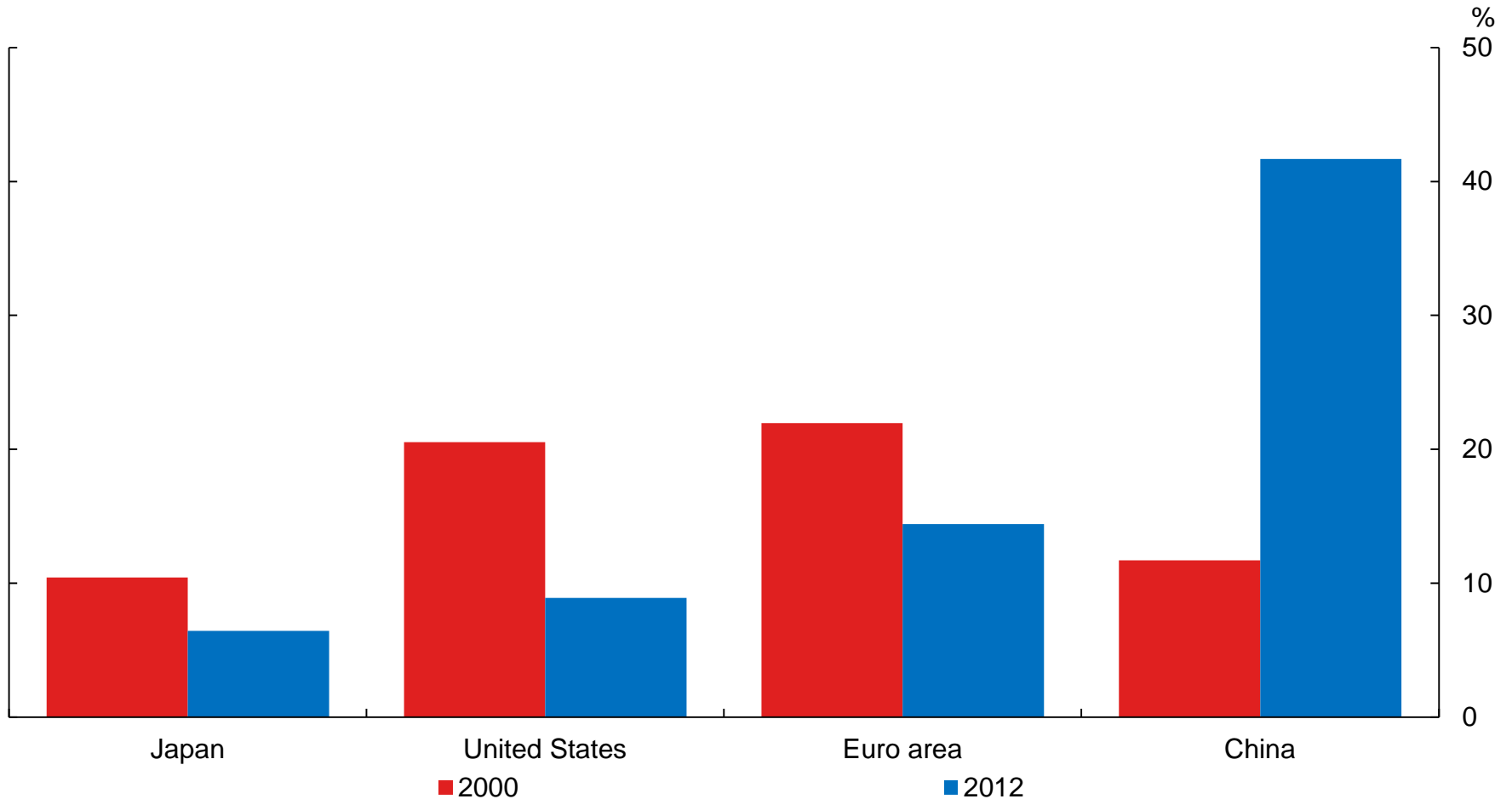
Cumulative marginal oil demand since 2002

Constant 2005 USD / bbl

Thousand barrels / day



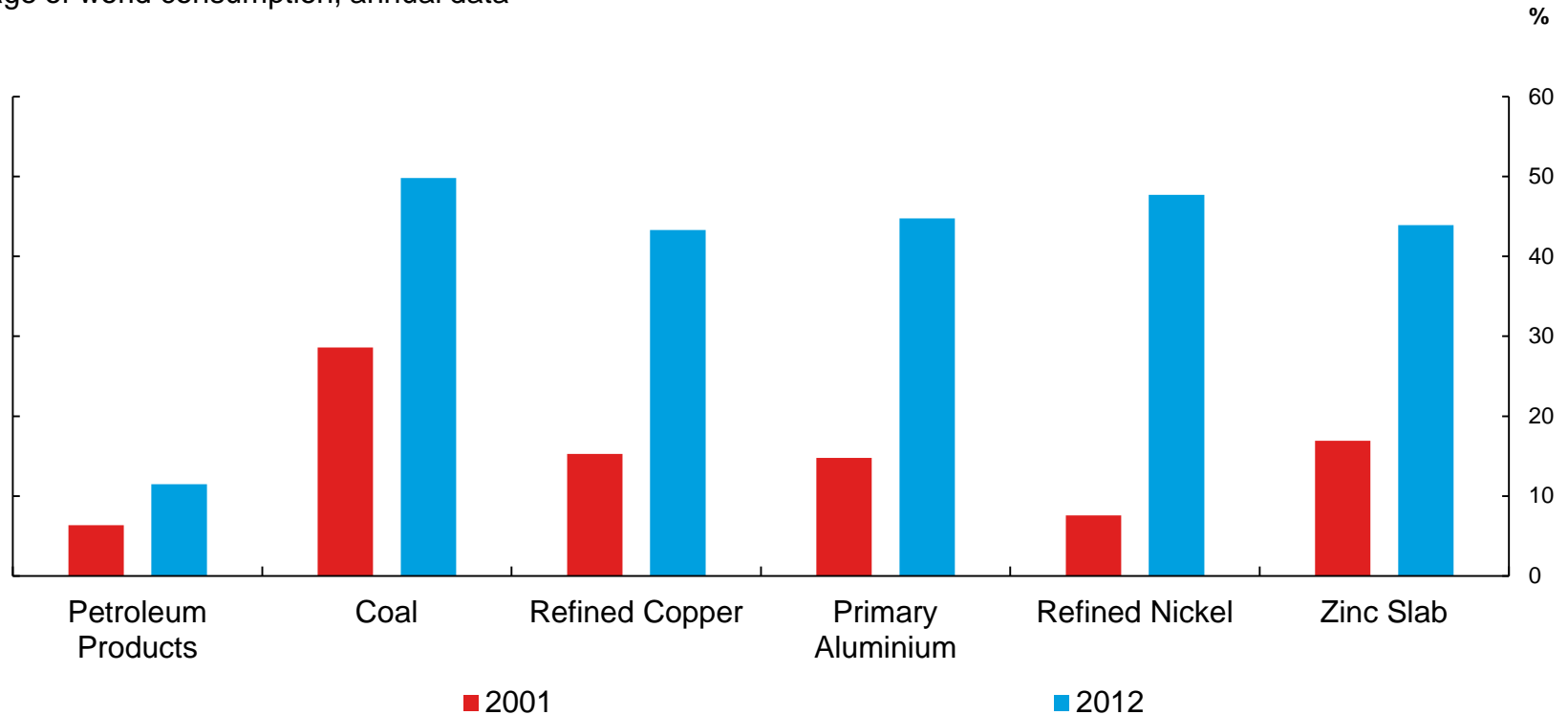
Consumption shares of base metals



A dramatic increase in China's share of global consumption, especially base metals

China's share of world consumption of key industrial commodities

Percentage of world consumption, annual data

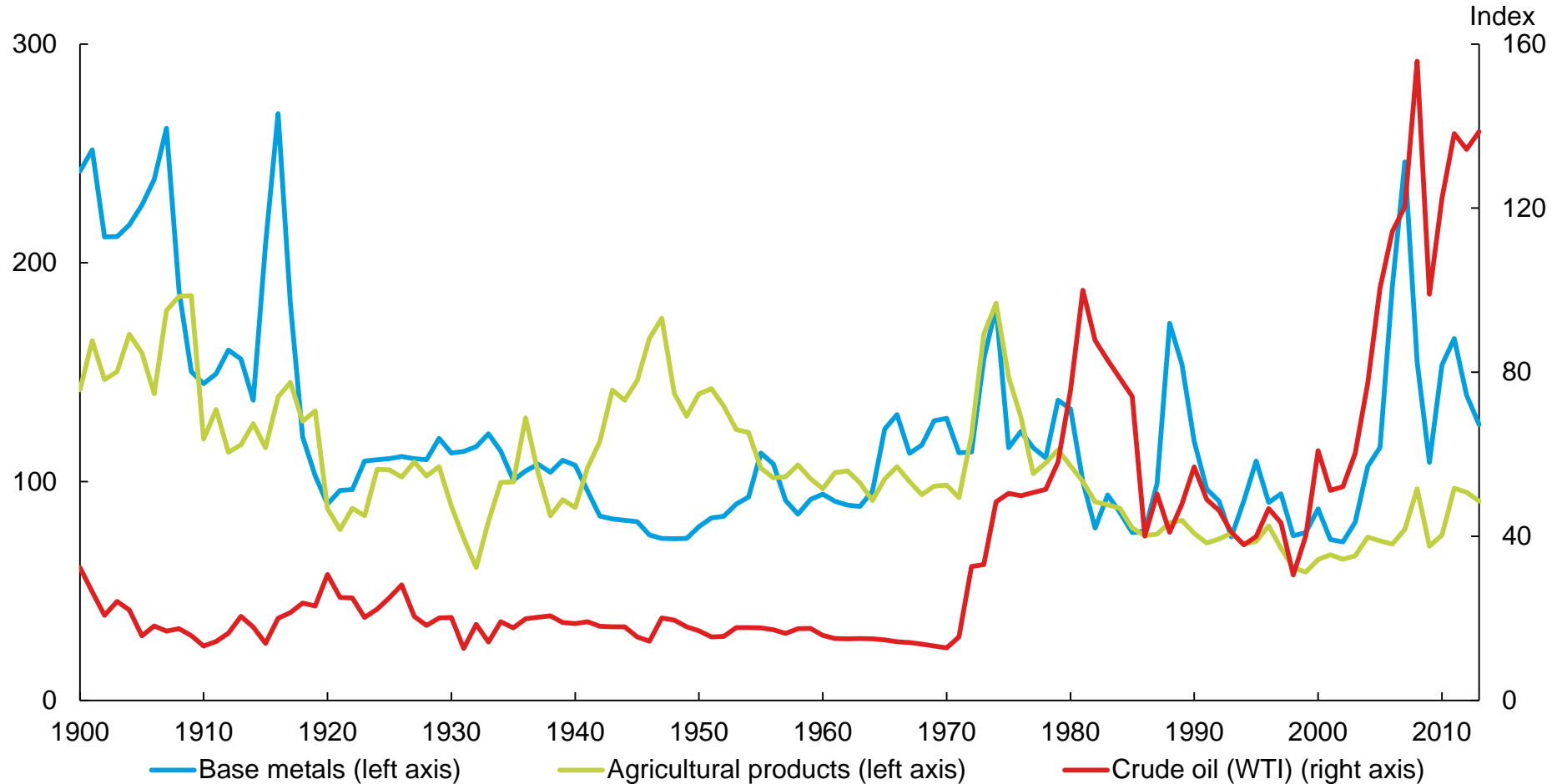


Note: 2012 values for coal are based on United States Energy Information Administration forecasts

Source: United States Energy Information Administration, World Bureau of Metal Statistics

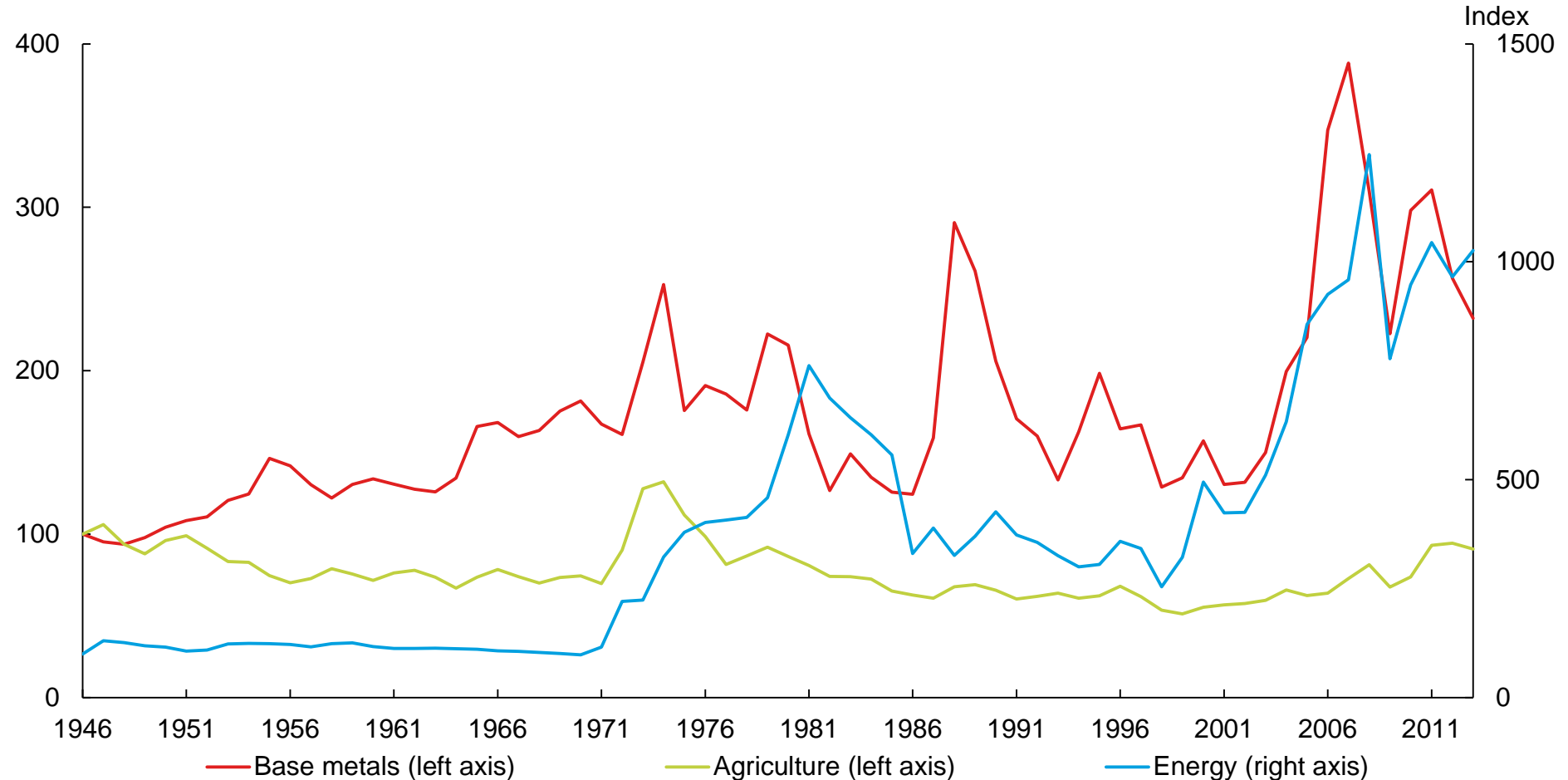
Long run commodity price indices

January 1981 = 100, annual data



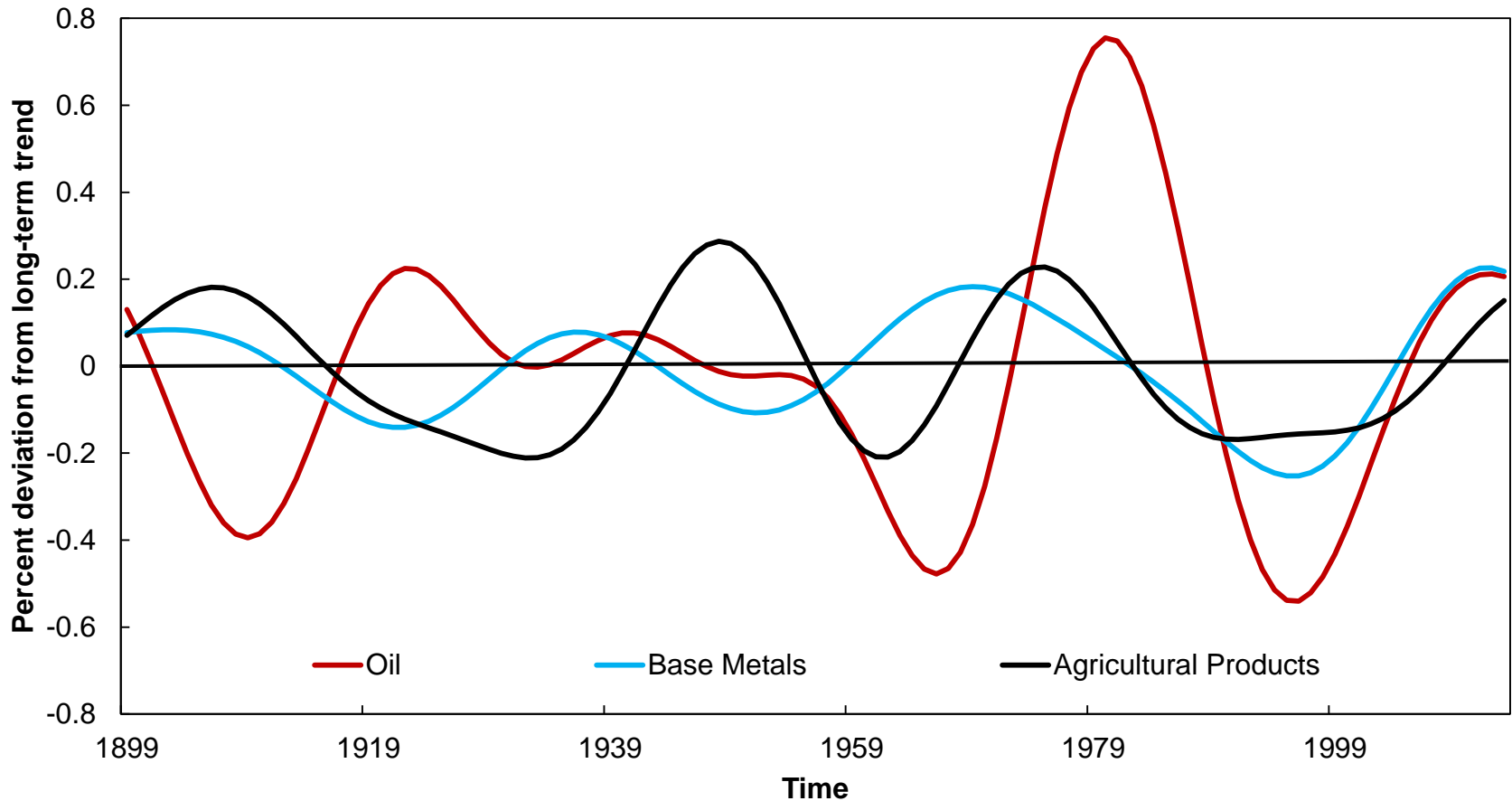
Most commodity prices well above historical averages

January 1946 = 100, annual data



Current commodity price super-cycle began in the early 2000s

Super-cycle Components for Real Metal, Agricultural, and Oil Prices



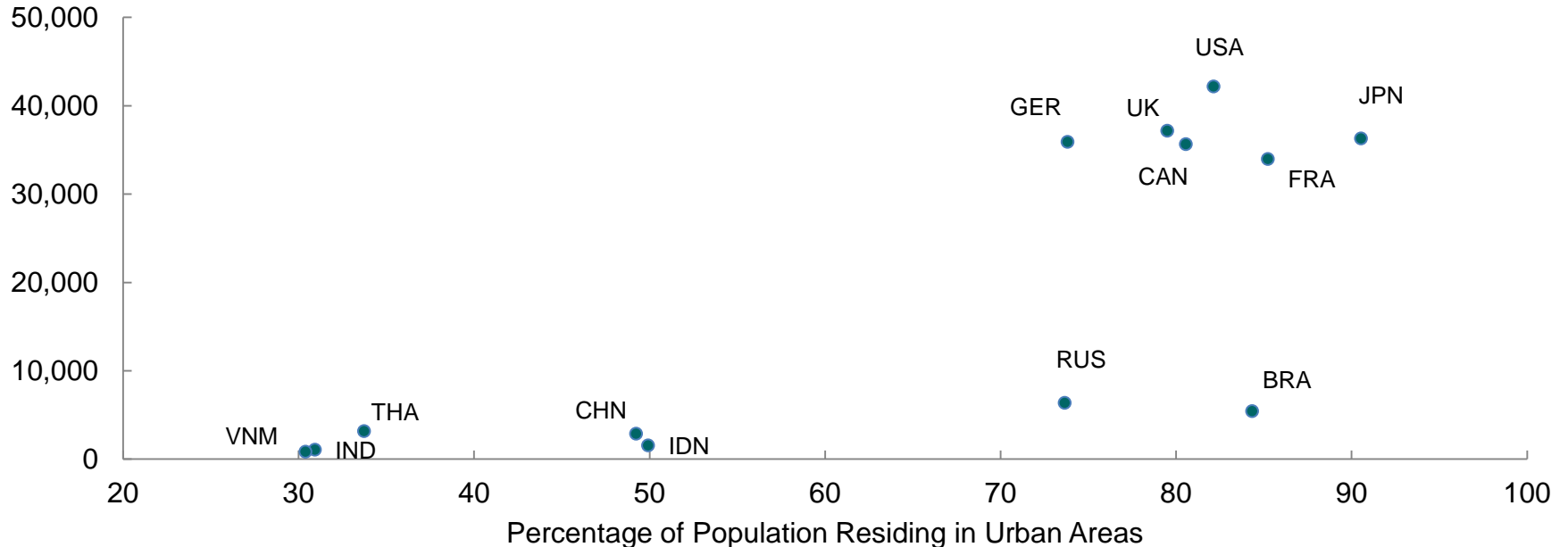
Is the commodity super-cycle over?

- Slower Chinese growth
- Oil demand has peaked in advanced economies
 - Efficiency gains will further curb the demand for oil
- Positive supply shock is anticipated in North American oil and natural gas production

Urbanization to continue for many EMEs

Economic development and the degree of urbanization

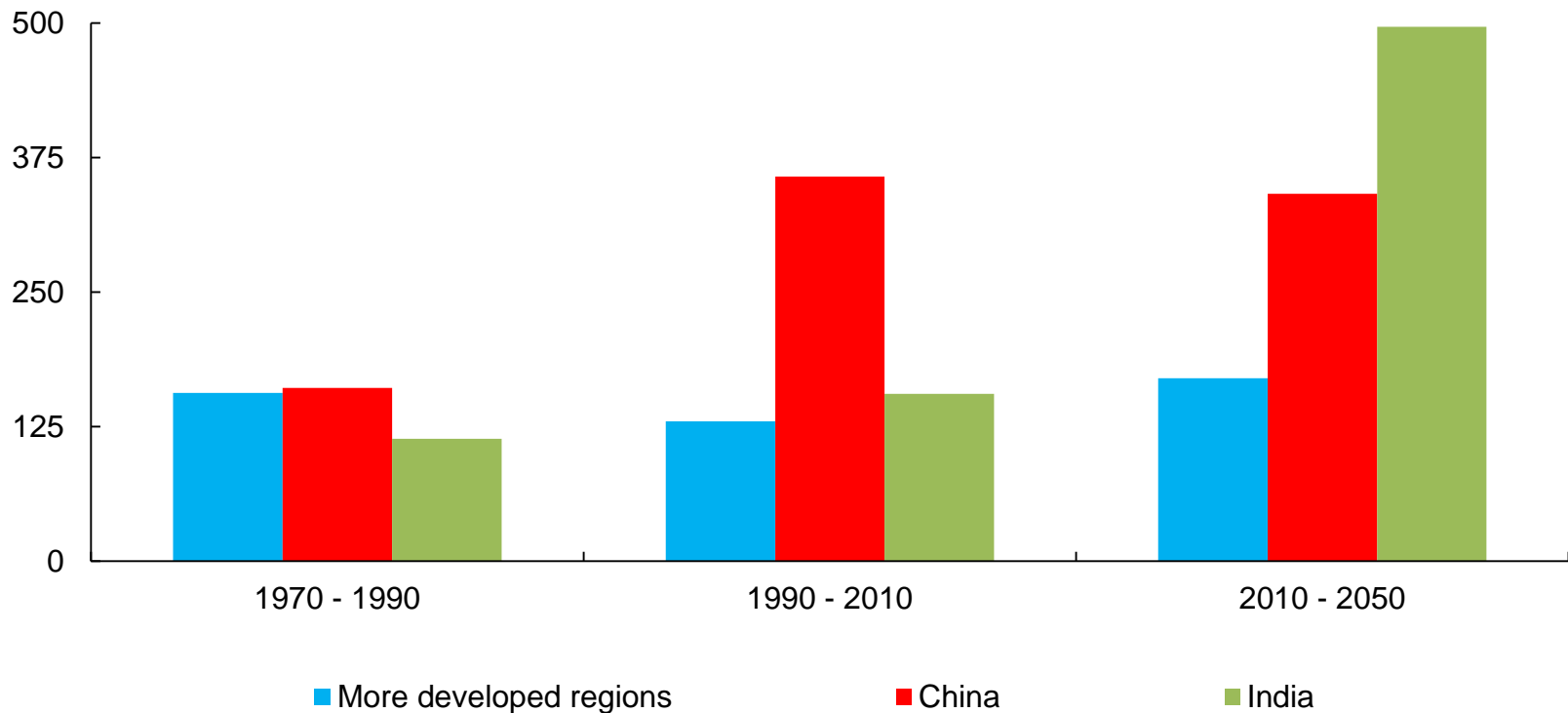
GDP per Capita
(real 2005 USD)



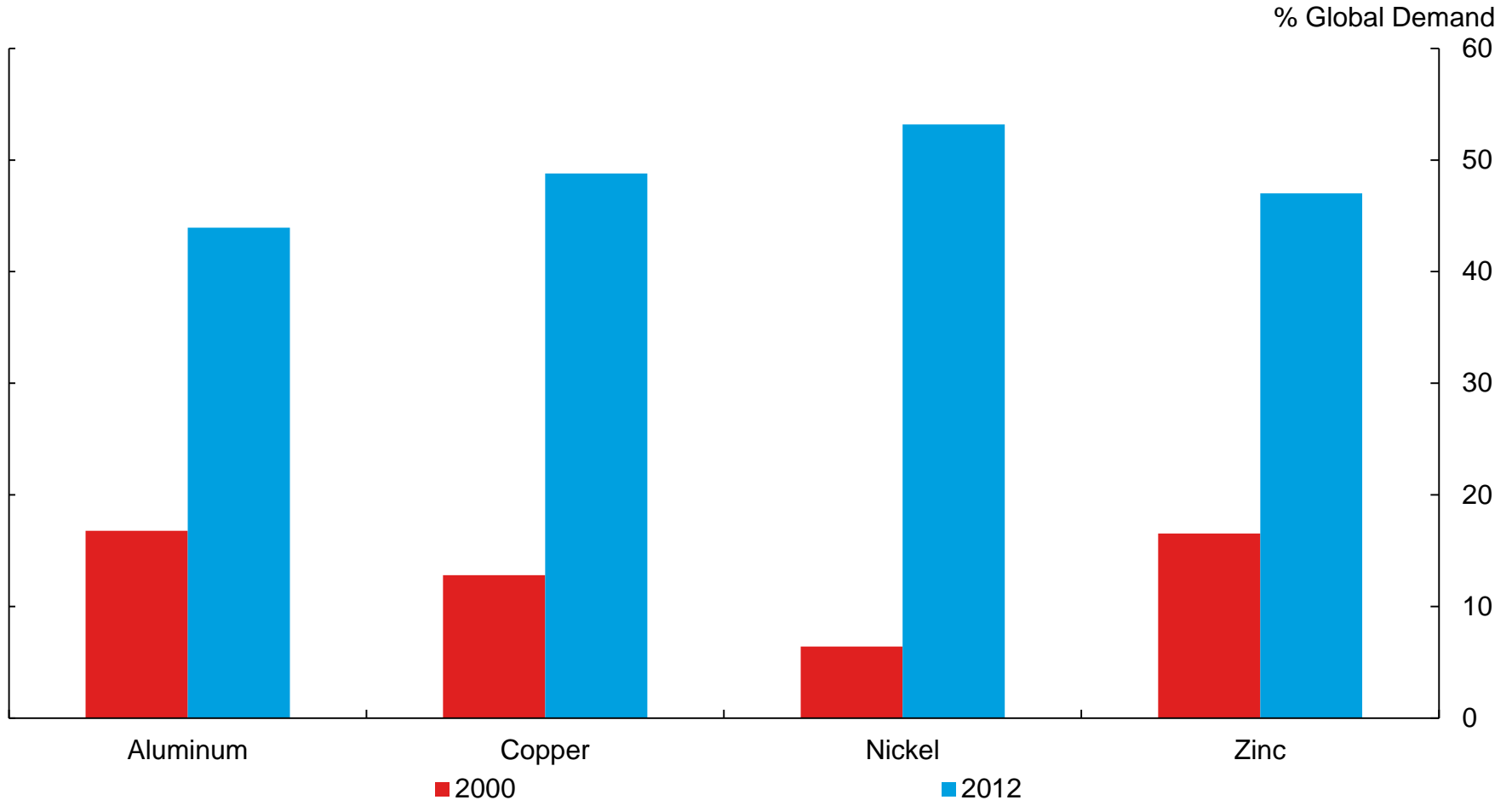
Urbanization to continue for many EMEs

Growth in urbanized population

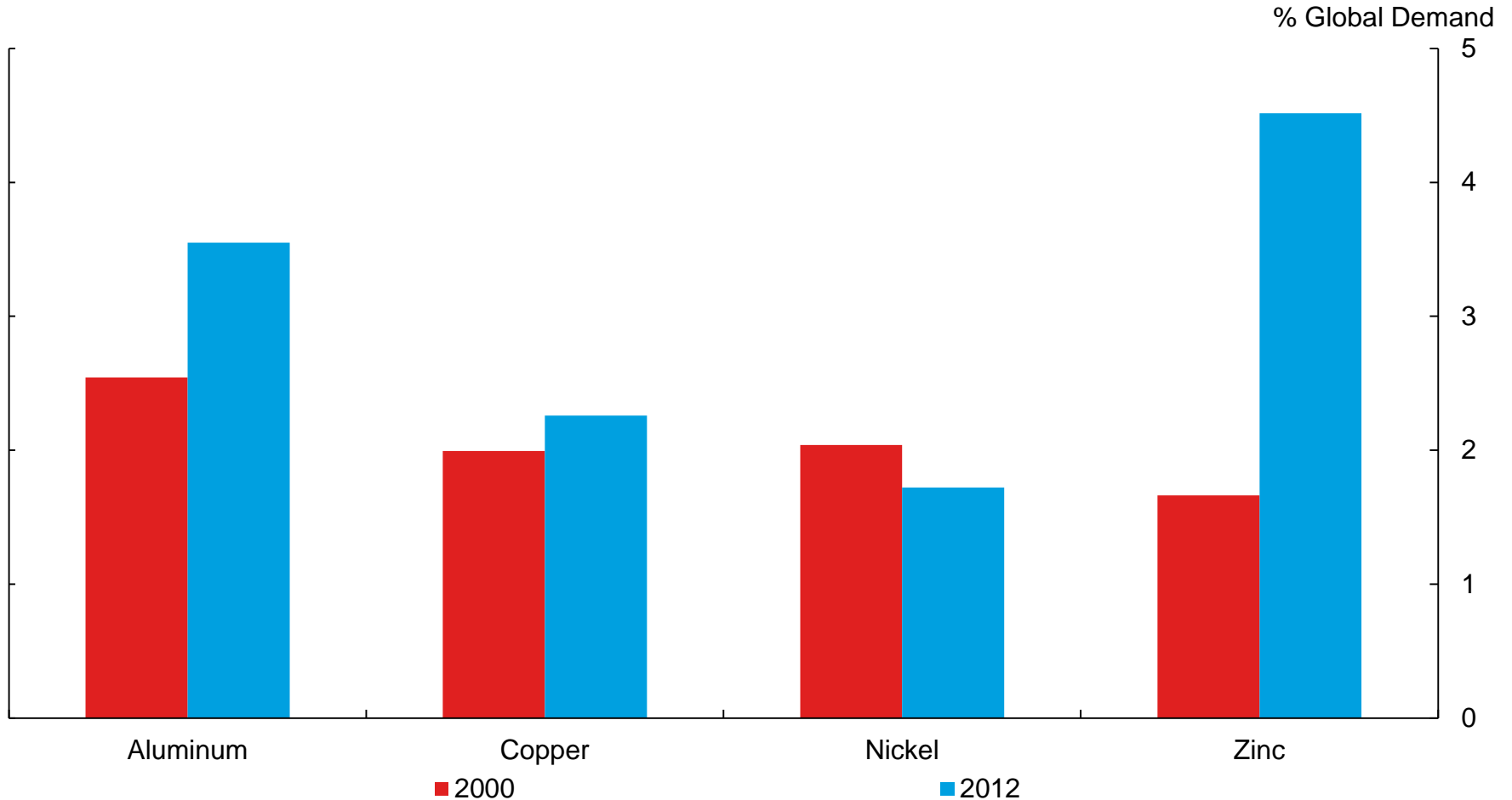
Millions of people



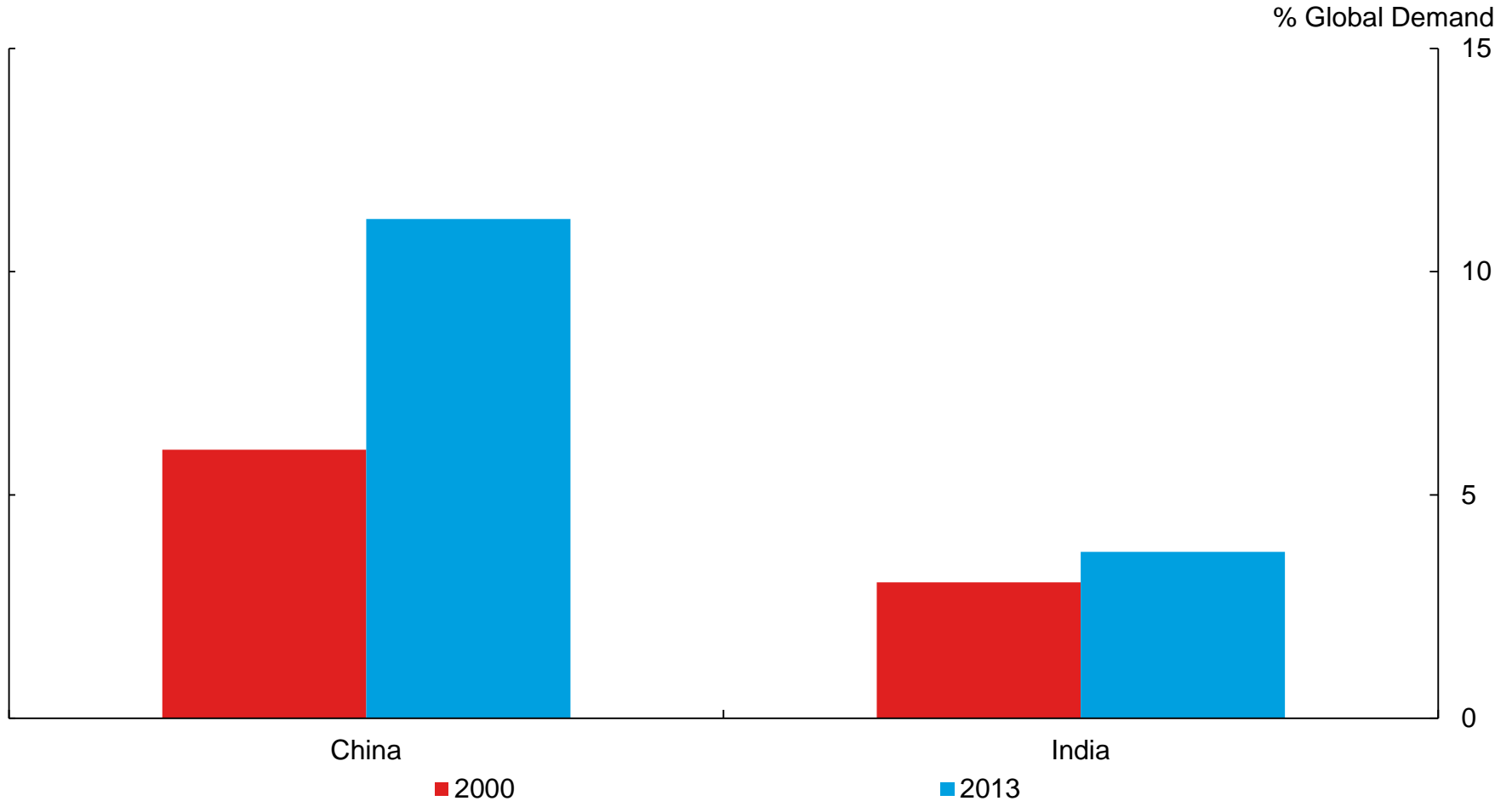
China's share of global base metal consumption



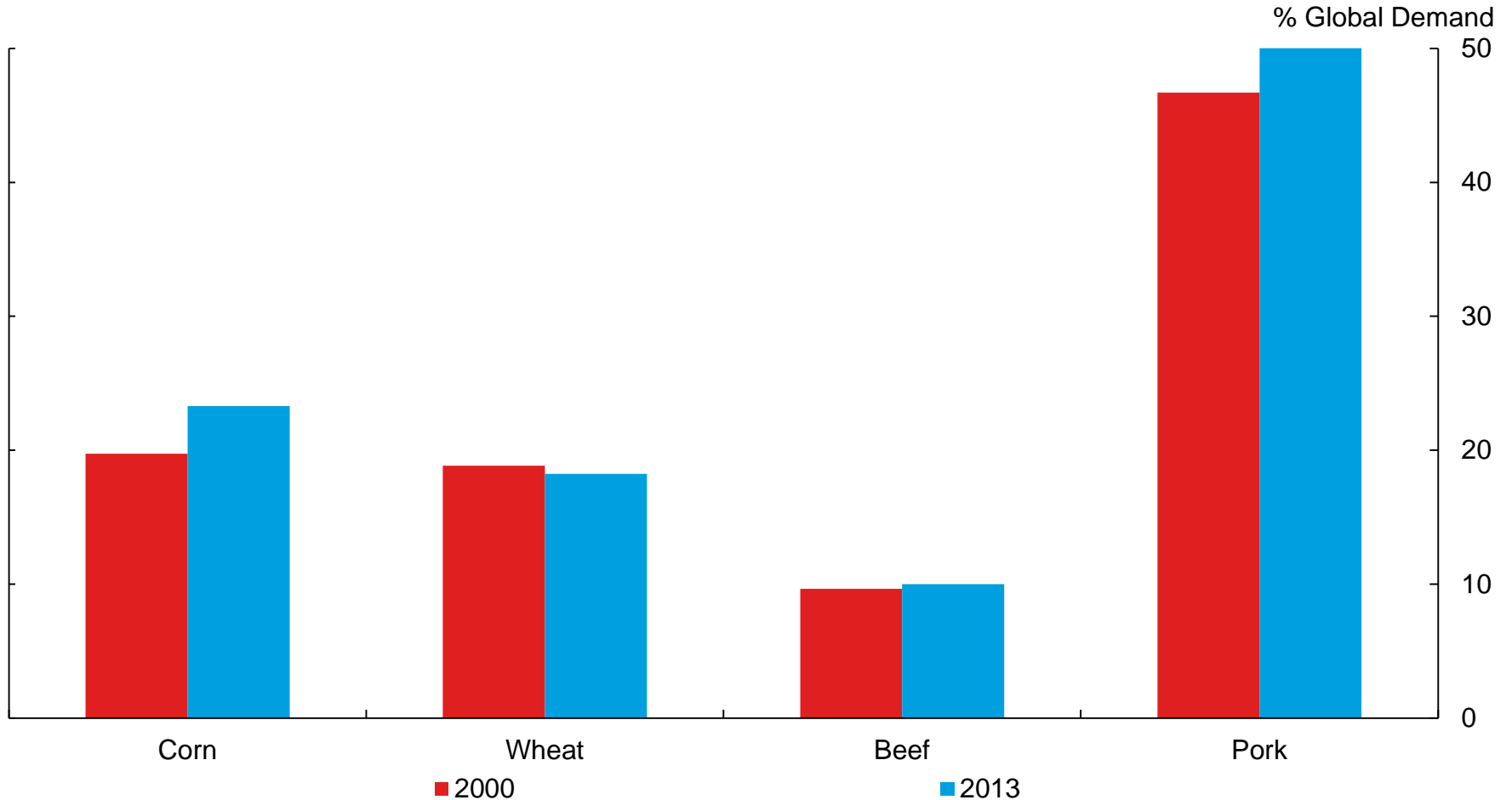
India's share of global base metal consumption



China and India's share of global oil demand

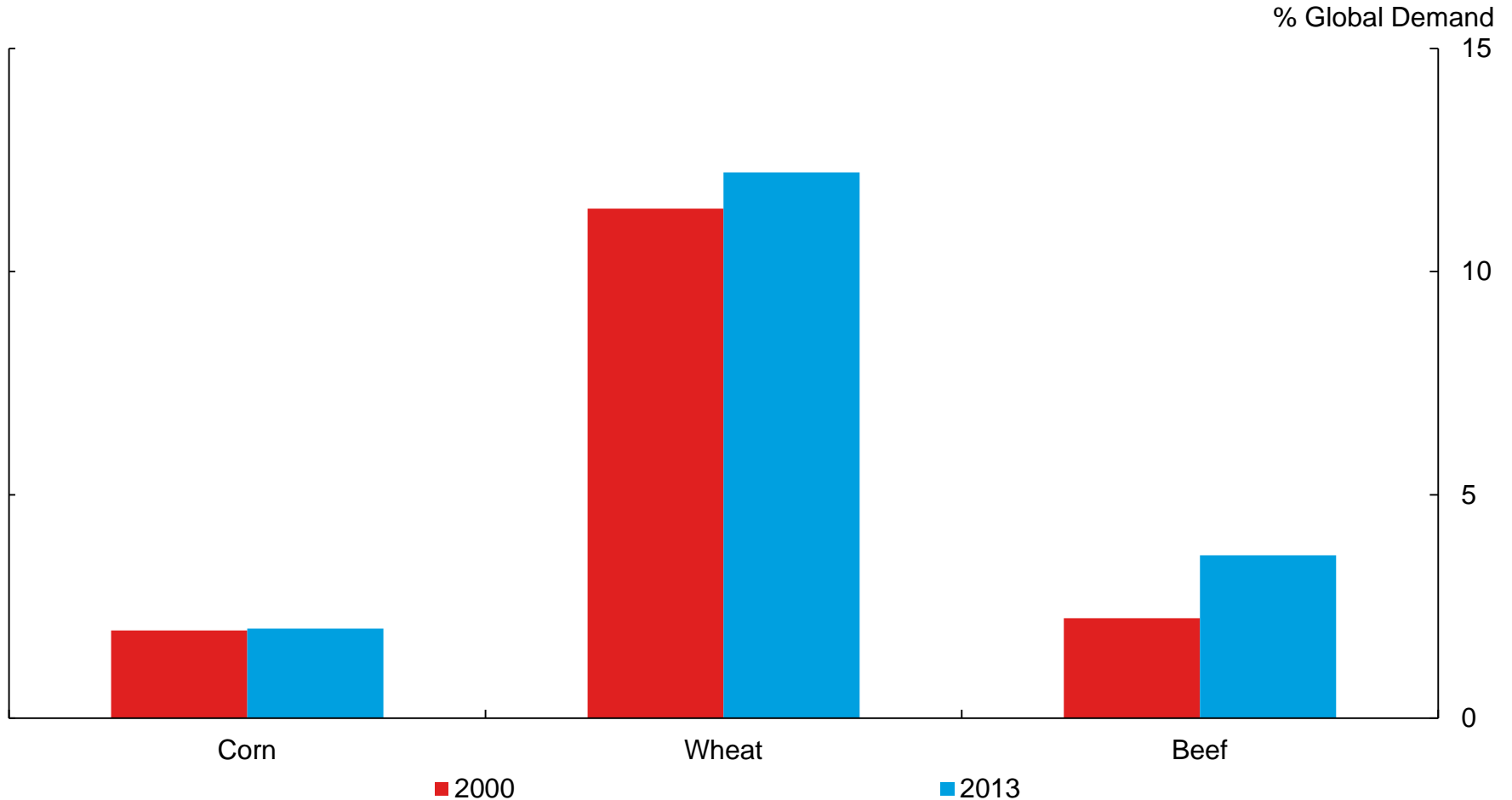


China's share of global agriculture commodity consumption

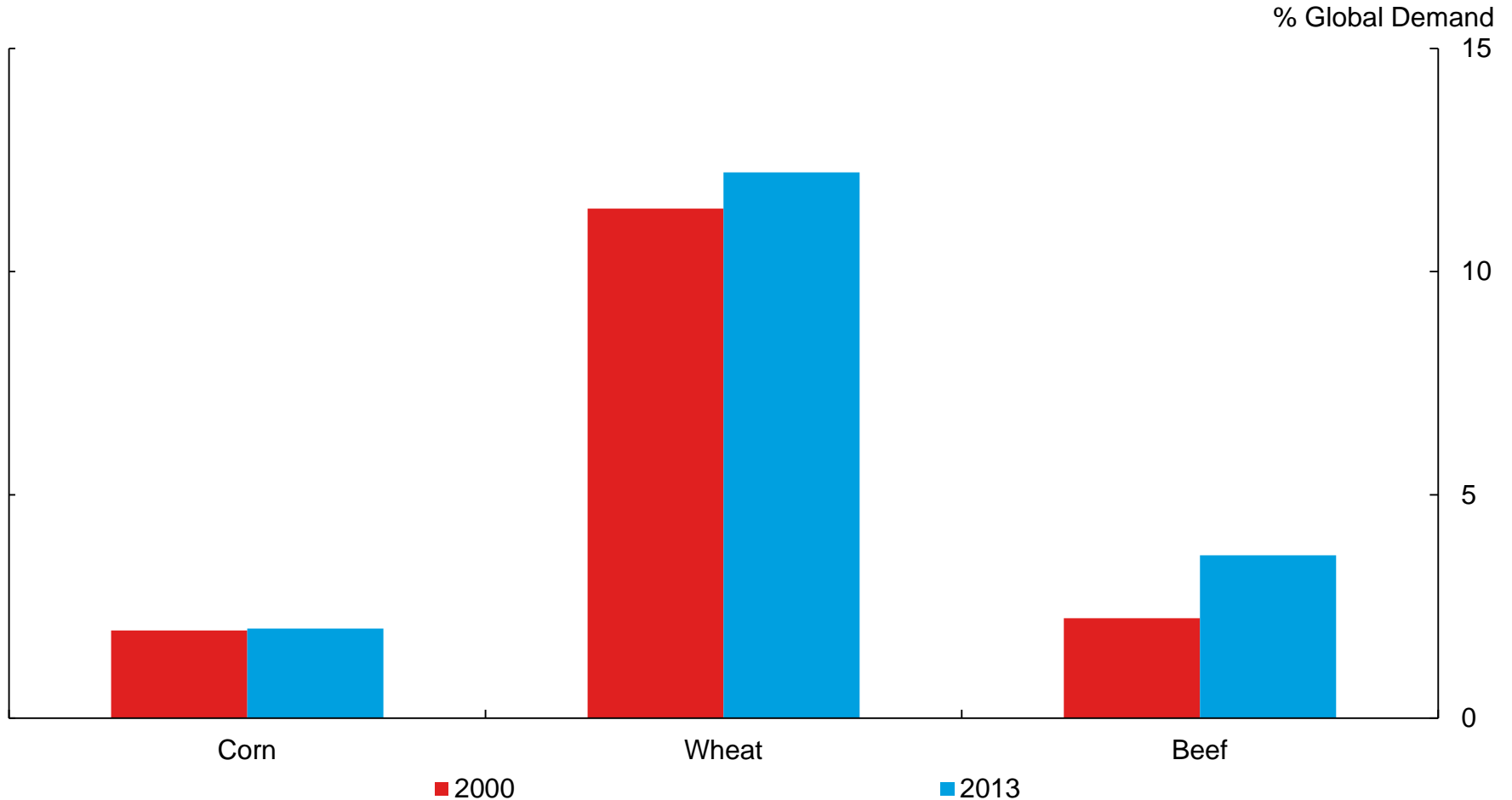


Source: U.S. Department of Agriculture

India's share of global agriculture commodity consumption



India's share of global agriculture commodity consumption



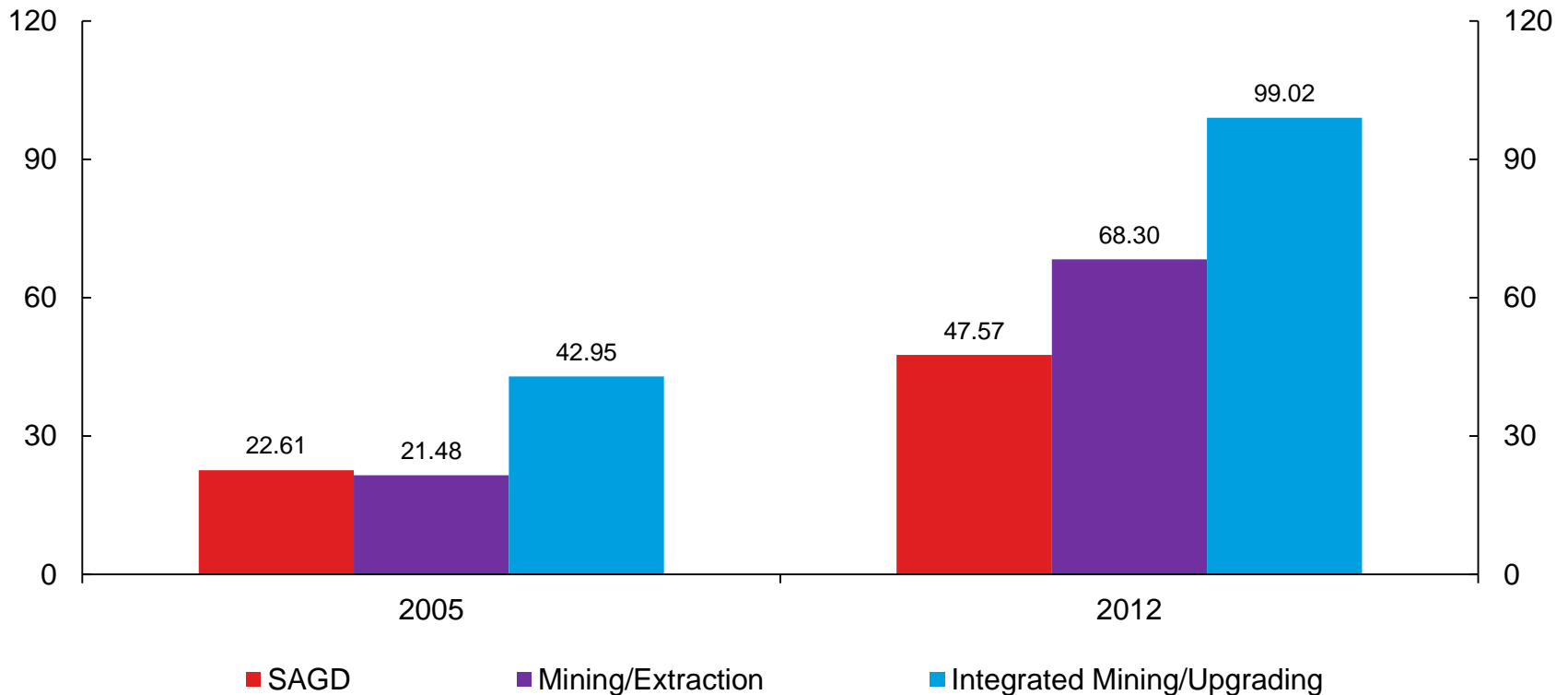
Source: U.S. Department of Agriculture

Escalating production costs

Supply costs for different oil sands projects

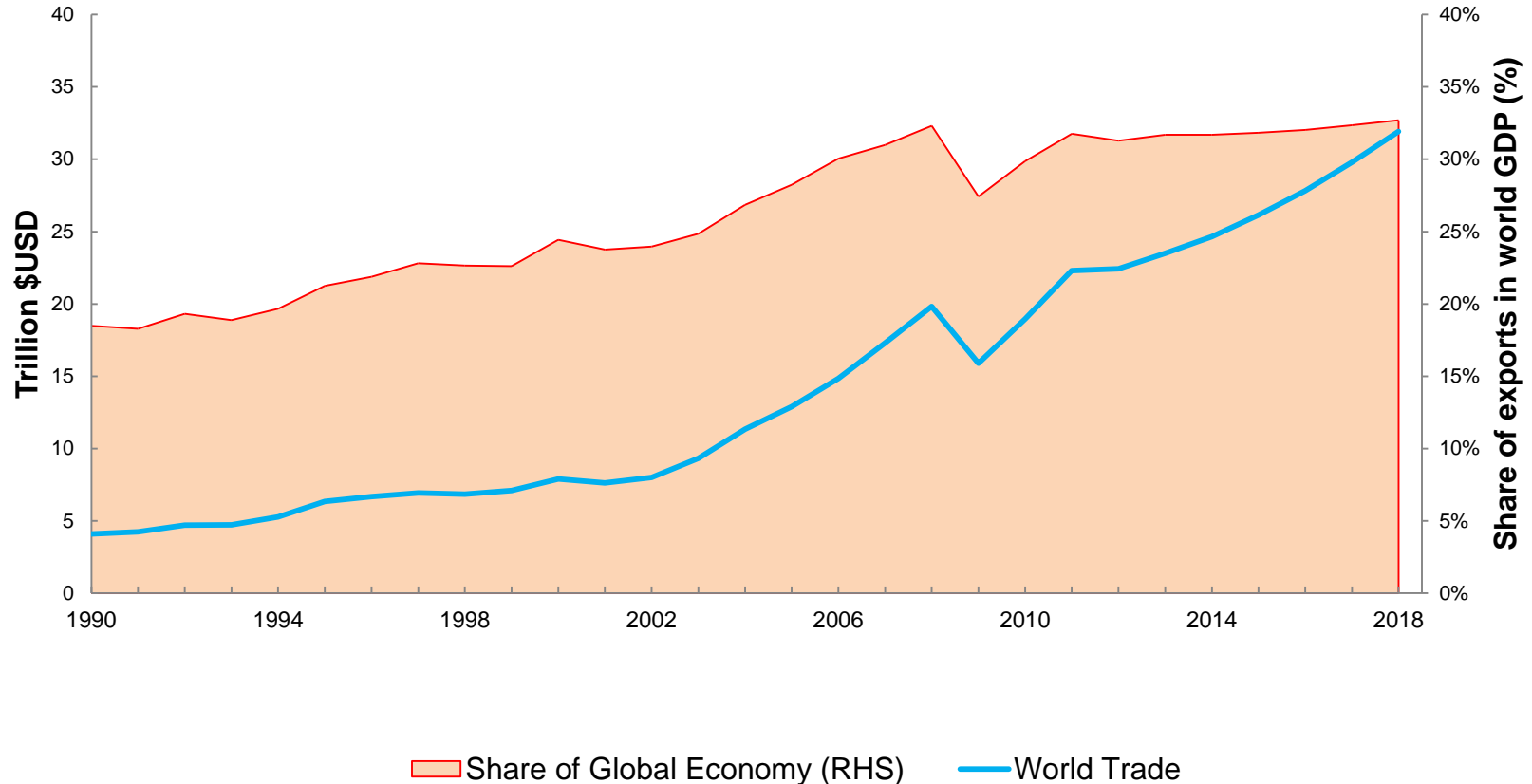
Prices at plant gate, constant 2011 Canadian dollars

\$CAD / bbl



The increase in global trade has supported commodity prices

Openness in world trade should continue to grow



5. Conclusions



Conclusion: Where do we stand?

- Activities of financial players appear to be increasingly responding to unexpected global business conditions
- Benefits of financialization exceed costs
- Economic fundamentals, in particular demand factors, drive commodity prices
- Current commodity super-cycle is expected to continue

Thank you

