

# COMING TO TERMS WITH NON-OECD OIL STOCKPILING

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## AGENDA

- Why is everybody talking about Chinese/Indian stockpiling?
- Why should non-OECD countries consider strategic reserves?
- What does it mean for energy markets and energy market analysis?

# Chinese oil stockpiling - market driver or hype?

A quick look at the numbers:

What China has

{ Domestic production of crude  
+ Crude imports

What China uses

{ - Refinery throughputs  
- Crude exports  
- Direct burn of crude  
- Misc. losses

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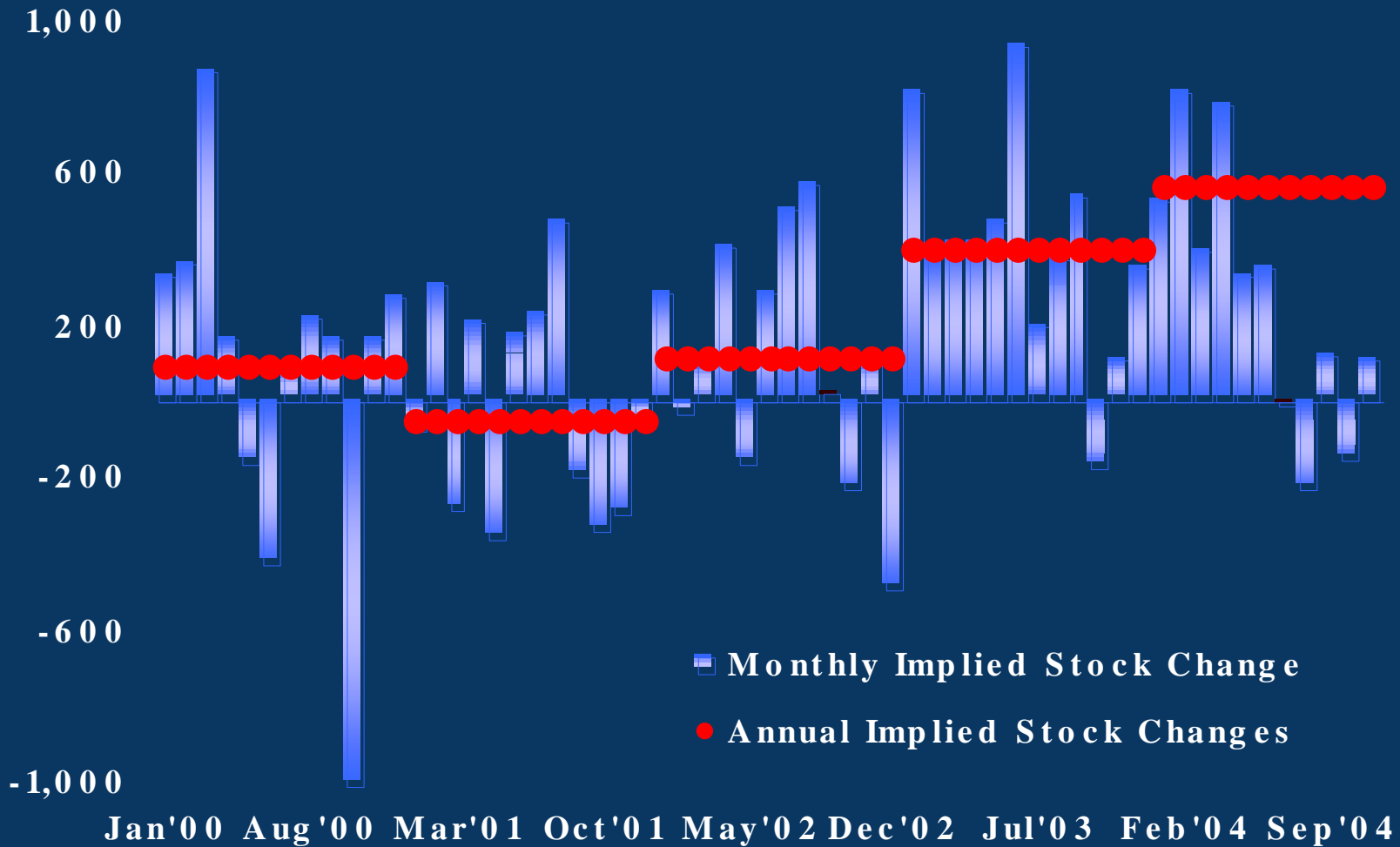
What's left

Negative = Implied stock draw

Positive = Implied stock build

# A back-of-the-envelope view of Chinese stock changes

## IMPLIED CRUDE OIL STOCK CHANGE

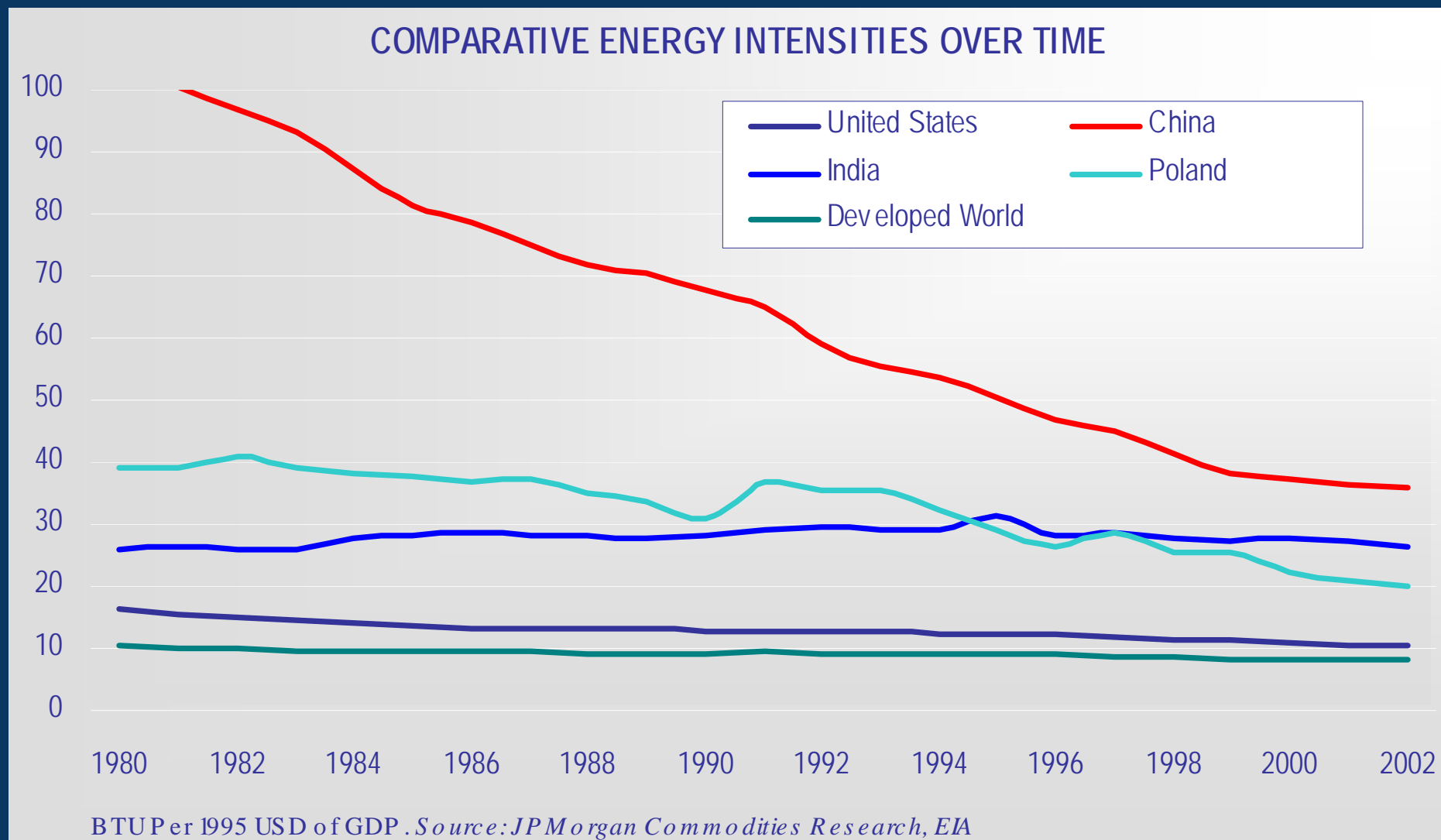


In kbd. Source: JPMorgan Commodities Research, China OGP, Reuters

# Why should non-OECD countries consider strategic oil stockpiling?

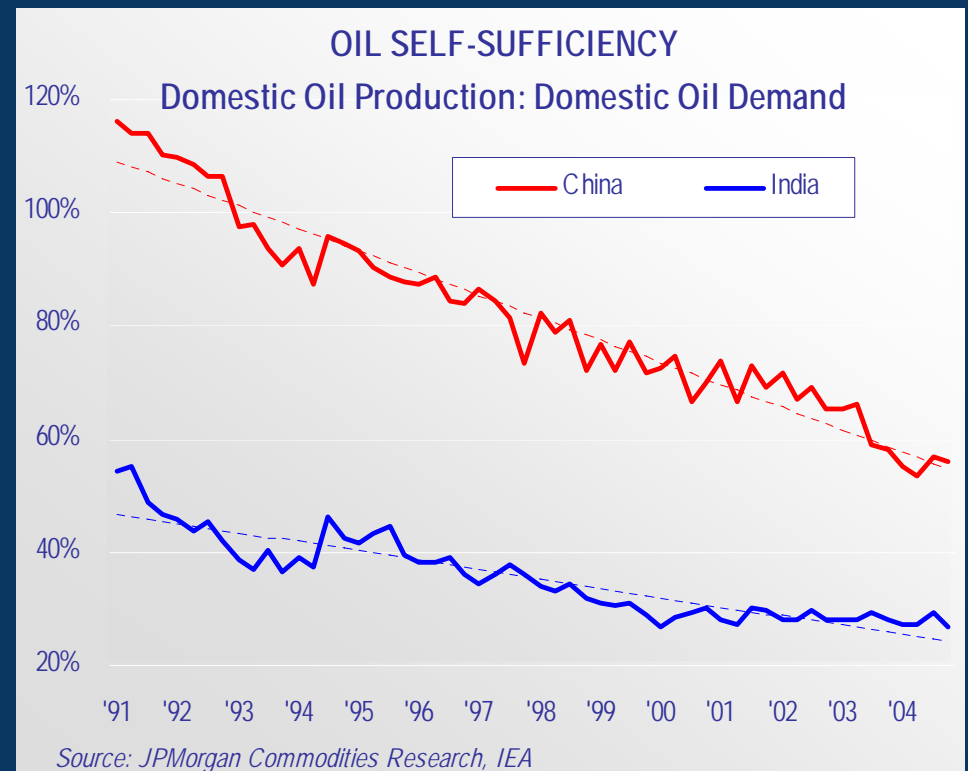
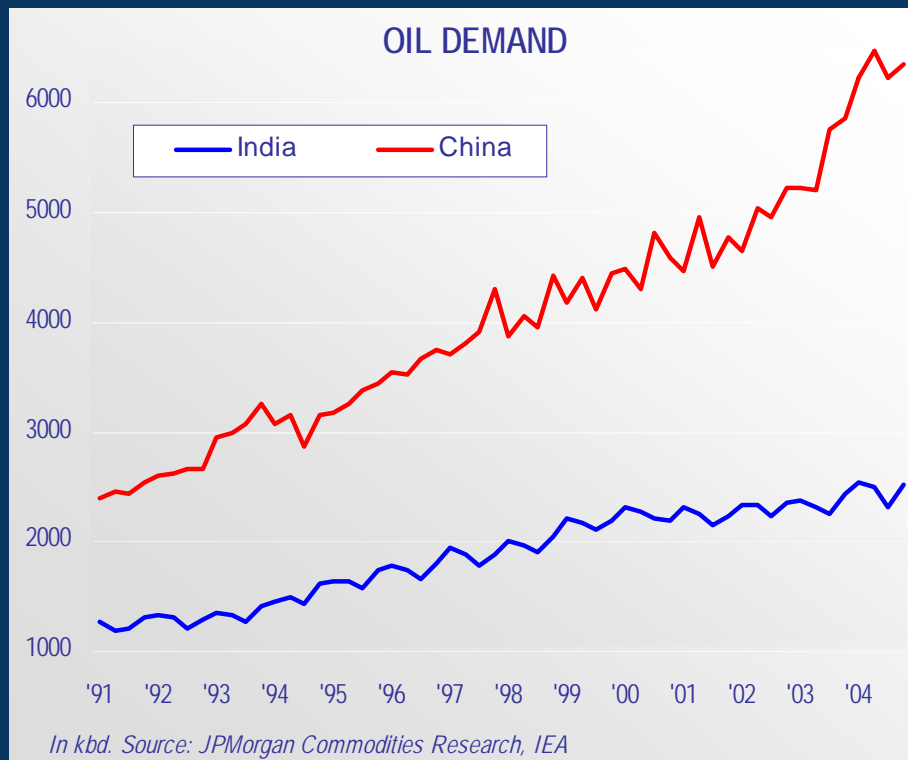
# Comparative Energy Intensities

Emerging market countries have made significant progress, but still trail developed world

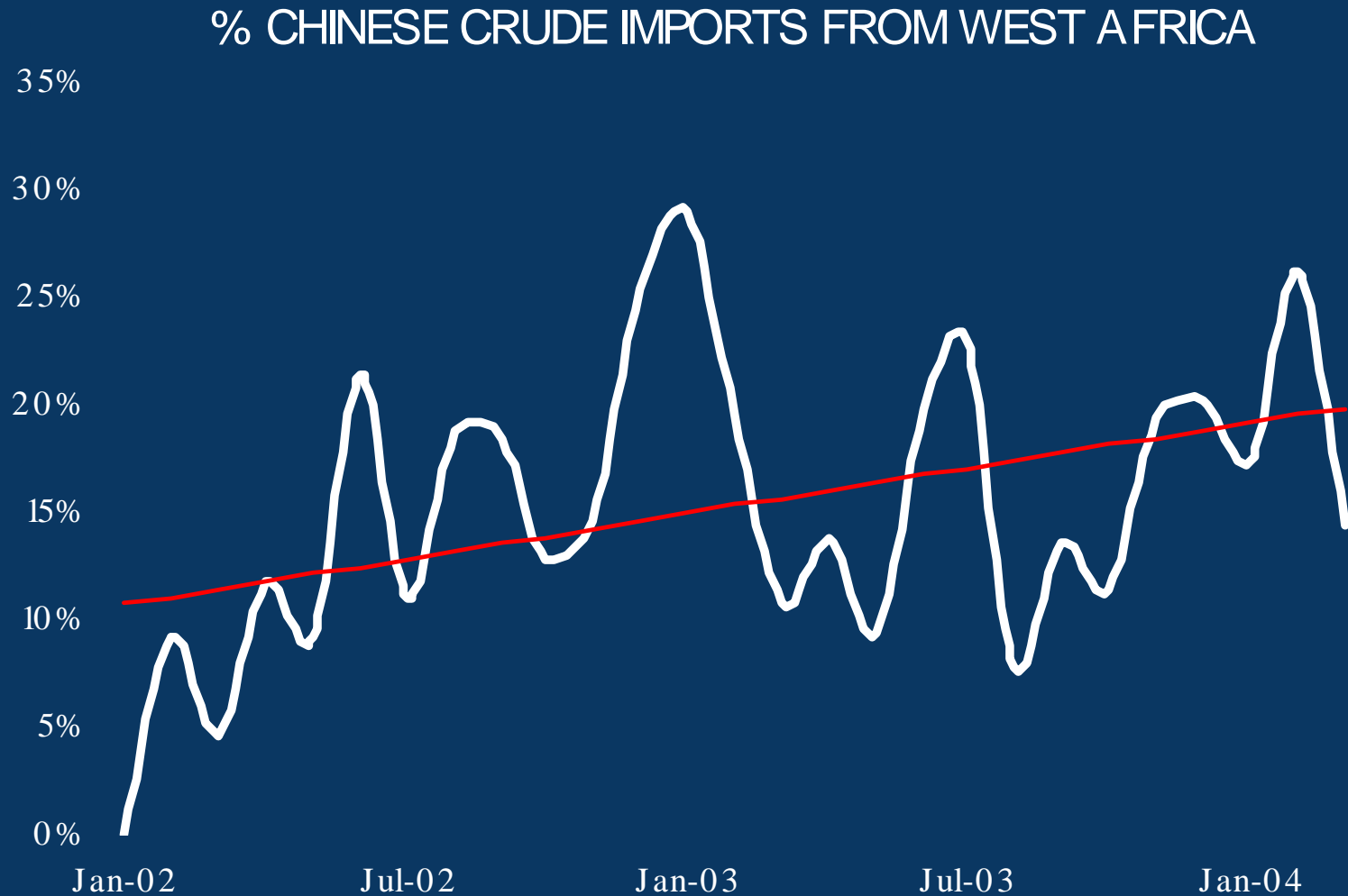


# Oil Demand Growth and Self-Sufficiency

## A growing concern



# Increased dependency means that countries like China have to go further for supplies



Source: JPMorgan Commodities Research, China OGP

'Energy security' is a multi-faceted problem

## Outright supply constraints

- Supply rations natural demand growth

## Distribution/infrastructure constraints

- Dispersed population + poor distributional infrastructure limit consumption in certain regions

# Why Should Governments Care?

- Access to reliable and affordable energy is a key development indicator, and key to keeping the population happy, particularly as disposable income and expectations rise
- Energy security is increasingly viewed as a strategic imperative, particularly with respect to external dependency
- Reliable and affordable energy supply is key to maintaining economic growth, especially where energy costs contribute a larger percentage of total costs of production
- A failure to supply reliable and affordable energy can seriously discourage foreign investment

# Government Strategies for Managing Demand Growth and Securing Energy Supply

- Conservation mandates and demand side management
- New domestic generation, production, & distribution capacity
- E&P abroad, diversification of foreign sources
- **Strategic stockpiling**
- Alternative energies

# China's Tenth 5-Year Plan (2001-2005)

## Energy Security

- System for preserving strategic reserves
- Accelerate exploration of domestic and foreign oil and natural gas resources
- Increase/diversify sources of power generation
- Improve energy efficiency
- Resource conservation and sustainable development

# India's Energy Security Plan

- Create government-controlled strategic crude reserve, managed by Indian Oil Corp.
  - 1<sup>st</sup> Phase: 5 mt (37.5 mb) of crude equal to 15 days of demand
  - 2<sup>nd</sup> Phase: Expand reserve to hold 45 days of demand cover
- Establish mandatory oil inventory levels to be held by oil companies
- Manage energy import dependence by maximizing domestic production and diversifying sources of supply
- Expand investment in foreign oil and natural gas development (Russia-Sakhalin, Vietnam and Iran)

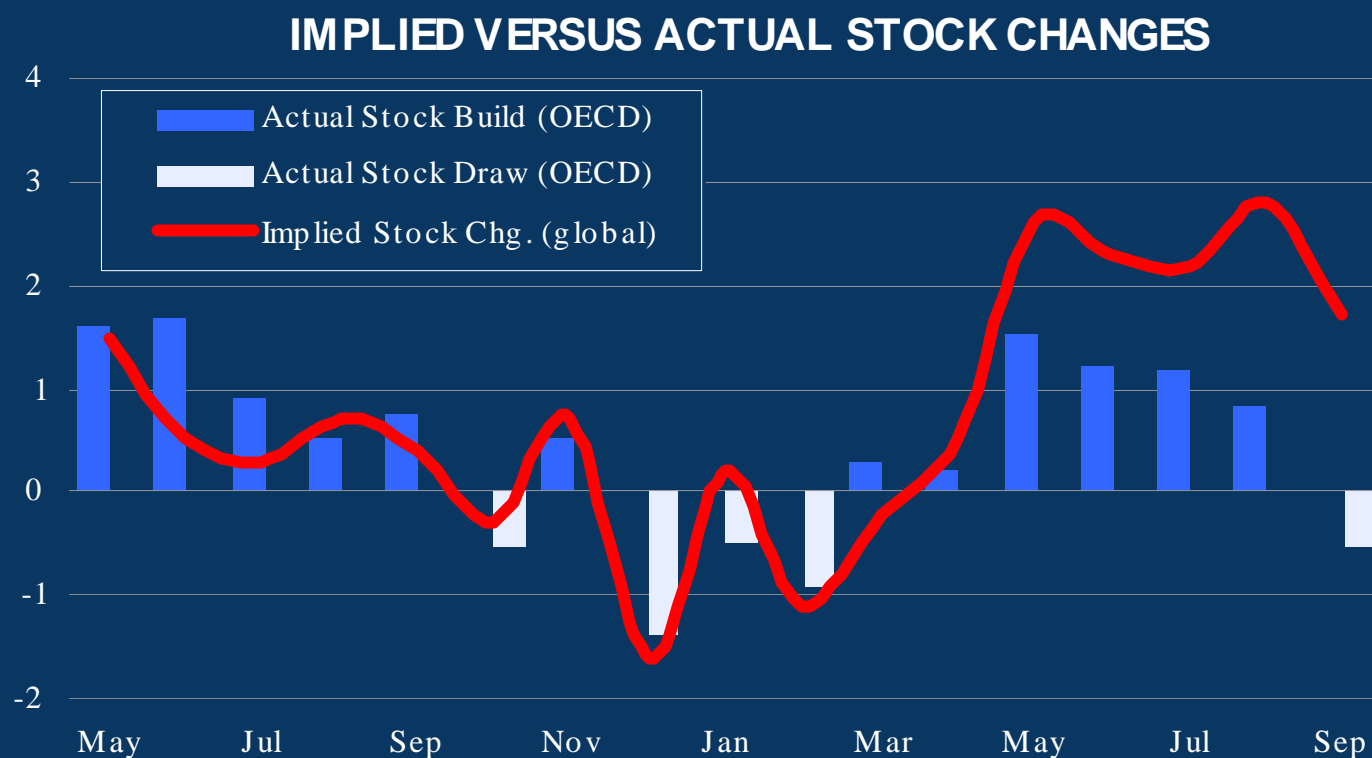
# India's Tenth 5-Year Plan (2002-2007)

- Increase domestic energy production (coal, hydrocarbons, electricity)
- Restructure/deregulate energy sector (includes phasing out fuel subsidies) in order to increase energy efficiency and decrease energy intensity
- Demand management by introducing energy efficient technologies and appliances

So what do these mandates mean for energy markets and energy market analysis?

# Data quality and data availability are an issue

- Non-OECD inventories – both commercial and strategic – are a black box in the global balance. They don't explain all data discrepancies, but are a major unknown variable.



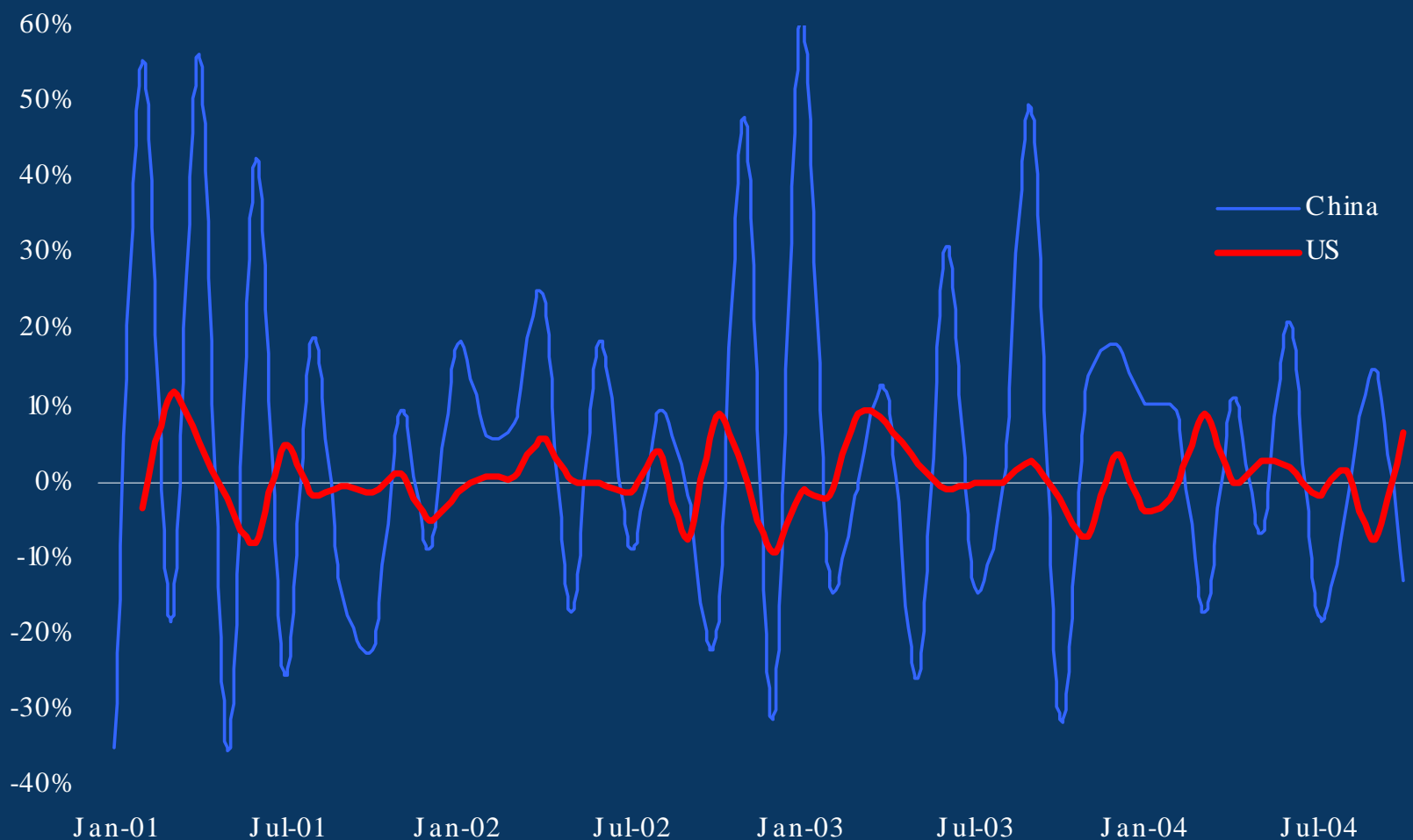
In million b/d. Source: JPMorgan Commodities Research, IEA, Industry and gov'n't sources

- In a tight market, information about these marginal barrels is important.

Even with better backwards-looking data, we can't necessarily predict non-OECD developments based on what we have seen happen in the OECD

# In the energy sphere, China's behavior is erratic and difficult to model or predict

## CHINESE CRUDE IMPORTS SWING SHARPLY FROM MONTH TO MONTH (Month-on-month % change in crude imports)



Source: JPMorgan Commodities Research, China OGP, EIA

Oil is a global market, so sovereign SPR policies are *global* policies

In the OECD, commercial and strategic barrels are *not* equivalent barrels. But in a country like China, how will the public/private line be drawn?

- How will new strategic reserves be built?
- How will they be managed?
- How will they be released/used?

We can't assume that new stockpilers will behave the same way as the old ones

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