The current dynamics of commodity markets

London Business School – 16th March 2018

Jean-François Lambert
Dynamics of Commodity Markets

1. Key Drivers of Commodities
2. Perspective for 2018
Dynamics of Commodity Markets

1. The Key Drivers of Commodities
Dynamics of Commodity Markets: Key Drivers

a. Commodities: definition and features
b. The 3 sectors (Agri, Metals and Energy) and their idiosyncrasies
c. The King of Commodities: Oil
d. Gold – A very special commodity
e. Price formation
Dynamics of Commodity Markets  

a. Definitions and Features

- Commodities *are* the essentials
- 3 main sectors: Agri, Metals and Energy
- Common features
  - Strategic by nature
  - Each with a unique nature
  - Market price
  - Mostly traded in USD
  - Future markets
What is the size of the cake?

- 4.5 Trillion USD
- 25 pct. of world trade
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b. The Three Sectors

i. Agri commodities (aka “Softs”)

• Cereals:
  ✓ Grains : Corn, Wheat, Barley, Rice
• Oilseeds:
  ✓ Soybean, Palm Oil, Rapeseed
• Other Softs:
  ✓ Cocoa, Cotton, Rubber, Coffee, Sugar
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Specificities of Agri Commodities

- Demand is foreseeable
  - Demography
  - Urbanisation
  - Food habits

- Supply is the driving factor
  - Climate and environment
  - Crops diseases
  - Research and technology
  - Policies

The Three Sectors
Dynamics of Commodity Markets

The Three Sectors

Aggregate Commodity Prices*

Nominal prices
Real prices**

Source: IMF, HSBC estimates

* IMF All commodity price index
** Real base = June 2012, deflated by US CPI

HSBC resource analysts’ forecasts
• When deflated, Food and Agri sub indexes, are flat over a long period
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ii. Metals (and minerals)

• Base Metals (Raw commodities and Industrial Metals)
  ✓ Raw: Iron Ore, Coking Coal
  ✓ Ferrous: Steel, Ferro Chrome
  ✓ Non Ferrous: Copper, Aluminium, Nickel, Zinc, Lead, Tin
  ✓ Minor Metals: Cobalt, Lithium, Magnesium, Titanium...

• Precious Metals
  ✓ Gold, Silver, Platinum, Palladium
Specificities of Metals

• Demand is the driving factor
  ✓ Economic development
  ✓ Urbanisation
  ✓ China
  ✓ Electric Vehicles

• Supply is driven by long term trends
  ✓ 5-7 year lag time from investment to production
  ✓ No foreseeable “peak mineral” phenomenon
  ✓ Technology
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The Three Sectors

The Rest of the World Vs China

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**RoW share of global consumption in 2017, %**

- **Population**: 81%
- **GDP**: 85%
- **Natural Gas**: 94%
- **Oil**: 94%
- **Palladium**: 70%
- **Platinum**: 87%
- **Gold**: 69%
- **Zinc**: 66%
- **Steel**: 53%
- **Lead**: 53%
- **Copper**: 53%
- **Ther Coal**: 46%
- **Nickel**: 50%
- **Aluminium**: 43%
- **Met coal**: 38%
- **Iron Ore**: 36%

**Source:** World Bank (MER), UN, BP Energy Outlook, Wood Mackenzie, CRU, IHS, GFMS, Johnson Matthey, Macquarie Research, February 2018.

**Source:** Macquarie Bank
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China Vs the United States

The Three Sectors

Source: HSBC

Source: World Bank
iii. Energy

The Key Contenders

• Coal, 28pct.
• Gas, 24pct.
• Oil, 33pct.
• Renewables, 4pct.

Specificities of Energy Commodities: Oil leadership

- Oil is the king of commodities
  - The bulk of commodity trade
  - The most liquid market
  - Dominant weight in various indexes
  - Prices of other commodities are highly correlated
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The Three Sectors

COE REXECODE COMMODITY INDICES

Global

Oil

Source Cercle Cyclope

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• How to assess the weigh of the 3 sectors?
  ✓ By value? By volume?
  ✓ One lead: Weight in trade (RICI)
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• Agri 35 pct.
• Metals 25 pct.
• Energy 40 pct.
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The Three Sectors

- Agri 41 pct.
- Metals 20 pct.
- Energy 39 pct.
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The Three Sectors

- Agri 29 pct.
- Metals 15 pct.
- Energy 56 pct.
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c. The King of Commodities: Oil

• A Supply driven commodity as uncertainty over demand growth is low.
• The importance of stocks.
• Conventional vs unconventional: the new normal
• Lingering “Shale Band” effect
• Rise of non fossil energy. A long term play which fuels speculation
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Historical Perspective

Crude Oil WTI

- Financial crisis
- OPEC Price management
- Rebound
- Commodity super cycle
- OPEC Price management
- Market forces
- The New Normal
- Cuts effect

Source: FinViz

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Close look on current market dynamics: is the oil band derailed?

Source FinViz
The oil band mechanics

• Prices are kept in check between conventional and shale oil producers

• Opposite dynamics:
  o Conventional producers rely on high capex with relatively low opex
  o Shale producers run an industrial process with low capex but high opex.

• Turning on and off spigots: what is easy for shale is tricky for conventional prod

• At the right price, “Shale boys”’ production will rise fast

• So fast that it will eventually unbalance demand with too ample a supply

• US shale producers are the new swing producers. What can OPEC/NOPEC do?
OPEC/NOPEC Efforts to Take Back Command: Cuts!

• Decision made in November 2016, reconfirmed in 2017 and for the whole 2018 with pledge to cut production by 1.8mbpd.
• At first the measure failed to move the market, but prices started to edge up in 2H17.
• The impact of increased US shale production was slower than anticipated: too much hedging at 55USD per bbl.
• Since then US Production is roaring, the spread between WTI and Brent has narrowed.
• Can cuts be effective on the long run? This is unsustainable.
  ✓ US are now producing more than Saudi.
  ✓ Cuts have been more than compensated by Shale plus other conventional production. Venezuela is the wild card.
• How to exit the “supply curb deal”?
The Shale Revolution in the US

LTO = Light Tight Oil (Shale)

Source: IEA Oil 2018 Report
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World Largest Oil Producers

World's Largest Producers
Crude oil

mb/d


Russia
United States
Saudi Arabia

Source Bloomberg
d. Gold, a very special metal: commodity and/or a quasi currency

- A mirror to USD
- A Geopolitical beacon
- A key play for central bankers
- Yet, physical demand is strong in India and China
- And like other precious metals, a technological play
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Gold

Source: GFMS-Thomson Reuters, Metals Focus, World Gold Council

Sources World Gold Council
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Gold

- Gold is the best hedge against conflicts

Sources – Thomson Reuters, Bloomberg, Capital Economics
Dynamics of Commodity Markets

e. How commodity prices are formed?

- The Fundamentals: Physical supply and demand
- The relationship with the dollar
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Price Formation

**Chart 6: US Dollar Index & Commodities Prices**

- **US Dollar Index (Inverted, LHS)**
- **Bloomberg Spot Commodity Index (RHS)**

- **Source:** Thomson Reuters

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How commodity prices are formed?

• The Fundamentals: Physical supply and demand
• The relationship with the dollar
• Oil price
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Price Formation

As of Mar 09, 2018

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<th>Index Name</th>
<th>Total Return</th>
<th>10 Yr Ann. Returns</th>
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<td>S&amp;P GSCI TR</td>
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<td>Launch Date: May 07, 2007</td>
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</table>

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<thead>
<tr>
<th>Index Name</th>
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</thead>
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<tr>
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</table>

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How commodity prices are formed?

- The Fundamentals: Physical supply and demand
- The relationship with the dollar
- Oil price
- Financial markets: commodities are an asset class
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Funds build bullish holdings in oil market

Managed money net long position in crude oil futures (million barrels equivalent)

Aggregate position in Brent and WTI contracts on ICE and Nymex exchanges
Sources: CFTC; ICE
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2. Perspectives for 2018
   a. The Backdrop
   b. Wild cards
   c. Long-Short Game
   d. Final thoughts
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a. Backdrop

i. A robust economic environment

ii. China’s resilience

iii. USD’s weakness
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Backdrop

I. Sound fundamentals: The World Economy is in good shape

• 45 leading economies making 80 pct. of the World GDP are in growth phase (OECD)
• if the world GDP was to keep a 3.6 -3.7 pct. growth momentum, it would double in 20 years
• Merchandise Trade grew by 3.6 pct. in 2017– 3.2 pct. e.2018 (WTO)
Healthy Fundamentals

Source IMF

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Healthy Fundamentals

Source WTO – Trade Outlook Indicator Feb 2018

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Dynamics of Commodity Markets  | Backdrop

II. China the key Stakeholder: The engine is (still) roaring

- 6.6 pct. Growth forecast for 2018, after 6.8 in 2017 (IMF)
- Above 6 pct growth, 11 to 12mio jobs created per year to allow the safe pursuit of urbanisation.
- High debt is concern but as Japan, it is largely in domestic hands
- USD denominated debt represents 5.9pct of GDP only (Capital Economics)
- Yet, harbingers of a potential slow down: local demand and activity
Clouds gathering on China?
III. For commodity markets, a key question: Is USD weakness sustainable?
• The consensus is that it is – for now
• Despite higher Fed rates...
• ...a roaring economy (America was already great – can it remain so?)
• as ECB is not about to raise rates
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b. Wild cards

i. Politics

ii. Geopolitics

iii. Climate
I. Politics: is protectionism the new normal?

- Tactical or strategic?
- China is the target but Europe may be harmed... and US will also.
- 85pct. of Chinese steel is sold domestically
- US imports accounts for 7pct. of aluminum global output
- The biggest risk: retaliation and ratcheting up

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Wild cards

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The Trump card

Wild cards

Chart: Chinese & US Steel Prices

Chart 2: Steel Trade (% y/y)

Source: Bloomberg

Sources: Thomson Reuters, Capital Economics

- North Korea: The Trump move “The elimination of the threat of war, if it can be guaranteed, might be enough” (G Friedman, GPF March 2018)
- South China Sea: how far Mr Xi will go to demonstrate his overwhelming control on the Middle Kingdom? Soft or hard power?
- Middle East: Can the relation between Iran and Saudi deteriorate?
III. Climate.
  - So far one noticeable disruption: Drought in Argentina
Dynamics of Commodity Markets  c. Long-Short Game

• Agri: More volatility this year, eventually!
  ▪ Speculative play: Soybean, Cocoa, Corn (ethanol), Coffee
  ▪ Neutral: Wheat, Sugar
  ▪ Bearish: Palm Oil
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- Metals: Beware of China, but surf on EVs
  - Speculative play: Cobalt, Nickel, Copper
  - Neutral: -
  - Bearish: Iron ore, Cocking Coal, Aluminum
Precious Metals: Dollar play and Diesel exit

- Speculative: Palladium (combustion engines)
- Neutral: -
- Bearish: Gold (geopolitics on the wane, FED rates hike), Platinum (diesel)
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- Energy: beware of Algo. trading and speculation
  - Speculative: LNG
  - Neutral: Natural Gas
  - Bearish: Thermal coal, Crude Oil
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d. Final Thoughts

• No new supercycle despite good economic momentum
  o A sudden demand boost is unlikely – India is not (yet) China
  o Disruptive elements (trade war, EV hype, science beating demographics)

• A worthy asset class?
  o “Except for all the others”
A word of caution:

Predictions tend to be wronged as soon as made, so a contrarian view to all the above might be wise!
Appendix: Viable Oil Reserves

• Peak oil is now widely construed as the date when demand of oil will decline.

• Originally the world’s concern was about the availability of oil supply. Such was what peak oil meant until the EV revolution shuffled the cards.

• However, assessing the profitability of oil reserves vs market prices deserves attention.

• The following slides show how much price sensitive the world oil reserves are.
Viable Reserves vs Oil Price: an illustration

World Reserves: 1,739 bn barrels
Oil reserves
Economically viable oil reserves by price of Brent Crude, bns of barrels

<20 <40 <60 <80 <100 <125 <150 >150

THE WORLD

Sources: Rystad Energy; Quandl

The Economist
Oil reserves
Economically viable oil reserves by price of Brent Crude, bns of barrels

Oil price
$51.68/barrel
as of 18 Oct 2016

$20 $40 $60 $80 $100 $125 $150 $150

1739
1282
674

OPEC
Non-OPEC
viable
unprofitable

Sources: Rystad Energy, Quandl
Oil reserves
Economically viable oil reserves by price of Brent Crude, bns of barrels

Oil price $51.68/barrel
as of 18 Oct 2016

< $20  < $40  < $60  < $80  < $100  < $125  < $150  > $150

1739

The World

561

China

451

OPEC

Greenland

Madagascar

Russia

Angola

Libya

Nigeria

Qatar

Kuwait

United Arab Emirates

Venezuela

Iraq

Iran

Saudi Arabia

Non-OPEC

viable

unprofitable

Sources: Rystad Energy; Quandl
Oil reserves
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OPEC
Non-OPEC
viable
unprofitable

The World
326
339
1739

Sources: Rystad Energy; Quandl

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