COMMODITIES DEMYSTIFIED

A GUIDE TO TRADING AND THE GLOBAL SUPPLY CHAIN
This outline, summary presentation is based on the new Trafigura publication “Commodities demystified: a guide to trading and the global supply chain”.
For more detail and to download the guide, go to [www.commoditiesdemystified.info](http://www.commoditiesdemystified.info)

- Fundamentals of Commodities p.5
- How Commodity Trading Works p.14
- Commodity Trading and Financial Markets p.20
Commodities trading provides vital underpinning for the global economy.

Contrary to common perceptions it is not a speculative business.

Rather it is one built on managing physical and financial logistics within a complex global supply chain.

Traders help resolve market inefficiencies by transforming commodities in space, time and form.

Trading firms take ownership of commodities from source to customer, making risk management a central core competence.

They are indifferent to commodity price levels and managing price risk is one of their key functions.

Resilience and reliability of service are fundamental.
TRAFIGURA GROUP OVERVIEW

KEY HIGHLIGHTS

- Two main lines of business: physical trading and industrial assets portfolio
- Synergies between trading and the Group’s industrial assets
- Strong financial performance and demonstrated robust track record through the cycle
- Highly-experienced management team
- Leading market position
  - 1st largest independent LNG trader
  - 2nd largest independent trader in non-ferrous commodities (1)
  - 2nd largest independent trader of crude and refined products (2)

COMPLEMENTARY BUSINESS LINES

FY2018 KEY FIGURES

- $180.7bn Group revenue
- 275.2mmt Oil and Petroleum Products total volume traded
- 4,316 Employees
- $53.8bn Total assets
- 18.5mmt Metals and Minerals total volume traded
- 66 Offices in 38 countries

(1) Market share in “tradable market” (international traded market where independent traders such as Trafigura operate) for some metals and concentrates
(2) Market share in “tradable market” in crude oil and refined products

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FUNDAMENTALS OF COMMODITIES
WHAT ARE PHYSICAL COMMODITIES?

- Products created by natural forces
- Delivered globally, often by sea and usually in bulk
- Exchangeable but non-standard
- Primary (either extracted or captured directly from natural resources) and secondary (produced from primary commodities to satisfy specific market needs) forms

COMMODITIES FOR HEAT, TRANSPORT, CHEMICAL MANUFACTURING AND ELECTRICITY

- **Coals**
  - Crude oil
  - Natural gas liquids
  - Natural gas

- **Non-Renewables**
  - Bitumen
  - Condensate
  - Diesel
  - Gasoline
  - Jet fuel
  - Fuel oil
  - Liquefied natural gas (LNG)
  - Liquefied petroleum gas (LPG)
  - Naphtha

- **Renewables**
  - Biofuels
  - Biodiesel
  - Ethanol

- **Primary**
- **Secondary**
DRIVERS OF GROWTH: ENERGY TRADING

- Disintermediation of oil majors
- New sources of production
- New patterns of demand

GLOBAL OIL DEMAND GROWTH IS DRIVEN BY NON-OECD ECONOMIES
DRIVERS OF GROWTH: METALS AND MINERALS

- Explosion in Chinese demand for metals and minerals
- Shift of destination countries from West to East
- Supply diversification spawned by commodities super-cycle
- Shift of source countries from North to South

EXPONENTIAL GROWTH IN CHINA'S BILATERAL METAL TRADE IMPORTS

Source: IMF World Economic Outlook, October 2015, p. 47
*The metals included are aluminium, copper, iron ore, lead, nickel, tin, zinc and uranium
CHANGING DYNAMICS OF TRADE

In metals and minerals as well as in energy, institutionally agreed approaches to commodity pricing have been supplanted by market-led mechanisms

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<th>VERTICALLY INTEGRATED INSTITUTIONS</th>
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<td>PRICE RISKS NOT MANAGED</td>
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- Mega-mergers at the turn of the century consolidated trading operations. ExxonMobil for instance now only markets its own oil, until the late 1990s it was a very active trading firm.

- Vertical disintegration has continued. Higher oil prices encouraged the majors to sell off refineries and non-core downstream distribution to focus more on highly capital intensive and specialised upstream exploration and production.

- Some commodity trading houses seized the opportunity to buy refineries, around which to build their trading business.

- Independent, specialist operators became increasingly influential with the collapse of the old, vertically integrated, supply chain model. A diffuse, actively traded market created more openings for independent commodity traders and shippers.
OIL TRADING: A MULTIDIMENSIONAL DISCIPLINE

CLICK ON THE ICONS TO WATCH THE ANIMATION
DEMYSTIFYING THE ROLE OF COMMODITY TRADERS

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Traders act as conduits between producers and consumers in both primary and secondary commodity markets.
COPPER CONCENTRATE SUPPLY CHAIN

COPPER CONCENTRATE SUPPLY

SOURCE

MINE

STORE / BLEND

TERMINAL

DELIVER

DEMAND

COPPER CATHODE SUPPLY

SOURCE

SMELTER / REFINER

TERMINAL

STORE

DELIVER

PROCESSOR / END USER

COPPER CONCENTRATE SUPPLY CHAIN

TRANSPORT

SCRAP / RECYCLE

TRANSPORT
A LOGISTICS BUSINESS BASED ON ARBITRAGE

- Business model based on identifying and eliminating market inefficiencies
- Pricing based on “when, where, what”
- Arbitrage opportunities arise when value of transformation exceeds the cost
- Financial markets used to fund operations and manage price risk
Arbitrage is the process of identifying and acting on market inefficiencies.

These are reflected in price differentials between untransformed and transformed commodities.

Where there is market mispricing – where differentials are larger than justified by fundamentals – traders act on these price signals to direct commodities to where they are most valued.

This is the role they play in **optimising global trade flows**.
In this example, Trafigura is sourcing copper concentrates via an offtake agreement with a Peruvian mine and is delivering copper concentrates to a Finnish smelter.

But the company uses multiple arbitrages based on its trading book to find the most efficient way of fulfilling its commitments.
Commodity markets are characterised by volatility and supply and demand shocks.
Trading firms play a vital role in addressing temporary market imbalances by storing surplus commodities.
They own and control midstream infrastructure and maintain large inventories at strategic locations.
They earn profits over time by reducing stocks when there is excess demand and building inventory when there is excess supply.

**BRENT FUTURES CURVES**
Blending is often the cheapest and most efficient way to bridge the gap between demand and supply.

In metals, materials from two or more mines can be combined to create commodities to spec.

Blending can secure better prices by reducing impurities.

In oil, blending is needed to handle the wide diversity of crude grades and refined product specifications.
THE ROLE OF OPERATIONS

CLICK ON THE ICONS TO WATCH THE ANIMATION
DEMYSTIFYING THE ROLE OF THE OPERATIONS TEAM WITHIN A COMMODITY TRADING FIRM
Trading is a high-volume, low-margin business

Firms need to operate flexibly at scale

This requires them to be able to mobilise significant financial resources to finance working capital and manage price risk

TRAFIGURA 2018 KEY FIGURES

- **275.2mmt**: Oil and Petroleum Products total volume traded
- **$58bn+**: Financial lines available to Trafigura
- **$180.7bn**: Group revenue
- **95.9mmt**: Metals and Minerals total volume traded
- **$53.8bn**: Total assets
- **1.3%**: Gross profit margin
Hedging is fundamental to commodity trading

Trading firms systematically eliminate price exposure using futures contracts

They are left with more manageable “basis risks” reflecting difference between specific transaction price and hedging instrument

**TRANSACTION DATE**

- Physical transaction
- Agree to sell crude in 3 months at Brent + $1.5
- Hedge
- Sell Brent futures at $60 / contract

**BRENT**

$60

**DELIVERY DATE**

- Physical transaction
- Deliver crude – receive $56.50 / barrel
- Hedge
- Buy Brent futures at $55 / contract
- Realised profit = $5
- Net revenue $61.50 ($56.50 + $5)
Commodity trading firms play a vital role in organising an efficient, market-based global supply chain for essential raw materials.

A more integrated, complex and volatile global economy makes managing risk and large-scale logistics all the more necessary.

These are specialist skills which call for companies with resilient and responsive business models that can readily access:

- liquid financing and financial markets
- global infrastructure
- extensive networks of counter-parties

Commodity markets are ever-changing. But the core requirements of the physical trading business will stay the same.