"Interactions between Financial and Energy Markets: Trends in Energy Commodities Trading with Respect to Market Participants, Products, Prices and Volatility"

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XVII International Tor Vergata Conference on Banking and Finance

GME session: Financial Markets Impact on Energy prices

- LITASCO (LUKOIL International Trading and Supply Company) is the **international marketing and trading company** of the LUKOIL Group.

- LITASCO is one of the **world's major traders** of crude oil and refined petroleum products, present in **twelve different countries on five continents**. LITASCO deals with a relevant number of suppliers and customers, including all of the world's major oil corporations.

- LITASCO is continuously **exposed to price risk** and deals in a wide range of oil derivatives in order to reduce such risk.

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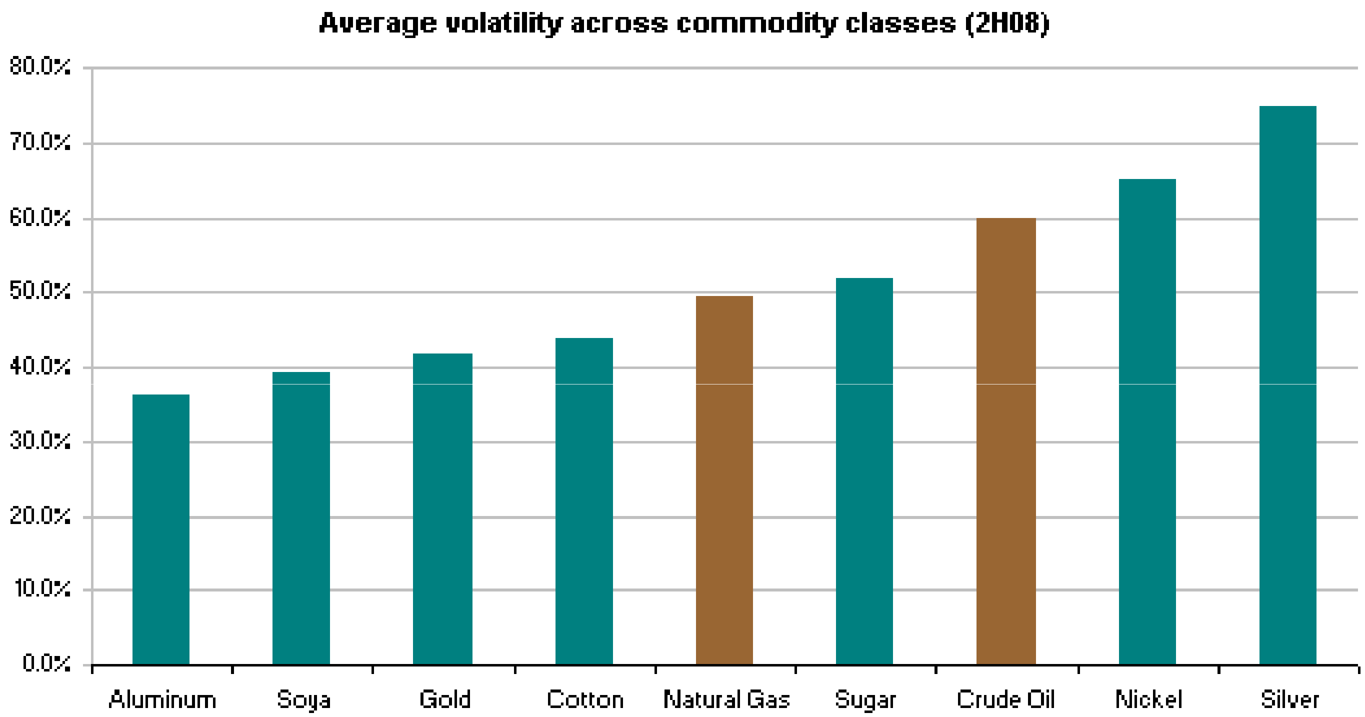
COMMODITIES VOLATILITIES



- Energy markets at the high end of commodities volatilities

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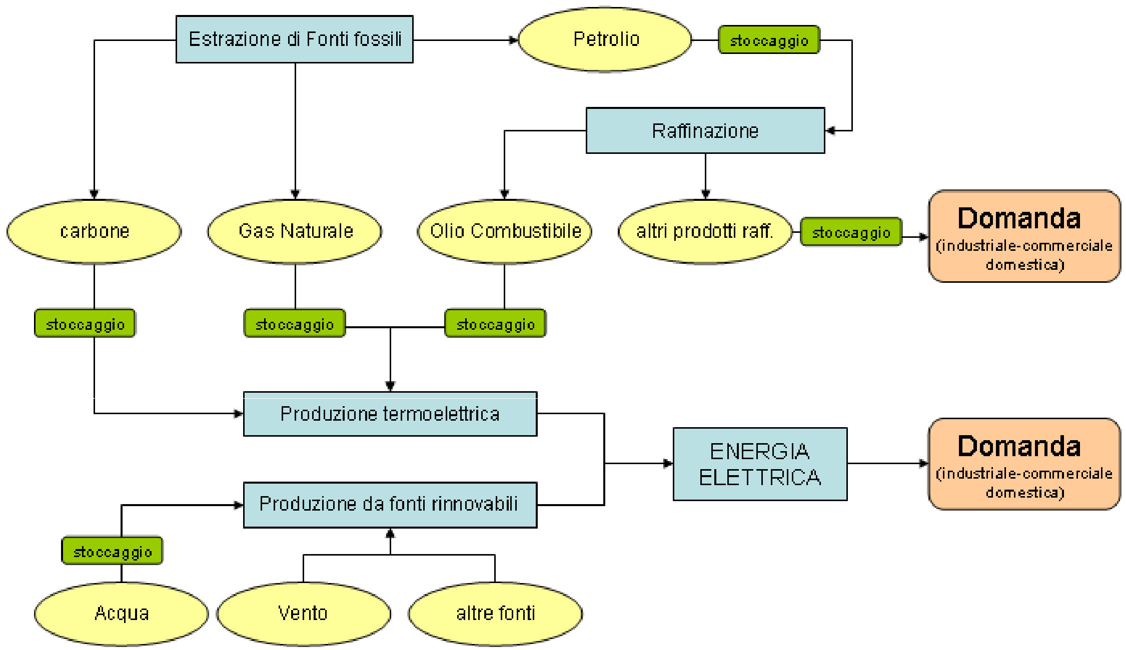
PHYSICAL MARKET STRUCTURE



Important factors

- market **liberalization** status
- **logistics** (transport., storages, etc.)
- availability of **operators** willing to bear or pass-through risks

- **Price Risk** is continuously created, reshaped, bored or transferred.
- Trading **derivatives** is an efficient way to bear or transfer price risk

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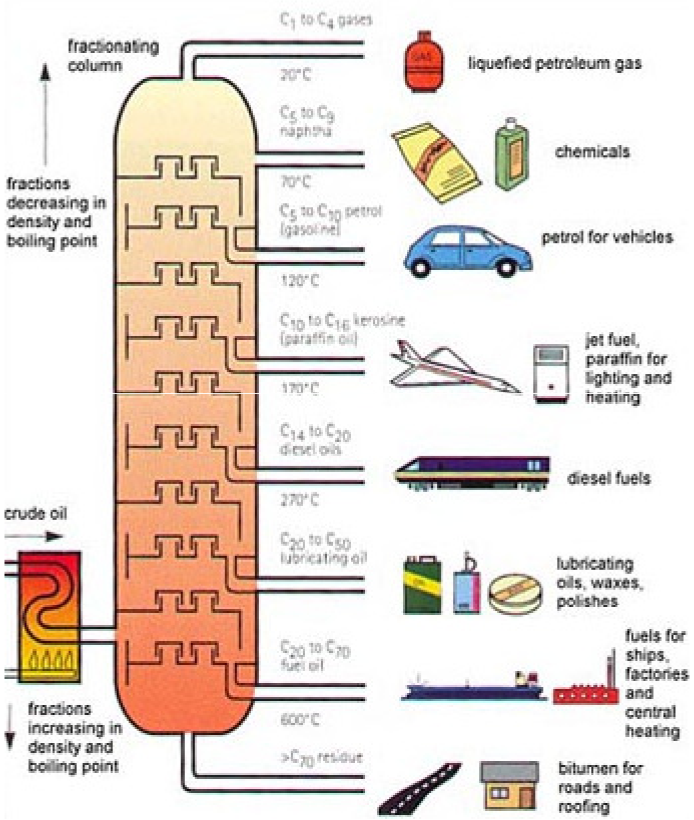
PHYSICAL OIL MARKETS

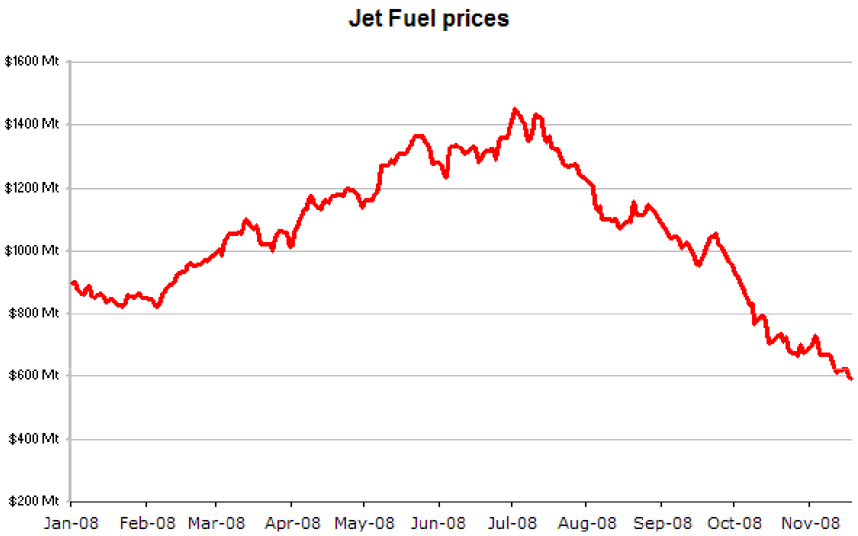


- different products
- different customers
- different locations
- different Incoterms (FOB/CIF)

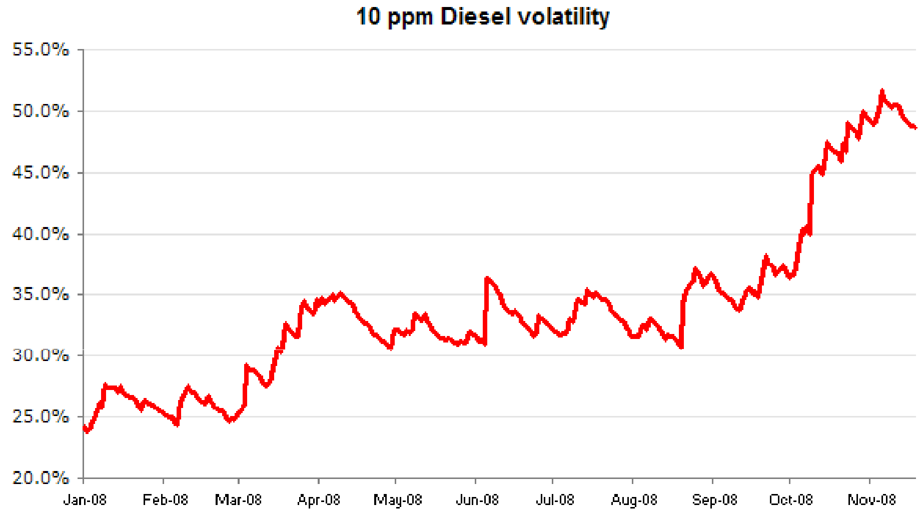
- different prices & volatilities

Source: www.theoildrum.com

PHYSICAL OIL MARKETS



Source: Platt' spot prices



Source: E.W.M.A. volatility on Platt's 10 ppm FOB bgs R'dam spot prices

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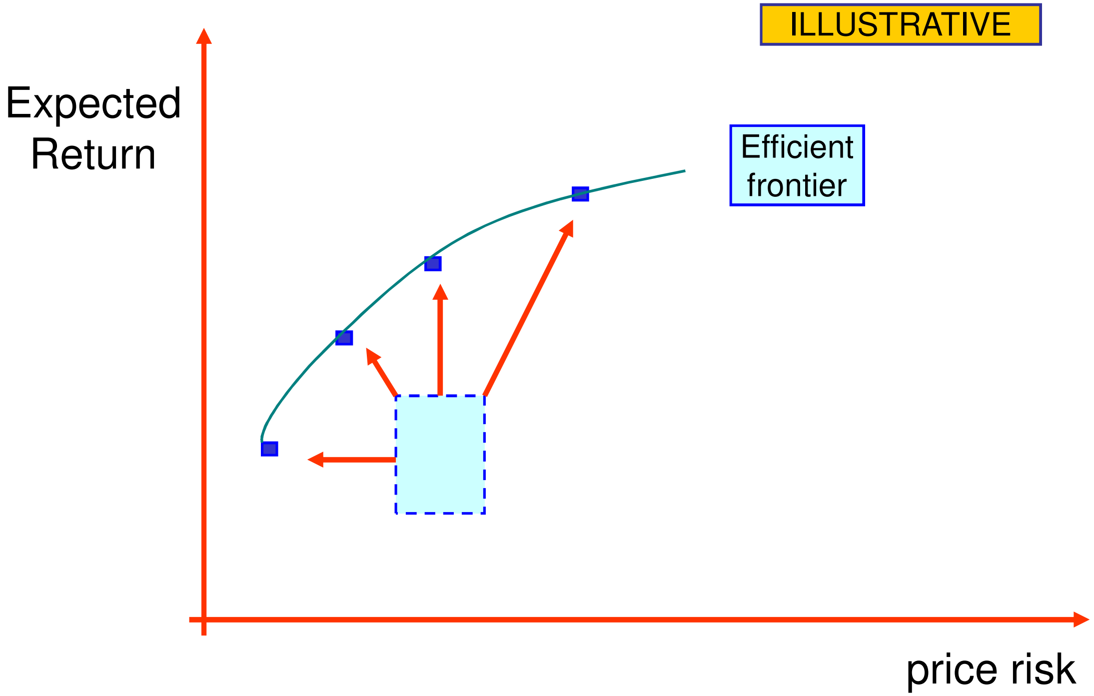
RETURN and RISK



- there is an "**efficient frontier**" representing the best available trade-offs between risk and return.
- A company should **get to the curve and select a point** according to its own risk appetite (**best "risk-adjusted return"**)
- In this framework, the **role of derivatives** in order to have "**complete markets**" is fundamental (Ross)
- **Risk lovers** can speculate, **risk adverse** can hedge. Role of speculation is fundamental (Speculation is different from manipulation)

- **Derivatives** bear the crucial role of **increasing the opportunities** for market participants, by enlarging the Efficient frontier

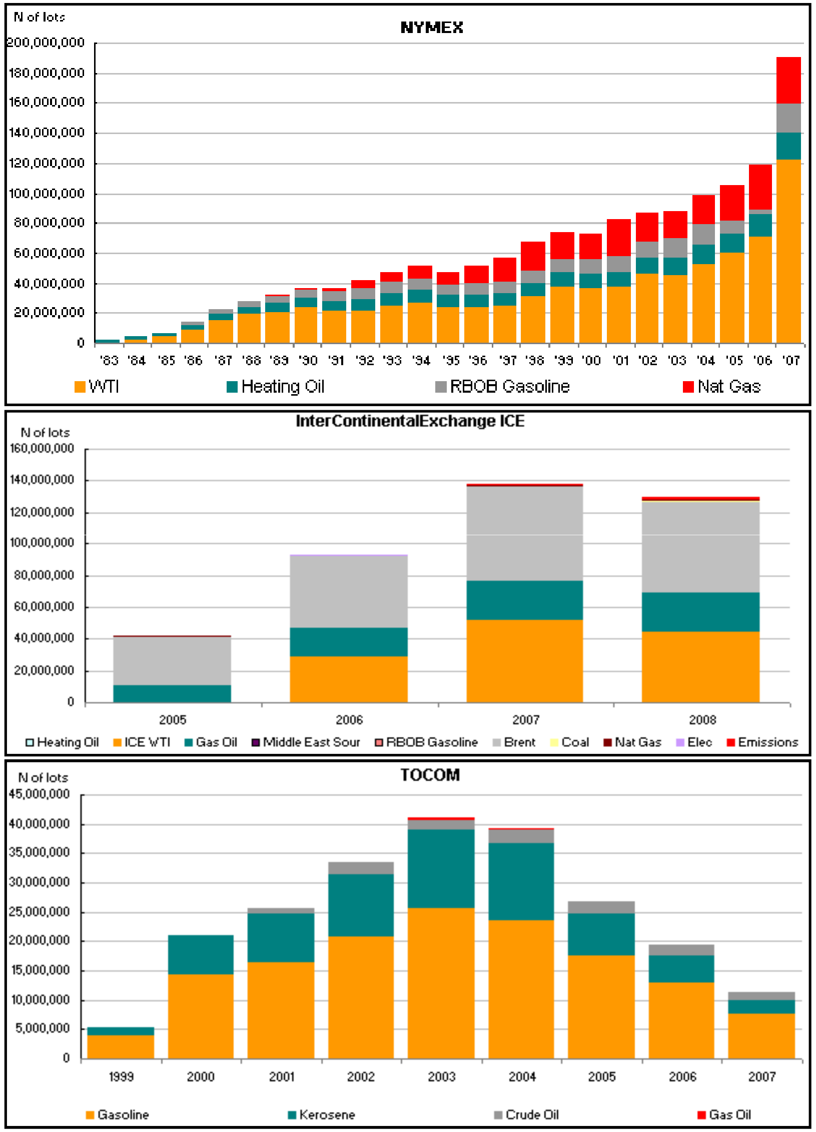
COMMODITY EXCHANGES

	Exchanges	Agriculture Futures	Metal Futures	Energy Futures
1	New York Mercantile Exchange		14,777	86,562
2	Dalian Commodity Exchange	91,330		
3	Chicago Board of Trade	60,800	15	
4	London Metals Exchange		59,412	
5	Tokyo Commodity Exchange	3,334	27,550	24,654
6	Central Japan Commodity Exchange	1,108		26,739
7	International Petroleum Exchange			26,400
8	Tokyo Grain Exchange	22,717		
9	New York Board of Trade	16,059		
10	Zhengzhou Commodity Exchange	12,060		
11	Shanghai Futures Exchange	146	11,074	
12	Chicago Mercantile Exchange	8,535		
13	Euronext-LIFFE	4,336		
14	Kansas City Board of Trade	2,600		
15	Minneapolis Grain Exchange	999		

Source: "Overview of the World's Commodity Exchanges", UNCTAD Secretariat, 2001. I.P.E. is now part of ICE.

EXCHANGE TRADED OIL FUTURES

- main derivative: Futures on crude
- limited typologies of Futures traded
- new instruments/markets prone to failure/disappear
- no relevant & lasting innovations



Sources: Exchanges data. (ICE 2008 data till Sept. 08)

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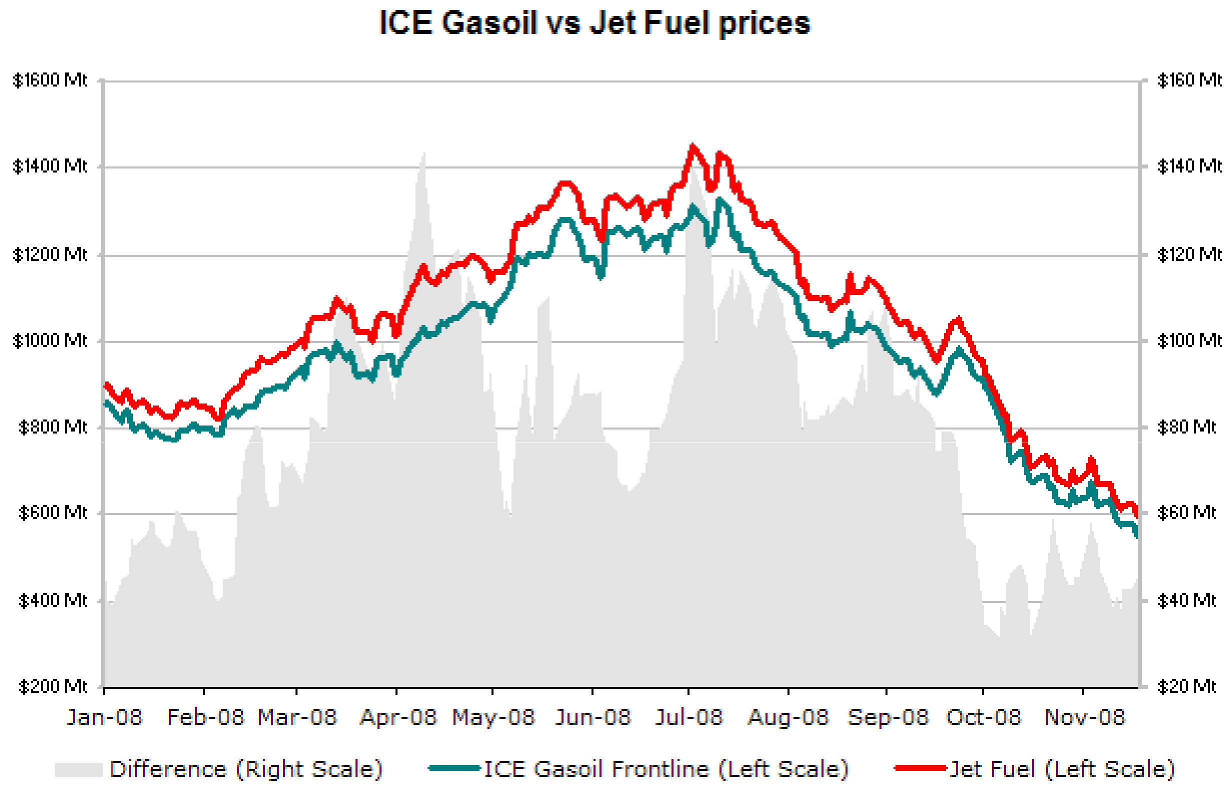
HEDGING WITH OIL FUTURES



- Hedging Jet fuel exposure by using ICE Gasoil future contracts, while cancelling **outright exposure**, leaves relevant **basis risk**

Source: ICE and Platt's prices

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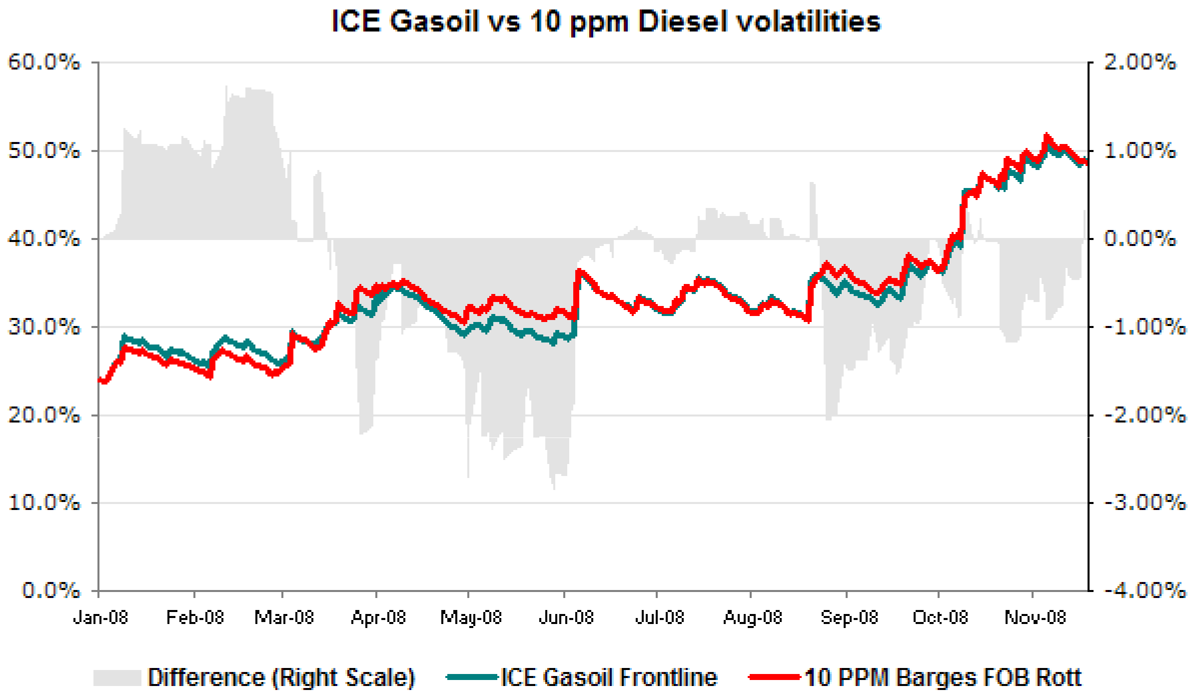
HEDGING WITH OIL FUTURES

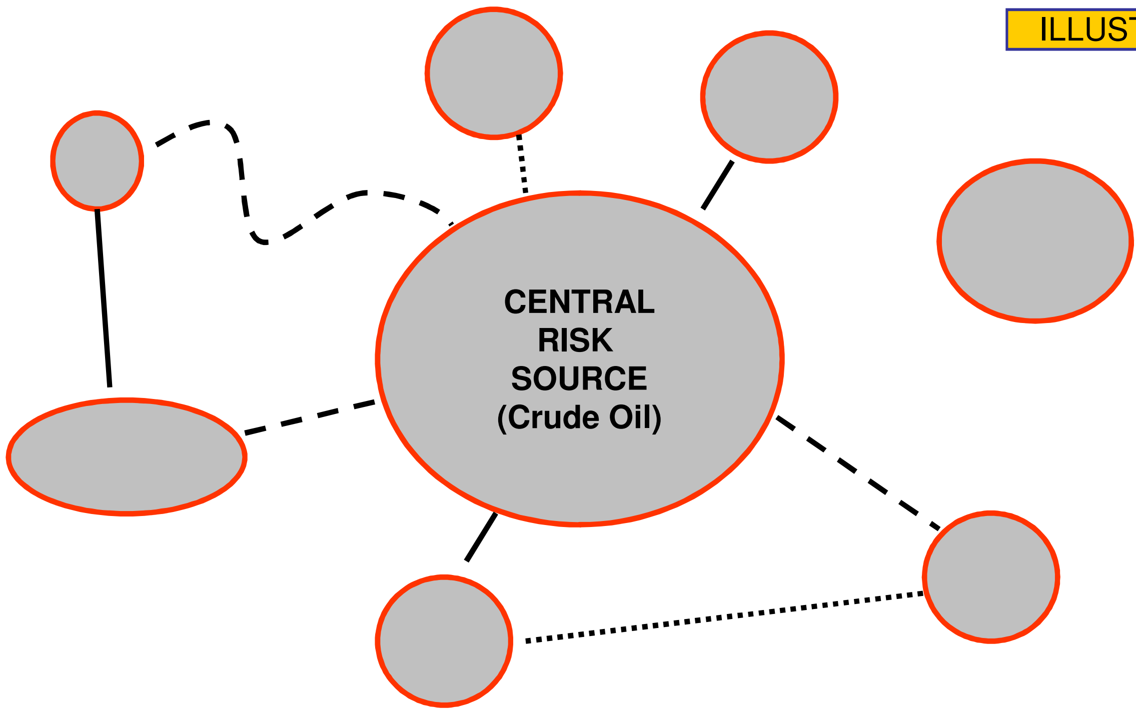


- increase in volatility in 2008
- high short-term correlations
- but jumps frequent
- relevant "basis risk"

Source: annualized Exponentially Weighted Moving Average on ICE and Platt's prices

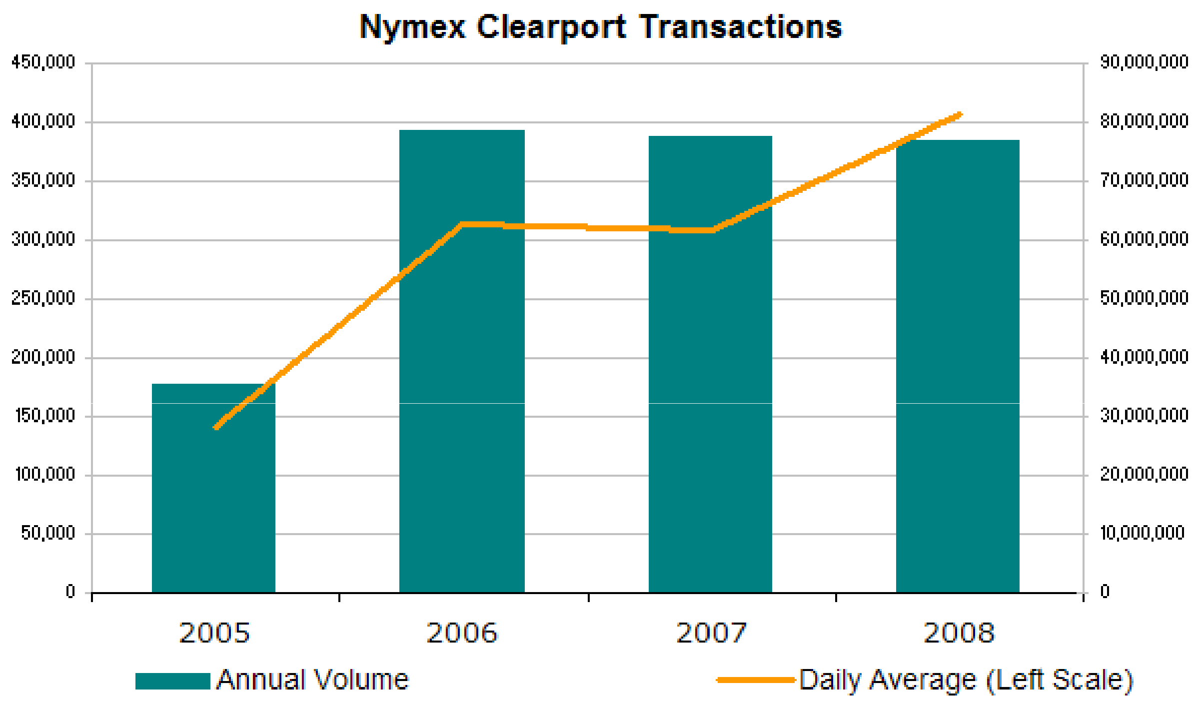
BASIS RISK

ILLUSTRATIVE



- Oil price as the central price and volatility **engine.** Oil futures as main hedging instrument
- Risk reduction often hindered by **low correlations** and **lack of a sufficient number of derivatives instruments.**
- **Basis Risk** is probably the most relevant issue for Risk management in the oil industry.

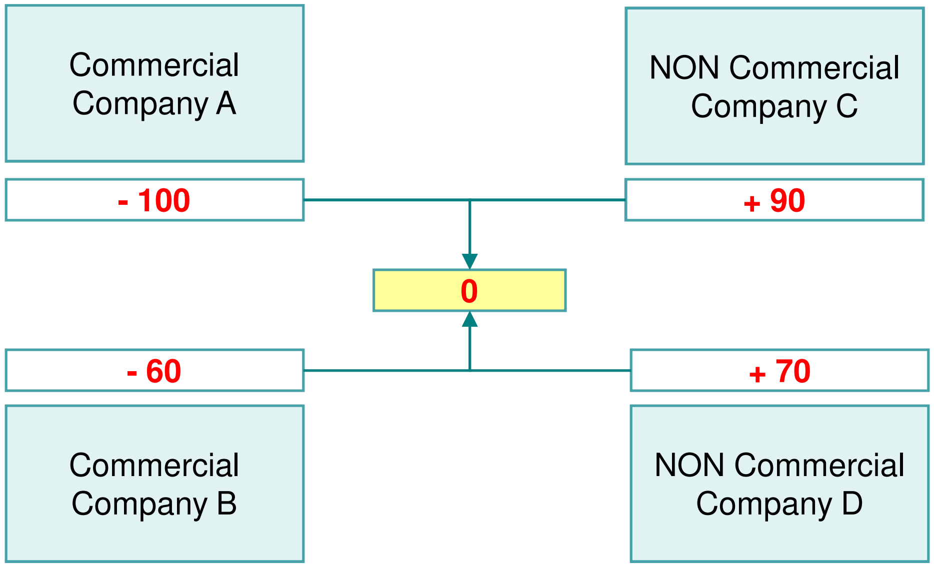
OTC CLEARING



- derivatives (Swaps) still transacted Over-The-Counter but then **submitted for clearing**
- distinction between **organized markets and OTC** nowadays less relevant

DERIVATIVES MARKET PARTICIPANTS

ILLUSTRATIVE



- market **net position** always to be at zero (zero-sum game)
- role of **Non Commercials** is thus fundamental
- recent **de-leveraging** of N.C. from oil markets will **lower the Efficient Frontier**

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CURRENT AND FUTURE TRENDS

- de-leveraging from oil – non commercials pull out.
- volatility here to stay
- new Futures contracts not probable
- increasing liquidity on long-dated maturities
- more involvement from physical players, including N.O.C.
- OTC clearing increasing
- new derivatives underlyings (FFAs, Emissions related, Weather derivatives)

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