





Price Risk Management in commodities



Introduction

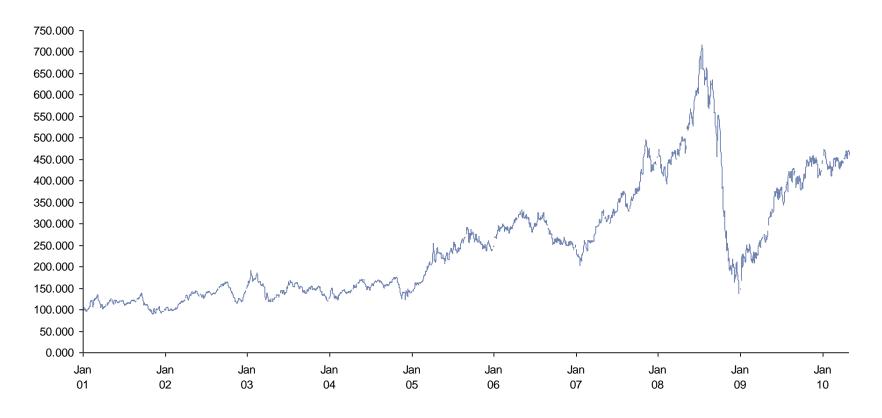
WHY HEDGING A POSITION?

- Less uncertainty: Hedging instruments allow the buyer to protect themselves against market price fluctuations, i.e. volatility.
 - → With bunker representing 20 to 40% of the cost of running a ship, they provide greater control, rather than hazard, over operational costs.
- Securing profit margins
 - → The need to ensure the margin, through a new budgetary tool, when calculating on a specific charter.
- Time saved on bunker purchasing
 - → Within this global movement towards market specialisation, the Client can concentrate on its core business, thus being more dynamic.



A VOLATILITY STRONGER THAN EVER

Fuel Oil 3.5% Fob Barges NWE - Historical





- Bunker risk management improve a company's creditworthiness
 - → Banks and Investors tend to prefer strategies based on controlled growth in earnings.
- Same opportunities: furthermore, the client may benefit of any price decreases
 - → Depending on the strategy, the Client may buy at a ceiling while he may retain the right to buy for less than the settlement
- Hedging instruments are traded in a regulatory framework
- Very liquid market: ability to change position quickly
 - → In 2002, the Bank of International Settlements estimated the notional of commodity contracts at \$ 800 Bn.
 - → In a word, ship-owners and bunker suppliers can now make strategic decisions over the long-term with greater confidence. This is a priceless competitive advantage.



PANEL OF DERIVATIVES SOLUTIONS

	IMPACT	TIME LIMIT	MAIN PRODUCTS
Oil Producers	80-90% profit is linked to oil priceProject finance	12-24 month2-10 years occasionally	IPE BrentNYMEX WTI
Electricity Suppliers	5-15% Operational costsSupply for equipement contract	3-12 month2-5 years occasionally	Gas Oil 0.1% CIF Cargoes NWEFuel Oil 1% CIF Cargoes NWE
Airways	20-40% Operational costsAir career financing	6-12 month2-5 years occasionally	Jet/Kéro CIF Cargoes NWEJet/Kéro FOB Med
Shipping	40-50% Operational costsShips financing	6-12 month2-3 years occasionally	Fuel Oil 3.5% FOB Barges NWEGas Oil 0.1% CIF Cargoes NWE
Land Transport	■ 10-30% Operational costs	6-12 month3-5 years occasionally	■ ULSD 10ppm CIF Cargoes NWE
Petrochimical	 20-35% Operational costs 	6-12 month2-3 years occasionally	Naphta CIF Cargoes NWEPropane CIF Cargoes NWE

Products can be linked to euro/ Usd, tonnes or liters



Hedging solutions when physical exposure

Common financially settled instruments to hedge your exposure

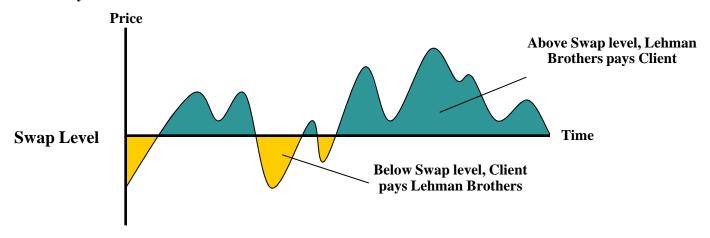
- Swap
- Call
- Zero-Cost Collar
- Call Spread
- 3-Way



Floating-for-Fixed Swap

This strategy allows the buyer to fix his asset cost over a pre-determined period and at a pre-determined price. Thus, Client "buys" or "pays fixed".

- Client: Buys Swap
- Settlement Frequency: Monthly
- Settlement Calculation: For each month, settlement versus average of daily mean price of underlying as published in Platt's European Marketscan
- Settlement Payable: 5 business days after each month



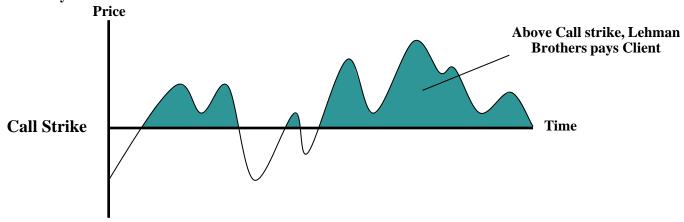
- ➤ Lock-in forward prices for Natural Gas, Oil & Oil products
- ➤ Provides the most certain future pricing
- ➤ No upfront premium required



Call (also known as Cap)

This strategy allows the buyer, after payment of a premium, the right to buy the asset over a predetermined period and at a maximum pre-determined price.

- Client: Buys Call Option (pays Premium)
- Settlement Frequency: Monthly
- Settlement Calculation: For each month, settlement versus average of daily mean price of underlying as published in Platt's European Marketscan
- Premium Paid: 2 business days after trade date (i.e. up-front)
- Settlement Payable: 5 business days after each month



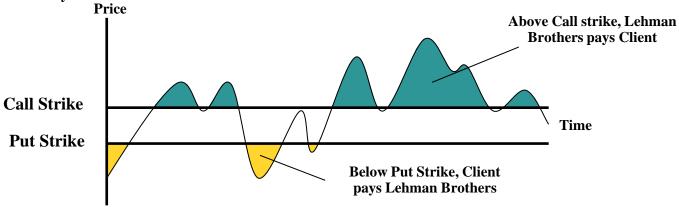
- > Maximum cost fixed at call strike
- ➤ 100% benefit from any price decrease below the strike
- > Requires upfront premium to be paid, no potential future payment obligations (maximum risk is the premium)



Zero Cost Collar

This strategy allows the buyer, the right to buy the asset at a pre-determined price (Call strike), while giving away any decrease below a lower specified price (Put strike) over a pre-determined period.

- Client: Buys Call Option / Sells Put Option for identical price
- Settlement Frequency: Monthly
- Settlement Calculation: For each month, settlement versus average of daily mean price of underlying as published in Platt's European Marketscan
- Premium paid: 2 business days after trade date (i.e. up-front)
- Settlement Payable: 5 business days after each month



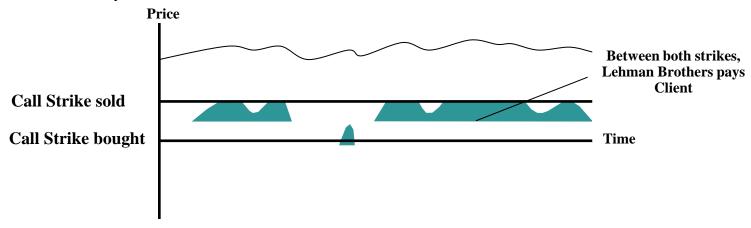
- > Purchasing price of the asset stands in a range, between both strikes options
- > Combination of a purchased Call and sold Put options. Strikes are set to make the structure costless
- > The costless collar provides a call for upside protection but limits downside benefit via the sold put



Call Spread

This strategy allows the buyer, the right to buy the asset at a pre-determined price (lower Call strike), and grants the same right at a higher level through the Call sale, over a pre-determined period.

- Client: Buys Call Option / Sells Call Option at a higher strike
- Settlement Frequency: Monthly
- Settlement Calculation: For each month, settlement versus average of daily mean price of underlying as published in Platt's European Marketscan
- Premium paid: 2 business days after trade date (i.e. up-front)
- Settlement Payable: 5 business days after each month



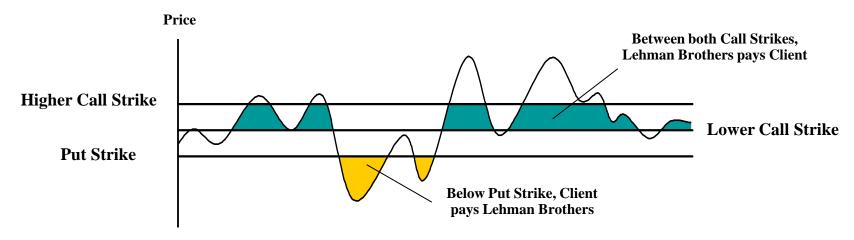
- The sale of the Call allows to reduce the price of the strategy
- Maximum pay-off is the difference between both strikes
- ➤ 100% benefit from any price decrease below the lower Call strike



3-Way

This strategy allows the buyer, to be compensated against any rise between both Call strikes, and will give away any movement above the Higher Call strike and below the Put strike.

- Client: Buys Call Option / Sells Call Option at a higher strike / Sells Put Option at a lower strike
- Settlement Frequency: Monthly
- Settlement Calculation: For each month, settlement versus average of daily mean price of underlying as published in Platt's European Marketscan
- Premium paid: 2 business days after trade date (i.e. up-front)
- Settlement Payable: 5 business days after each month



- ➤ The sale of the Higher Call allows to decrease the Strike of the Protective initial Call
- Market price equal to the difference between the Put and the Higher Call sold and the Call purchased



Conclusion

- A non hedge position is a speculative one
- Simplicity and liquidity are the two main criteria for a derivative tool
- Time frame has to match the physical needs.
- Hedging is accessory to your core business to control and manage your overall price.

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