



**PAREX BANK**

**Trading Oil Derivatives**

# Rising Hedging Needs

The trading environment has evolved, pushing increasingly large numbers of companies involved at all stages of the oil supply chain to protect themselves against wide price swings, hedging their physical activity with Energy Derivatives.

- Oil prices rose 50% in one year,
- Markets have become highly volatile (funds),
- Geopolitical environment (Iraq, Iran, Saudi Arabia,...),
- Refining bottlenecks,
- Increasing frequency of extreme weather events,
- Booming but precarious demand, etc.



# Parex Commodities Trading

## Products and Strategies



# The Products:

## 1/ Exchange Traded Derivatives:

Cleared by the International Petroleum Exchange (IPE)  
and the New York Mercantile Exchange (NYMEX).

- Futures
- Options





# The Products:

Parex is offering 24-hour access to exchange-traded Futures and Options:

## NYMEX:

- WTI Crude Oil
- Unleaded Gasoline
- Heating Oil
- Natural Gas

## IPE:

- Brent Crude Oil
- Gasoil
- Natural Gas

# Exchange-traded Strategies-

## Example 1: Futures.



Trader bought for \$52/bbl on July 16<sup>th</sup> 100,000 bbl of Urals crude oil from Russia for delivery 7-10th August.

The trader needs to hedge his crude from a potential fall in market price. He sells 100 contracts (1 contract = 1,000 bbl) of September IPE Brent crude oil Futures at \$60/bbl.

If at the time of delivery, crude prices have fallen by \$5/bbl, the trader can buy back his Futures position at \$55/bbl, which will compensate him for having paid his physical crude oil more than the current market price.

If prices have moved up by \$4/bbl, for example, the loss on the Futures position will be offset by a higher profit on the physical deal.

# Exchange-traded Strategies-

## Example 2: Options.



A Texas-based crude oil producer wants to hedge himself against falls in oil prices but still benefit from potential rises. He purchases a one-year WTI Put option (right to sell) for 2006, with a strike price of \$60/bbl for 50,000bbl/month (600,000bbl/year).

At each month's settlement date, if the price of WTI crude oil is below \$60/bbl, the Texas producer will receive the difference between \$60 and the market price of WTI crude from the hedge provider.

The producer pays upfront, for the full one-year period the entire hedge premium to the hedge provider. In this case, the premium is \$5/bbl, or \$3mln in total (\$5 x 600,000bbl).

If in January 2006, WTI has collapsed to \$50/bbl, the producer will receive \$10/bbl x 50,000bbl = \$500,000/bbl from the hedge provider.

If in February 06, WTI is worth \$58/bbl, the producer will receive \$2/bbl x 50,000bbl = \$100,000/bbl from the hedge provider.

If in March 06, WTI has risen to \$65/bbl, the producer will receive nothing that month, etc.

# The Products:



## 2/ Over the Counter (OTC) Derivatives:

Over the Counter contracts are agreed directly between two parties (the hedger or client and the hedge provider, Parex), without the help of an exchange matching the counterparties.



# The Products:

## OTC Derivatives – Swaps: Definition

### Swaps

are OTC contracts for the exchange of a Fixed Price against a Floating Price, whereby

the Buyer of the Swap buys a fixed price and sells a floating price and the Seller of the Swap sells a fixed price and buys a floating price.

Swaps are used to lock in a fixed price.





# The Products:

## Swaps: Detailed definition

The hedger (in this case a commodity user) agrees to pay a fixed price and receive a floating price for a specific volume of a commodity over a specified period. Swaps are settled in cash, at fixed intervals (usually monthly).

If at the settlement date, the floating price is higher than the fixed price, the user receives the difference between the floating price and the fixed price from the hedge provider (Parex). If the floating price is lower, the user pays the hedge provider the difference.

The net result is that the user's cost for the commodity is fixed, no matter what happens in the marketplace.



# The Products:

## Peculiarities of the Swaps market.

SWAPS are the preferred hedging tools of both producers and users of oil.

They offer more flexibility than Exchange-Traded products:

- the wide range of products mirrors actual physical market specifications (perfect hedge),
- no restrictions in terms of contract size,
- confidentiality is respected (deal not published on a screen).

Because SWAPS are less liquid instruments than exchange-traded Futures, they are less appreciated as a speculative instrument.

# The Products:

Parex will quote you a market on all the main liquid Northwest European oil products, including:

- Dated Brent
- Unleaded Gasoline
- 0.2% Gas Oil
- ULSD 50ppm
- Jet Fuel
- 3.5% Fuel Oil
- 1% Fuel Oil ...



# Swap Strategies- Example 1.



Shipping company wants to fix in advance the price of bunker fuel it will have to pay for the next 6 months.

Having calculated that they consume about 2,500 tonnes of bunker fuel per month, the company buys a 15,000-tonne 3.5% sulphur Fuel Oil Swap for October 05 till March 06 at \$300/tonne.

The shipping company's Swaps exposure will look like this:

Oct05: long 2.5kt 3.5% FO

Jan06: + 2.5kt 3.5% FO

Nov05: + 2.5kt 3.5% FO

Feb06: + 2.5kt 3.5% FO

Dec05: + 2.5kt 3.5% FO

Mar06: + 2.5kt 3.5% FO

If the October swap settles at \$310/t, the hedge provider will pay \$10/t to the shipping company, thereby offsetting their increased physical fuel costs.

If the October swap settles at \$290/t, the shipping company will pay \$10/t to the hedge provider but this loss will be offset by cheaper physical fuel costs.

The remaining five months will be settled the same way.



## Swap Strategies- Example 2.

Trader bought on the 25th of August 20,000 tonnes of Russian Gas Oil FOB Tallinn at \$580/t.

He sold the Gas Oil on the 29th of August on a CIF Rotterdam basis, for delivery 26-28 September at a price formula corresponding to the average of the Mean of Platts for 0.2% sulphur Gas Oil CIF N.W.E. + \$3/t for three days around bill of lading.

To protect himself from a fall in market price (Platts quote), the trader sells a 20,000t October 0.2% Gas Oil Swap at \$625/t, therefore locking in a \$45/t profit for his deal (before freight costs).

If the market falls and the October 0.2% Gas Oil Swap settles at \$610/t, the trader will receive \$15/t from the hedge provider, which will offset the lower price of his physical deal.

If the market has risen to \$635/t, the trader needs to pay \$10/t to the hedge provider, but this will be offset by a higher price obtained for his physical Gas Oil.



## Swap Strategies- Example 3.

Refiner wants to take advantage of high refining margins and lock in part of his profits for next year at current level.

Sells 1mln barrels per month of a tailor-made refining margin Swap (ex: 30% Unleaded Gasoline, 40% 50ppm Diesel, 30% LS Fuel Oil versus 100% Dated Brent) for calendar year 2006 at \$9.50/bbl.

The refiner's exposure will look like this:

Jan06: -300kb Unl -400kb Diesel -300kb FO +1,000kb Crude

Feb06: -300kb Unl -400kb Diesel -300kb FO +1,000kb Crude

Mar06: -300kb Unl -400kb Diesel -300kb FO +1,000kb Crude

...etc.

If, upon settlement of the January swaps, the refining margin has fallen to \$7.50/bbl, the hedge provider will pay \$2/bbl to the refiner.

If the January swaps settle at \$11/bbl, the refiner will pay \$1.50/bbl to the hedge provider but this loss will be offset by an increase in the physical refining margin.

The rest of the hedge will be settled monthly, in the same manner.



## Getting started:

- Open a trading account with the Parex Derivatives Brokerage Desk (Sign necessary agreements for Exchange-traded or/and OTC products).
- Deposit an Initial Margin of 5-10% for Futures and Options or 15-20% for Swaps (lower margin rates can apply for combinations of instruments, ex. For Spreads trading or Future+Swap differential, etc).
- Pay fees or commissions when applicable.
- Maintain Margin until settlement of the positions.



## Energy Trading Support:

- Team of Energy experts with in-depth knowledge of international physical and derivatives markets, providing clients with tailor-made solutions.
- 24 hrs brokerage desk with round-the-clock taking of orders and position checking.
- Simple “Long Form” agreements based on the International Swaps and Derivatives Association (ISDA) Master Agreement, offering rapid and efficient way to trade OTC instruments.
- Free weekly market research to help you identify trends and make successful investment and hedging decisions.



We will be delighted to put our expertise at your disposal to help you hedge or invest in the fast-growing Oil Markets.

**For more details, please get in touch with:**

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