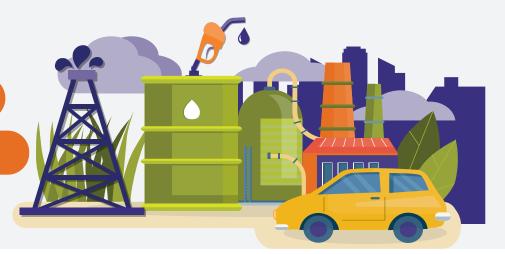


Natural Gas &

# WTI Crude Oil



## **Commodity Derivatives**

Business is subjected to unforeseeable risk due to changes in the raw material cost and business environment. Business having an underlying exposure to commodity prices are exposed to price risk due to factors like international commodity price movement, USDINR movement, premium / discount to international prices, etc. The volatility in the above-mentioned factors can be significant and cause erosion in profit margins and may require higher deployment of capital. It is possible to mitigate such risks by using suitable commodity derivative products for hedging. Options and Futures are by far the most commonly used Commodity Derivatives.

Commodity Futures contract is "an agreement to buy or sell an underlying commodity at a specified future date (called Expiration Date) at a price that is fixed today." The value of Commodity Derivatives is generally based on the expected price movements of their underlying in the future.

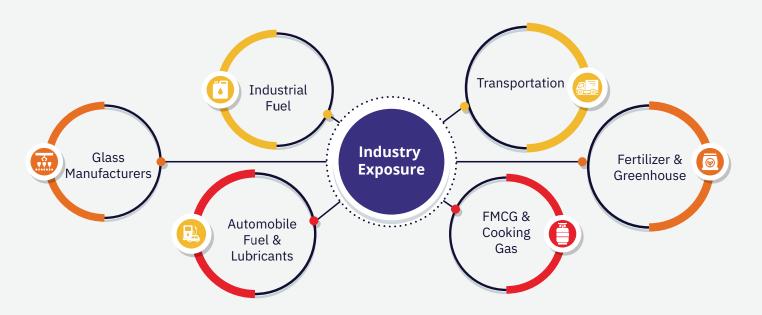
Buyers use such contracts to avoid the risks associated with the price fluctuations of a futures' underlying product or raw material. Sellers use futures contracts to lock in guaranteed prices for their products.

### **Energy Complex - Crude Oil and Natural Gas**

Crude oil is a naturally occurring, unrefined petroleum product composed of hydrocarbon deposits and other organic materials. A type of fossil fuel, crude oil can be refined to produce usable products such as gasoline, diesel and various forms of petrochemicals. It is a nonrenewable resource, which means that it can't be replaced naturally at the rate we consume it and is therefore a limited resource. India is 3rd largest consumer of crude oil in the world, after United States and China.

Natural Gas is found in deep underground rock formations or associated with other hydrocarbon reservoirs in coal beds and as methane clathrates. Natural gas is used mainly in the industrial, commercial, transportation, and household sectors. Natural gas is an essential energy source, and its demand is continuously increasing globally.

Henry Hub is a natural gas pipeline located in Louisiana, USA, which serves as a benchmark for natural gas pricing in the United States and around the world. It is the delivery point for natural gas futures contracts traded on the New York Mercantile Exchange (NYMEX).



### Contract Specifications - Options with WTI Crude Oil Futures and Natural Gas Futures as Underlying

Product Parameters	WTI Crude Oil Options On Futures	Natural Gas Options On Futures
Underlying	WTI Crude Oil Futures Contract Traded On NSE	Natural Gas Futures Contract Traded On NSE
Instrument Type	OPTFUT	
Options Type	The options contracts shall be European styled which can be exercised only on the expiration date	
Symbol	WTICRUDE	NATURALGAS
Last Trading Day (contract Expiry)	Two business days prior to the Expiry day of the underlying futures contract.	
Trading		
Underlying Quotation / Base Value	₹ per Barrel	₹ per Barrel
Tick Size	₹ 0.10 (10 Paise)	₹ 0.05 (5 Paise)
Strike Price Interval	₹ 50	₹5
Maximum Allowable Open Position	Individual clients: 9,60,000 barrels or 5% of the market wide open position, whichever is higher. Member Level: 96,00,000 barrels or 20% of the market wide open position, whichever is higher.	Individual clients: 120,00,000 MMBtu or 5% of the market wide open position, whichever is higher. Member Level: 12,00,00,000 MMBtu or 20% of the market wide open position, whichever is higher.
Settlement		
Mode Of Settlement	On expiry of options contract, the open position shall devolve into underlying futures position as follows: • Long call position shall devolve into long position in the underlying futures contract • Long put position shall devolve into short position in the underlying futures contract • Short call position shall devolve into short position in the underlying futures contract • Short call position shall devolve into short position in the underlying futures contract • Short put position shall devolve into long position in the underlying futures contract • Short put position shall devolve into long position in the underlying futures contract All such devolved futures positions shall be opened at the strike price of the exercised options	
Due Date Rate (final Settlement Price)	Daily settlement price of underlying futures contract on the expiry day of options contract.	





NIL ExchangeTransaction Charges Fungibility of Collateral across segments



Natural Gas & WTI Crude Oil are traded in multiple exchanges across the globe, one may find attractive arbitrage opportunities

#### DISCLAIMER

CME GROUP MARKET DATA IS USED UNDER LICENSE AS A SOURCE OF INFORMATION FOR CERTAIN NSE PRODUCTS. CME GROUP HAS NO OTHER CONNECTION TO NSE PRODUCTS AND SERVICES AND DOES NOT SPONSOR, ENDORSE, RECOMMEND OR PROMOTE ANY NSE PRODUCTS OR SERVICES. CME GROUP HAS NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE NSE PRODUCTS AND SERVICES. CME GROUP DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF ANY MARKET DATA LICENSED TO NSE AND SHALL NOT HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN CME GROUP AND NSE.