

CRUDE OIL

Crude oil is a naturally occurring and flammable liquid found in rock formations in the earth. It consists of a complex mixture of hydrocarbons of various molecular weights plus other organic compounds. It is often referred as the "mother of all commodities" because of its importance in the manufacturing of a wide variety of materials.

APPLICATIONS

Crude oil is used to produce fuel for cars, trucks, airplanes, boats, and trains. It is also used for manufacturing a wide variety of other products, including asphalt for roads, lubricants for all kinds of machines, and plastics for toys, bottles, and food wraps, among others.

Due to the chemical structure of oil, its long hydrocarbon molecules can be "cracked" or recombined into shorter molecules that have different characteristics. It is because of this property that crude oil can be made into a variety of products, including tar, gasoline, diesel, jet fuel, heating oil, and natural gas.

INDIAN OIL MARKET SCENARIO

- In FY24 Crude oil production in India was 199 million barrels, meanwhile the consumption stood at 1,917 million barrels. India has a proved reserve of 4,543 Million barrels.
- Crude Oil consumption in Indian expanded at a growth rate of 3.8% during 2013-2023.India's crude oil consumption stood at 5.4 million barrels per day.
- During FY24 crude oil imports were valued at Rs. 11,00,589 Crores, where as product imports were valued at Rs. 1,90,914 Crores and Total product exports were valued at Rs. 3,94,153 Crores.
- Rapid economic growth is leading to increasing demand of oil for production and transportation. Hence, India's dependency on oil imports is likely to increase further.
- With rising income levels, demand for automobile is estimated to increase, in turn leading to augmented demand for oil and gas.



WORLD OIL: Production

(million barrels per day)

	2023	2022
OPEC	34	34
Non-OPEC	62	60

Source: Energy Institute Statistical Review of World Energy

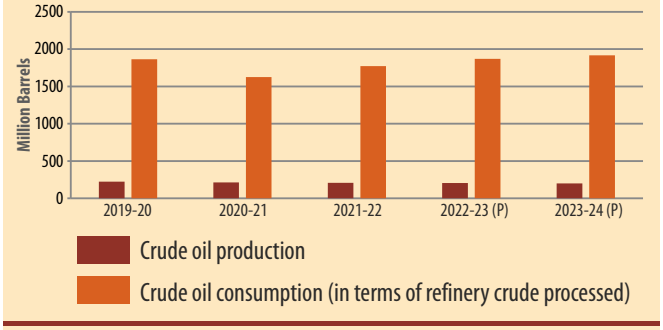
WORLD OIL: Consumption

(million barrels per day)

	2023	2022
OECD	45	45
Non-OECD	55	52

Source: Energy Institute Statistical Review of World Energy

INDIA CRUDE OIL PRODUCTION AND CONSUMPTION



Source: Petroleum Planning and Analysis Cell (PPAC)

Variants:

Two factors that determine the market value of a specific grade of crude oil are density (measured in American Petroleum Institute (API) gravity) and the sulphur content, respectively, which are representative of how light and sweet or sour the crude oil is.

West Texas Intermediate

A high-quality crude oil explored and physically traded in the U.S., West Texas Intermediate is one of the largest traded commodity in the world. Its API gravity is approximately 39° API and has 0.24% sulphur content. The New York Mercantile Exchange (NYMEX Division of CME Group) is the primary exchange facilitating futures trade in this light sweet crude oil.

Brent Crude Oil

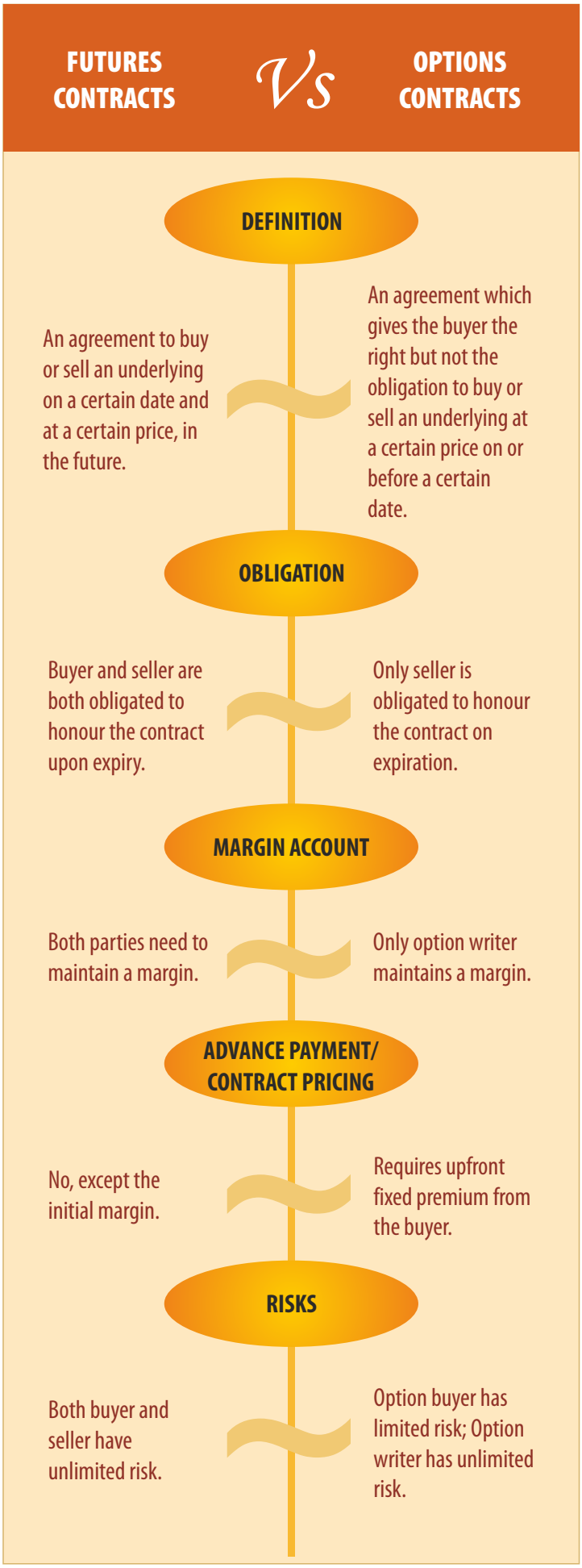
Crude oil from the North Sea, UK, Brent is a pricing benchmark for crude from Europe and Africa. With an API gravity of 38° API and 0.4% or less of sulphur content by weight, Brent crude oil is the second most traded variety of crude in the world.

Middle East Crude Oil

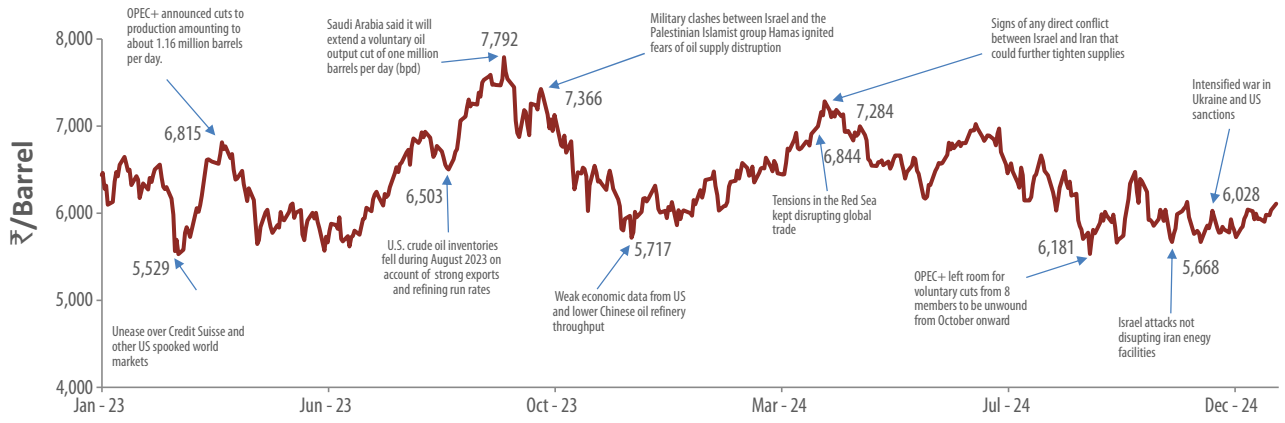
It is generally taken as the arithmetic average of Dubai and Oman crude grades. An API gravity between 31° API and 37° API and 2.05% or less of sulphur content by weight makes Middle East Crude Oil a heavy and sour crude oil. It is a variety with a very large physical market in the Gulf region. Most of the Indian refineries use crude benchmarked against Middle East Sour Crude Oil. TOCOM is a prominent futures trading platform that offers trading in this grade of crude oil.

FACTORS AFFECTING MARKET FUNDAMENTALS:

- Prices ruling in the international markets
- Currency exchange rate movements, especially, the US dollar
- Economic factors: industrial growth, global financial crisis, recession, and inflation
- OPEC announcements
- Weather variability
- Government trade policies (import duties, penalties, and quotas)
- Geopolitical events
- Changes in the refining sector; for example, a drop in the refinery utilisation rate
- US crude and product inventories data



CRUDE OIL PRICE MOVEMENT*



*Source: MCX | *near month prices*

SALIENT SPECIFICATIONS OF MCX CRUDE OIL AND CRUDE OIL MINI FUTURES CONTRACTS

	CRUDE OIL	CRUDE OIL MINI
SYMBOL	**CRUDEOIL**	**CRUDEOILM**
Description	CRUDEOILMMMYY	CRUDEOILMMMMYY
No. of contracts a year	12	
Contract duration	6 months	
TRADING		
Trading period	Mondays through Fridays	
Trading session	Monday to Friday: 9:00 a.m. to 11:30 p.m. / 11:55* p.m. (*Based on US daylight saving time period.)	
Trading unit	100 barrels	10 barrels
Quotation/Base value	₹ / barrel	
Maximum order size	10,000 barrels	
Tick size (minimum)	₹ 1	
Daily price limits	The Exchange has implemented a narrower slab of 4%. Whenever the narrower slab is breached, the relaxation will be allowed up to 6% without any cooling off period in the trade. In case the daily price limit of 6% is also breached, then after a cooling off period of 15 minutes, the daily price limit will be relaxed upto 9%. In case price movement in international markets is more than the maximum daily price limit (currently 9%), the same may be further relaxed in steps of 3%.	
Initial margin	Minimum 10% or based on SPAN, whichever is higher	
Extreme Loss Margin	Minimum 1%	
Additional and/or special margin	In case of additional volatility, an additional margin (on both buy side and sell side) and / or special margin (on either buy side or sell side) at such percentage, as deemed fit, will be imposed in respect of all outstanding positions.	
Maximum allowable open position	For individual clients: 4,80,000 barrels or 5% of the market wide open position, whichever is higher for all Crude Oil contracts combined together. For a member collectively for all clients: 48,00,000 barrels or 20% of the market wide open position, whichever is higher for all Crude Oil contracts combined together.	
Due Date Rate:	Due date rate shall be the settlement price, in Indian rupees, of the New York Mercantile Exchange's (NYMEX)# Crude Oil (CL) front month contract on the last trading day of the MCX Crude Oil contract. The last available RBI USDINR reference rate will be used for the conversion. The price so arrived will be rounded off to the nearest tick. For example, on the day of expiry, if NYMEX Crude Oil (CL) front month contract settlement price is $81.90 and the last available RBI USDINR reference rate is 80.4205, then DDR for MCX Crude oil contract would be ₹6,586 per barrel (i.e. $81.90 *80.4205 and rounded off to the nearest tick).	Due date rate shall be the settlement price, in Indian rupees, of the New York Mercantile Exchange's (NYMEX)# Crude Oil (CL) front month contract on the last trading day of the MCX Crude Oil Mini contract. The last available RBI USDINR reference rate will be used for the conversion. The price so arrived will be rounded off to the nearest tick. For example, on the day of expiry, if NYMEX Crude Oil (CL) front month contract settlement price is $81.90 and the last available RBI USDINR reference rate is 80.4205, then DDR for MCX Crude oil Mini contract would be ₹6,586 per barrel (i.e. $81.90 *80.4205 and rounded off to the nearest tick).
Settlement Mechanism:	The contract would be settled in cash	

#A market division of Chicago Mercantile Exchange Inc. ("CME Group")

Note: Please refer to the exchange circulars for latest contract specifications.

*a) For Latest Initial Margin refer circular No MCX/MCXCCL/133/2021 dated March 03, 2021.

b) The Margin Period of Risk (MPOR) shall be in accordance with SEBI Circular no. SEBI/HO/CDMRD/DRMP/CIR/P/2020/15 dated January 27, 2020. For applicable minimum MPOR, refer latest circulars issued by MCXCCL from time to time.

c) For all the applicable margins, refer the latest circulars issued by the Exchange or Multi Commodity Exchange Clearing Corporation Limited (MCXCCL) from time to time

SALIENT FEATURES OF MCX CRUDE OIL AND CRUDE OIL MINI OPTIONS CONTRACT

Symbol	CRUDEOIL	CRUDEOILM
Underlying	Underlying shall be Crude Oil Futures contract traded on MCX	Underlying shall be Crude Oil Mini Futures contract traded on MCX
Description	Option on Crude Oil Futures	
Options type	European Call & Put Options	
Expiry Day (Last Trading Day)	Two business days prior to the Expiry day of the underlying futures contract	
Trading Period	Monday through Friday - 9.00 a.m. to 11.30 / 11.55 p.m.# (#Based on US daylight saving time period.)	
Trading Unit	One MCX Crude Oil futures contract (100 BBL)	One MCX Crude Oil Mini futures contract (10 BBL)
Underlying Quotation/ Base Value	Rs. Per barrel	
Strikes	25 In-the-money, 25 Out-of-the-money and 1 Near-the money (51 CE and 51 PE). The Exchange, at its discretion, may introduce additional strikes, if required.	
Strike Price Intervals	₹50	
Tick Size (Minimum Price Movement)	₹0.10	₹0.05
Daily Price Limit	The upper and lower price band shall be determined based on statistical method using Black76 option pricing model and relaxed considering the movement in the underlying futures contract. In the event of freezing of price ranges even without a corresponding price relaxation in underlying futures, if deemed necessary, considering the volatility and other factors in the option contract, the Daily Price Limit shall be relaxed by the Exchange.	
Margins	The Initial Margin shall be computed using SPAN (Standard Portfolio Analysis of Risk) software, which is a portfolio based margining system. To begin with, the various risk parameters shall be as under: A. Price Scan Range – 3.5 Standard Deviation (3.5 sigma) B. Volatility Scan Range – Minimum 5% or as decided by MCXCCL from time to time. For applicable VSR refer latest circulars issued by MCXCCL. C. The Short Option Minimum Margin (SOMM) and Margin Period of Risk (MPOR) shall be in accordance with SEBI Circular no. SEBI/HO/CDMRD/DRMP/CIR/P/2020/15 dated January 27, 2020. For applicable SOMM and MPOR refer latest circulars issued by MCXCCL from time to time. D. Extreme Loss Margin – Minimum 1% (to be levied only on short option positions) E. Premium of buyer shall be blocked upfront on real time basis. F. For Additional Margin refer latest circulars issued by MCXCCL from time to time.	
Premium	Premium of buyer shall be blocked upfront on real time basis.	
Margining at client level	Initial Margins shall be computed at the level of portfolio of individual clients comprising of the positions in futures and options contracts on each commodity	
Maximum Allowable Open Position	Position limits for options would be separate from the position limits applicable on futures contracts. For individual clients: 9,60,000 barrels or 5% of the market wide open position, whichever is higher for all Crude Oil Options contracts combined together. For a member collectively for all clients: 96,00,000 barrels or 20% of the market wide open position, whichever is higher for all Crude Oil Options contracts combined together. Upon expiry of the options contract, after devolvement of options position into corresponding futures positions, open positions may exceed their permissible position limits applicable for future contracts. Such excess positions shall have to be reduced to the permissible position limits of futures contracts within two trading days.	
Exercise Mechanism at expiry	All In the money (ITM)# option contracts shall be exercised automatically, unless 'contrary instruction' has been given by long position holders of such contracts for not doing so. The ITM option contract holders, who have not submitted contrary instructions, shall receive the difference between the Settlement Price and Strike Price in Cash as per the settlement schedule. In the event contrary instruction are given by ITM option position holders, the positions shall expire worthless. All Out of the money (OTM) option contracts shall expire worthless. All devolved futures positions shall be considered to be opened at the strike price of the exercised options. All exercised contracts within an option series shall be assigned to short positions in that series in a fair and non-preferential manner. #ITM for call option = Strike Price < Settlement Price | ITM for put option = Strike Price > Settlement Price	
Due Date Rate (Final Settlement Price)	Daily settlement price of underlying futures contract on the expiry day of options contract.	

Content by: **PMT (Energy), MCX** | Designed by: **Graphics Team, MCX**

Multi Commodity Exchange of India Limited
Corporate address: **Exchange Square, Chakala, Andheri (East), Mumbai - 400 093, India**
Tel. No. 91-22-6731 8888 | info@mcxindia.com | www.mcxindia.com | CIN: L51909MH2002PLC135594

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