

COMMODITY DERIVATIVES – RISK MANAGEMENT & INVESTMENT INSTRUMENTS

(Perspective on Energy Price Risk Management)

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A mechanism that allows people to participate in trade.
Consisting of.....



CAPITAL MARKET

DEBT MARKET

FOREX MARKET

COMMODITY MARKET

MONEY MARKET

BULLION

Gold, Silver,
Diamond

METALS & ALLOYS

Aluminium, Copper, Lead
Nickel, Zinc, Brass, Steel

AGRICULTURAL

Grains: Barley, Maize, Wheat



Spices: Black Pepper, Cardamom,
Coriander, Jeera, Turmeric



Fibre: Cotton (Bales), Kapas, Raw Jute



Oil Complex: Castorseed, CPO,
Soybean, Soyoil, RBD Palmolein



Others: Guarseed, Guargum, Mentha
Oil, Isabgul, Rubber, Sugar



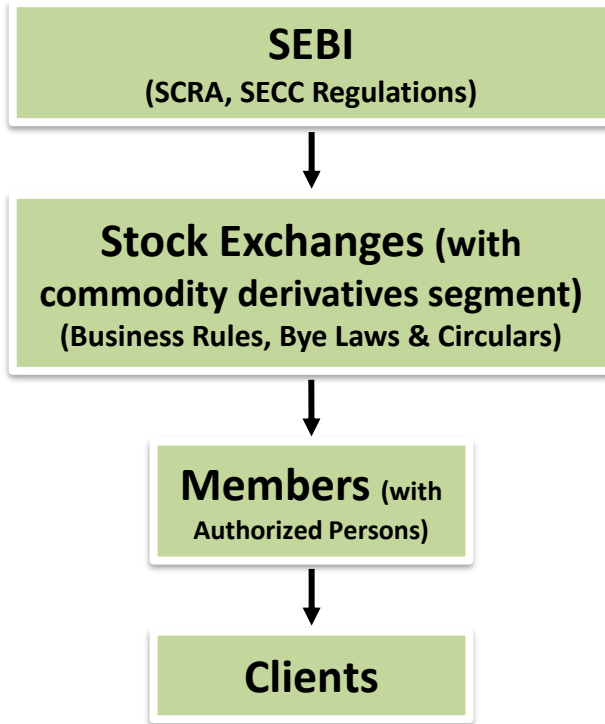
SEBI has notified 91 commodities, where
exchanges may launch derivative contracts

MCX iCOMDEX Bullion Index Futures
MCX iCOMDEX Base Metal Index Futures
MCX iCOMDEX Energy Index Futures



DID YOU KNOW ?

YOU CAN DIVERSIFY YOUR PORTFOLIO WITH COMMODITIES DERIVATIVES - BULLION | BASE METAL | ENERGY | AGRI



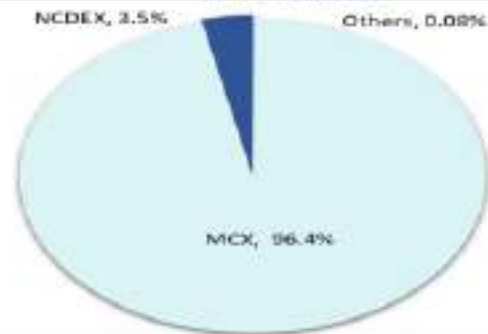
- National online multi commodity exchanges started operations during 2003-04
- Under SEBI regulations (since September 28, 2015)
- Options commenced from October 17, 2017
 - Options on Crude Oil, Natural Gas, Gold, Silver, Copper, Zinc
- Integration of Intermediaries for equity and commodity derivatives segment
- Universal Exchanges : Single exchange operating various segments i.e. Stock Exchanges



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COMMODITY FUTURES MARKET SHARE Q1 FY22-23



ADT - FUTURES (INR Crore)



MARKET SHARE IN KEY SEGMENTS FOR Q1 FY22-23

Commodity Segment	MCX Market Share in Indian Commodity Futures	Proportion of MCX's turnover
Precious Metals & Stones	99.99%	38.8%
Energy	100%	46.8%
Base Metals	99.99%	13.2%
Agri Commodities	16.98%	0.7%
Index Futures	86.67%	0.4%

EXTENSIVE REACH

588 Members

51,246 Authorised Persons

42,78,997 terminals (including IST, WT, CTCL)

872 cities/towns across India

*No. of UCCs : 1,07,17,641

All data as on June 30, 2022 ; * Unique Client Code

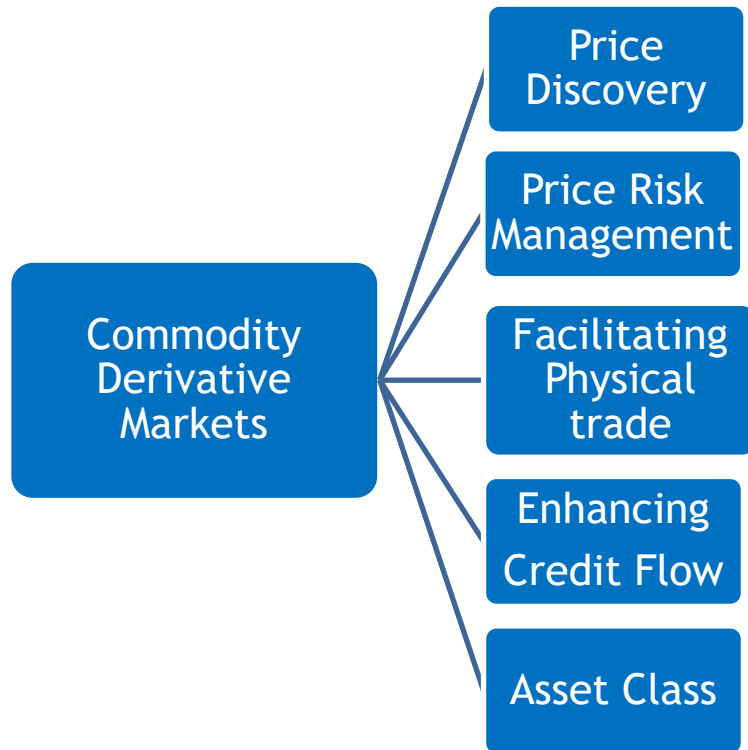


The stock index futures and commodity futures are the derivatives offered by the largest number of trading venues.

Top five exchanges by volume traded 2021- Energy derivatives.

Energy				
Moscow Exchange	601,672,263	-21%	416,464	39%
CME Group	551,294,357	-9%	33,345,992	52%
Zhengzhou Commodity Exchange	499,532,108	19%	2,773,473	72%
Dalian Commodity Exchange	155,127,619	16%	4,170,458	53%
Multi Commodity Exchange of India	76,043,137	-21%	433,521	27%

Global Commodity futures, which accounted for the third most traded derivative, with a share of 15.6%, saw volumes increase by 10.6%. Commodity options had the same trend, with volumes going up 35.7% on 2020.



- Standardized contracts traded on recognized exchanges
- Counterparties: holder & exchange
- Contract terms: non-negotiable
- Prices: Publicly available
- Predominantly online markets
- Highly liquid
- Cost: Comparatively much lesser
Average Value Realisation is Rs. 222 per crore rupee traded excluding taxes and brokerage

MARGINS AT MCX

- **Initial Margin** - Value At Risk (VaR) based margin across all open positions **SUBJECT** to minimum margin (scaled up by a factor of 3.5 sigma to cover 99.9% confidence level)
- **Extreme Loss Margin** - Levied to cover tail-end scenarios not covered by VaR based margin
- **Additional Margin / Special Margins**
- **Concentration Margin** – Based on Member Level concentration of positions, grossed up at client level

OTHER RISK MITIGATION MEASURES

- **Real time margin utilization & MTM loss monitoring alerts** at 60%, 75%, 90%
- **Risk Reduction Mode (RRM)**
 - Triggered at 90% margin utilization
 - Put in to normal mode with margin utilization at or below 85%
 - Square off mode at 100% margin utilization
- **Online MTM:** Member shifted to square-off mode on 100% utilization
- **Daily Price Limits (DPR)**
- Collaterals accepted - Cash, Cash Equivalent (i.e. Fixed Deposits; maximum equal to cash) & Non Cash Collateral (i.e. G-Sec, Eligible Securities & Warehouse Receipts; maximum equal to cash and cash equivalent)
- Self - Match Prevention Functionality
- System Checks prevent orders from unregistered UCC

COMMODITY DERIVATIVE CONTRACTS @MCX

PARAMETERS	CRUDE OIL	NATURAL GAS
Trading Unit	100 Barrels	1,250 mmBtu
Price Quotation	Rs./bbl	Rs./MMBtu
Tick Size	Re. 1	10 paisa
Price Movement per Tick (in Rs.)	100	125
Initial Margin	Minimum 10% or based on SPAN whichever is higher	
Settlement type	Cash Settled	
Due Date Rate # A market division of Chicago Mercantile Exchange Inc. ("CME Group")	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 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.	Due date rate shall be the settlement price, in Indian rupees, of the New York Mercantile Exchange's (NYMEX)# Natural Gas (NG) front month contract on the last trading day of the MCX Natural Gas 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.

CRUDE OIL & NATURAL GAS OPTIONS CONTRACT SPECIFICATIONS

PARAMETERS	CRUDE OIL - OPTIONS	NATURAL GAS OPTIONS
Trading Unit	1 MCX Crude Oil Futures (100 bbl)	1 MCX Natural Gas Futures (1250 MMBtu)
Price Quote	Rs / bbl	Rs. / MMBtu
Strikes	40 ITM*, 40 OTM* & 1 ATM * (81 CE & 81 PE)	30 ITM*, 30 OTM* & 1 ATM * (61 CE & 61 PE)
Strike Price Interval	Rs 50	Rs 5
Price Movement per Tick	Rs 0.10	Rs 0.05
Profit & Loss / Tick	Rs 10	Rs 62.5
Settlement Logic	Devolve into MCX Crude oil Futures contract	Devolve into MCX Natural Gas Futures contract
Settlement date	Two business days prior to the Expiry day of the underlying crude oil futures contract	Two business days prior to the Expiry day of the underlying Natural Gas Futures contract

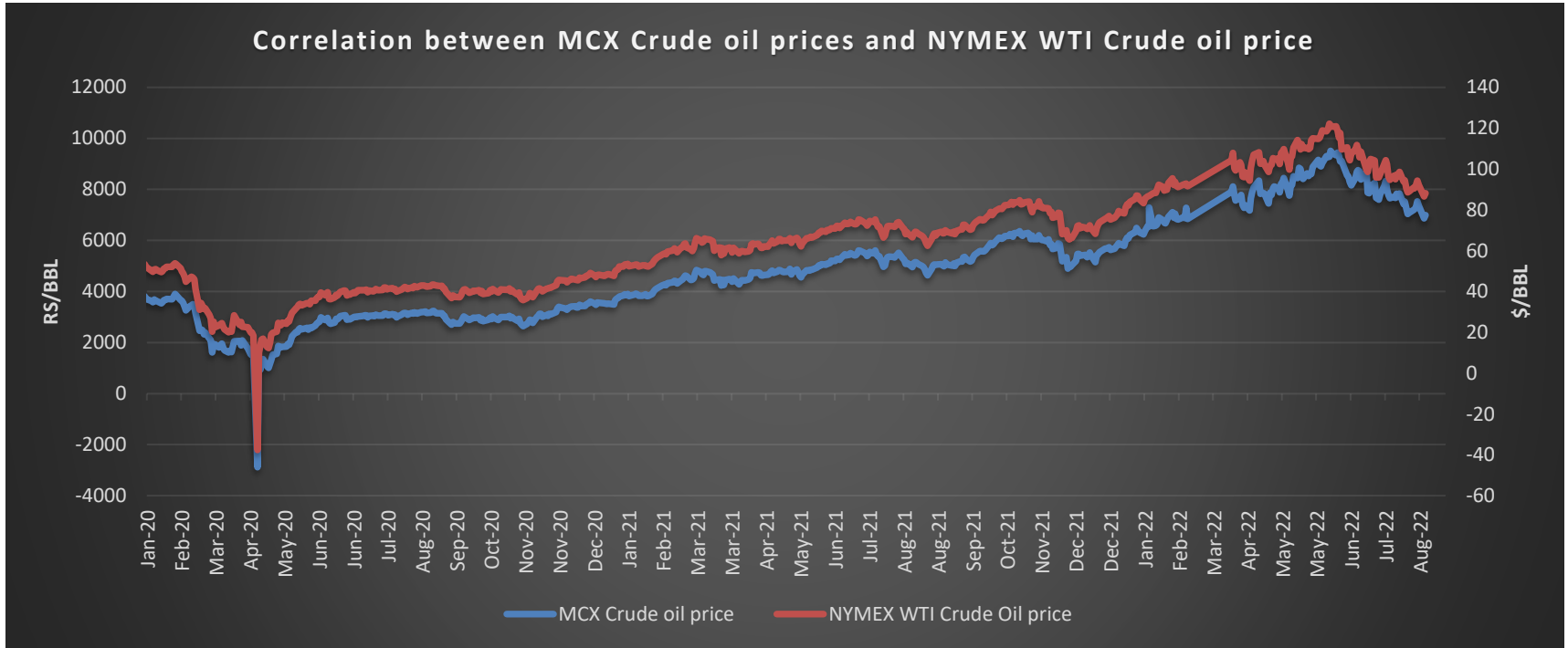
***ITM:In-The-Money, OTM: Out-Of-The-Money, ATM: At-The-Money**

OPTIONS AS HEDGING INSTRUMENT

- Options offer the buyer an **protection** against adverse movement
- Maximum Loss to the extent of Premium paid for Buyer
- Exchange Traded options free from **counter party risk**
- Futures & Options combination (both risk management tools): gives **leverage** of futures with **safety** of options: Profit from change in future prices but limit losses via Options
- **Low Transaction Cost, low capital intensive**



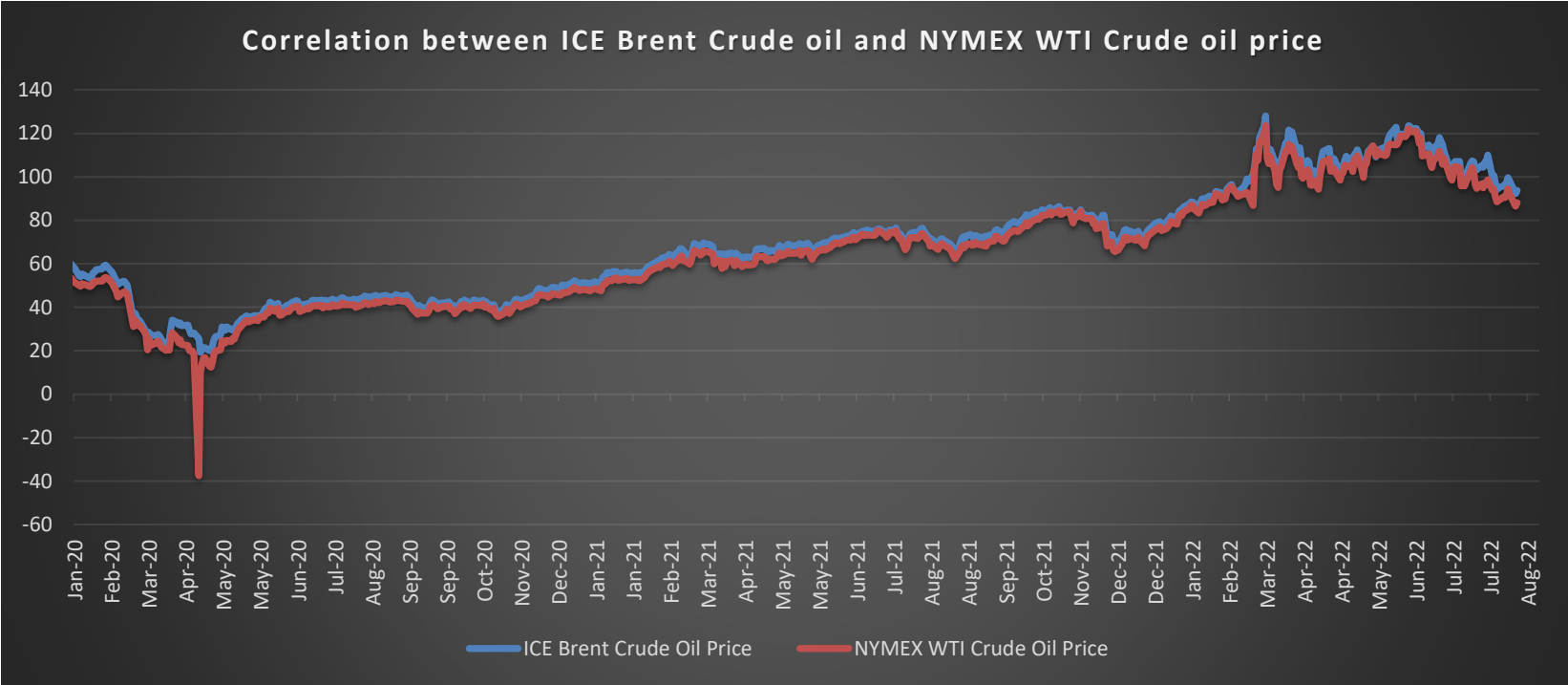
*Options on Commodity Future were permitted by SEBI on June 13, 2017 via Circular SEBI/HO/CDMRD/DMP/CIR/P/2017/55.
MCX launched "Options on Crude Futures" on 15th May, 2018*



Source: CME & MCX

Till 17th Aug 2022

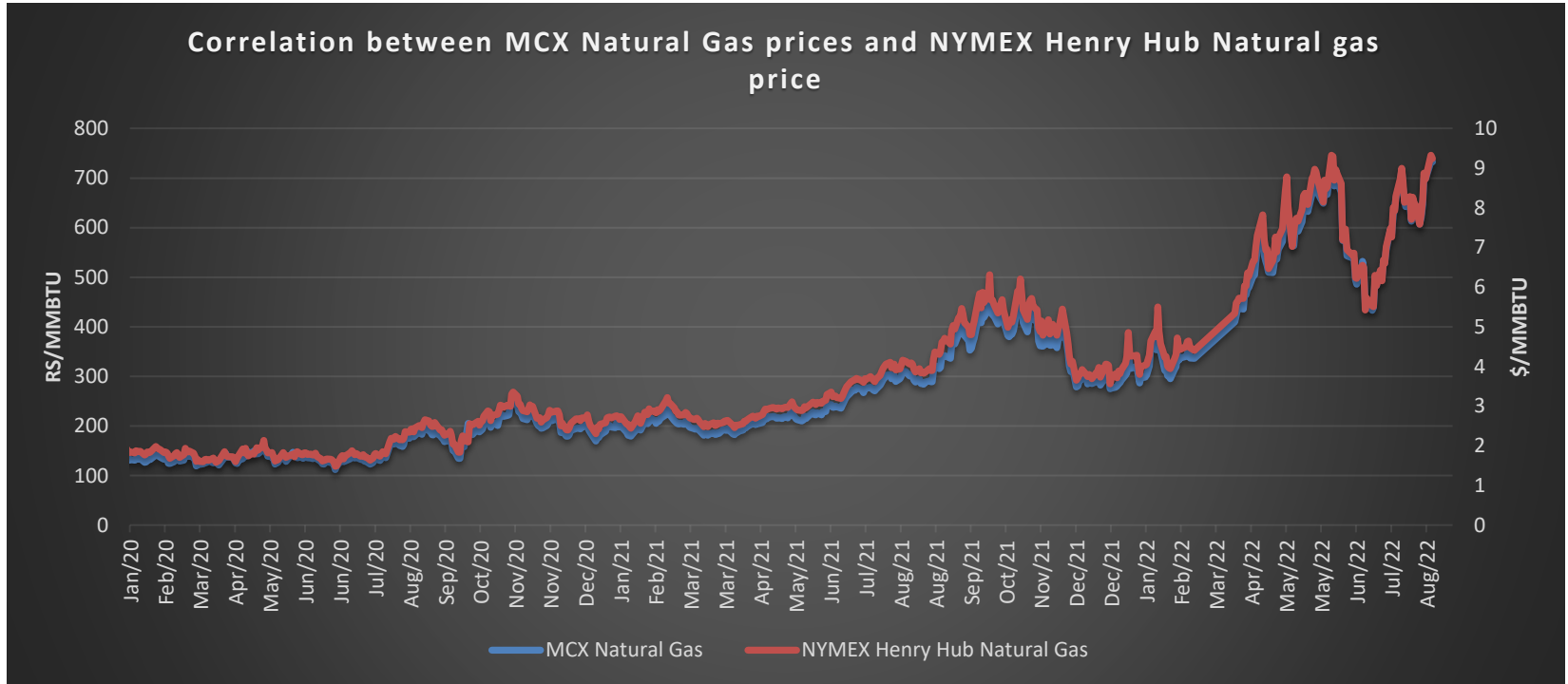
Correlation between MCX crude oil and NYMEX WTI crude oil is 0.98



Source: CME & ICE

Till 17th Aug 2022

Correlation between ICE Brent Crude oil and NYMEX WTI crude oil is 0.98



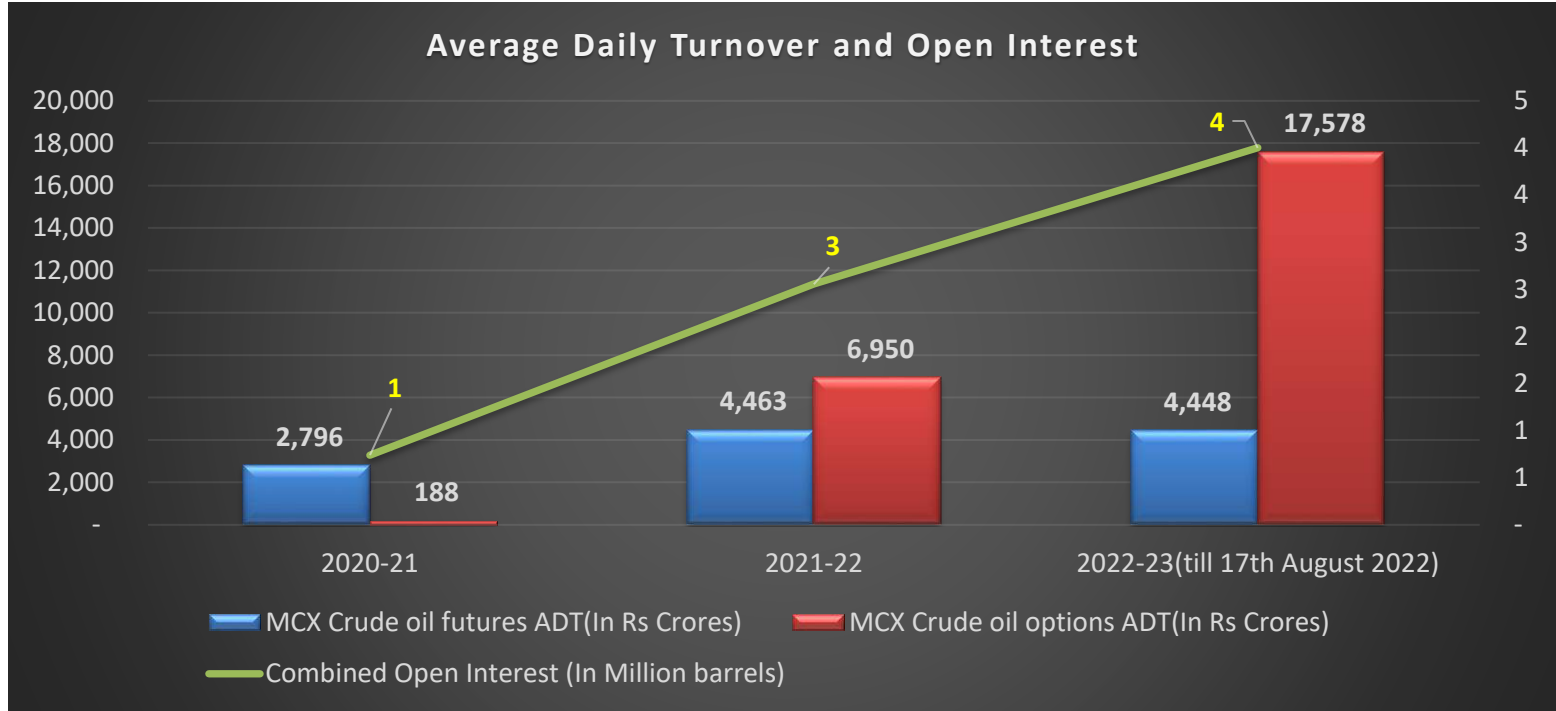
Source: CME & MCX

Till 17th Aug 2022

Correlation between MCX Natural Gas and NYMEX natural gas : 0.99

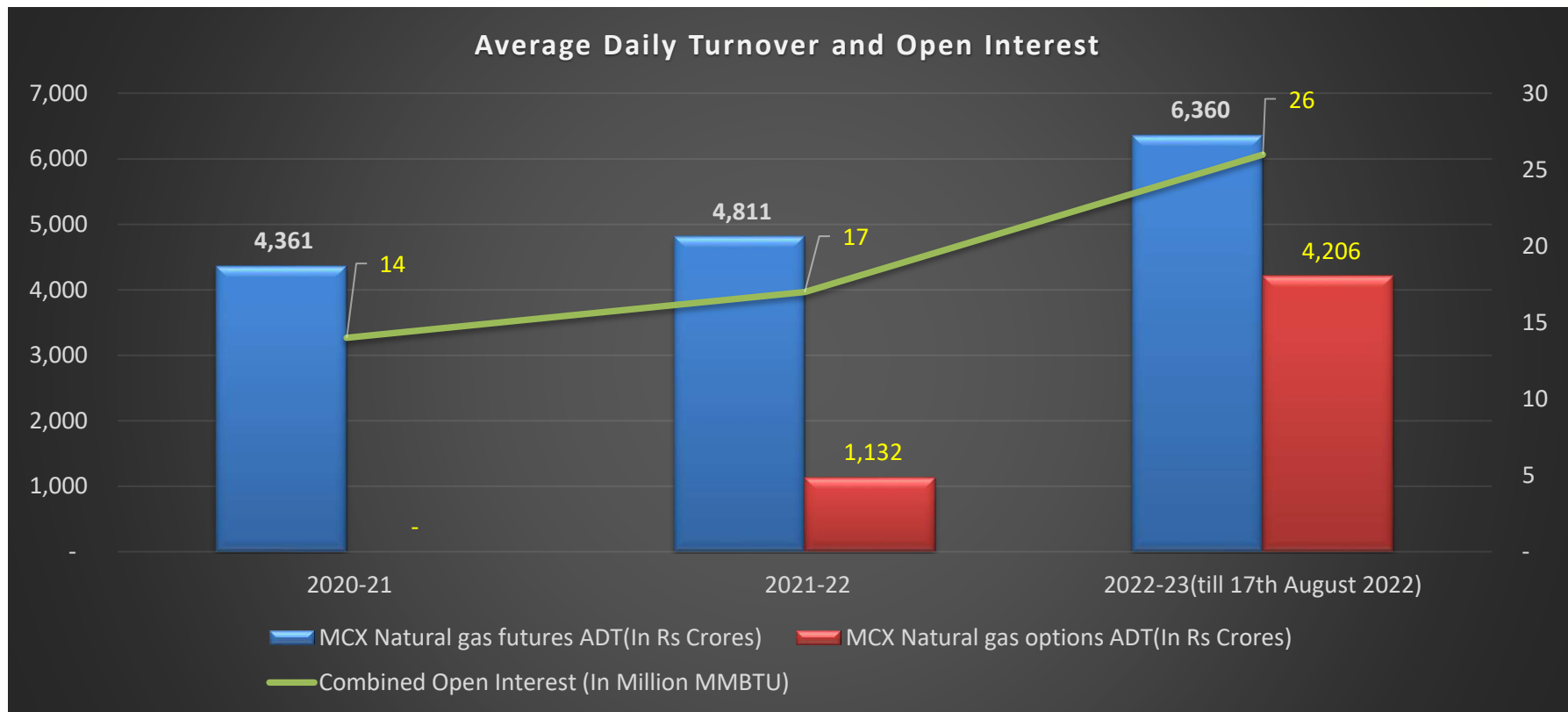
Highest Turnover (Rs Crores)	Highest since inception
MCX Crude Oil futures	28,440 (08 Jan 2020)
MCX Crude Oil Options	58,261 (16 Aug 2022)
MCX Natural Gas futures	20,776 (28 Sep 2021)
MCX Natural Gas Options	12,688 (18 Aug 2022)





Source: MCX

Average Daily Turnover and Open Interest



Source: MCX
 Natural gas options launched on 17th January 2022

Crude Oil & Natural Gas - Fundamentals

OPEC announcements

Global Demand Supply Scenarios

Currency exchange rate & Inflation

Government trade policies

Geopolitical events

Global economic growth: industrial growth, global financial crisis, recession, and inflation

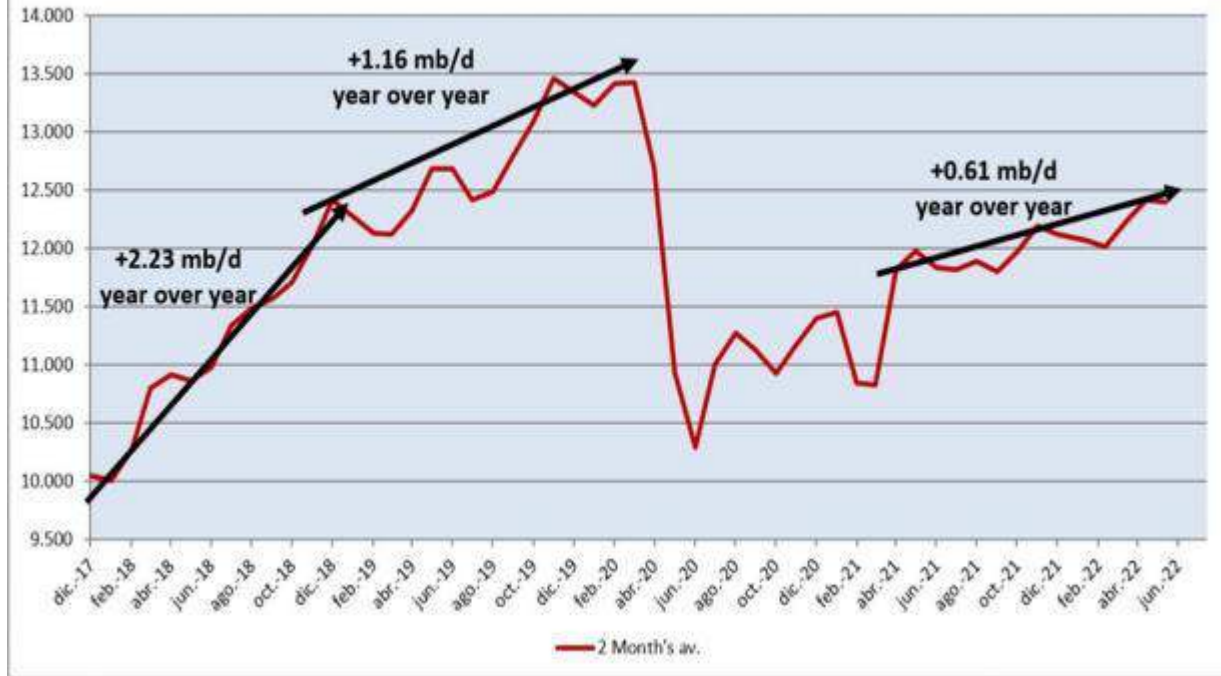
Weather variability

US crude and product inventories

US Rig counts



EIA - U.S. Field Production of **Crude Oil + Unaccounted barrels**



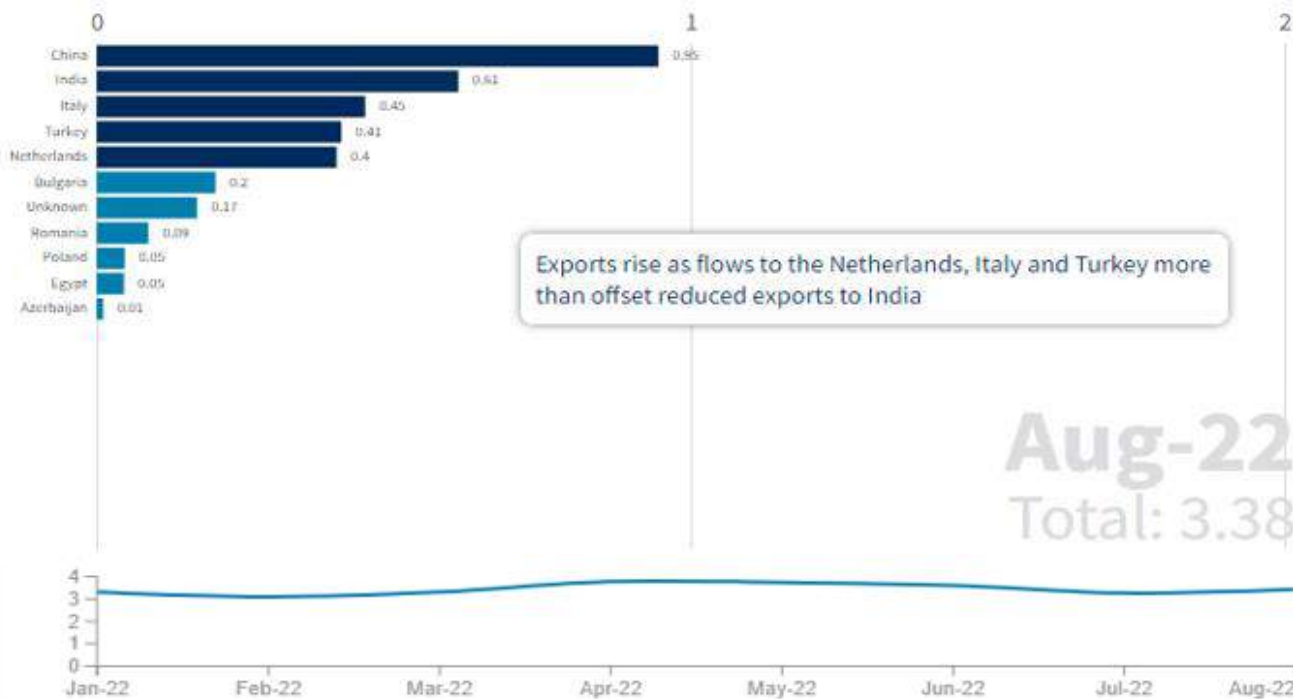
Source:EIA

US Crude Production growth trends (year over year)

- Dec-17 to Dec-18: +2.23 mb/d
- Jan-19 to Feb-20: +1.16 mb/d
- Apr-21 to Jul-22: +0.61 mb/d

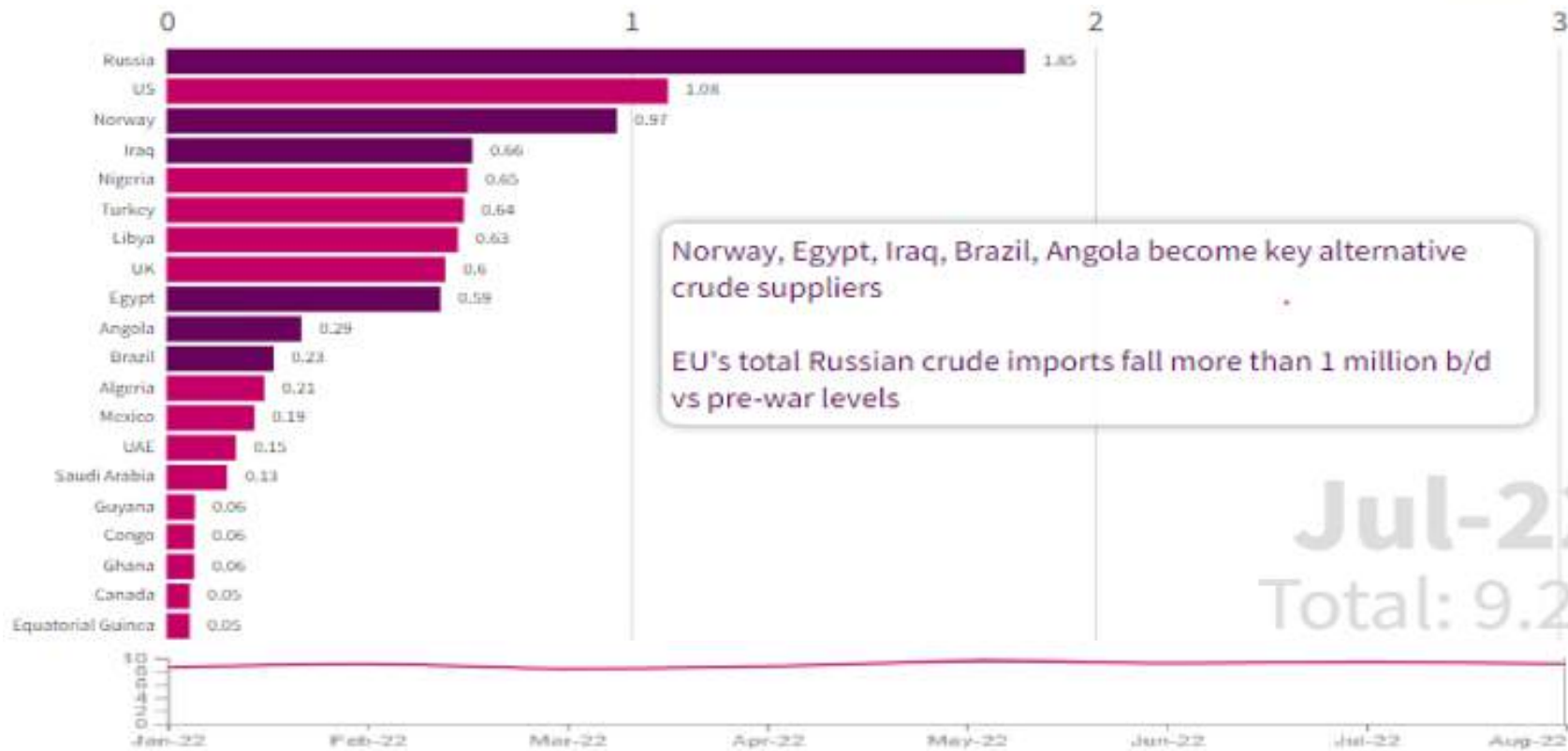
Crude oil production (with current level of well completions) is growing at a much lower pace than in previous periods

RUSSIA CRUDE OIL EXPORTS BY DESTINATION (MILLION B/D)



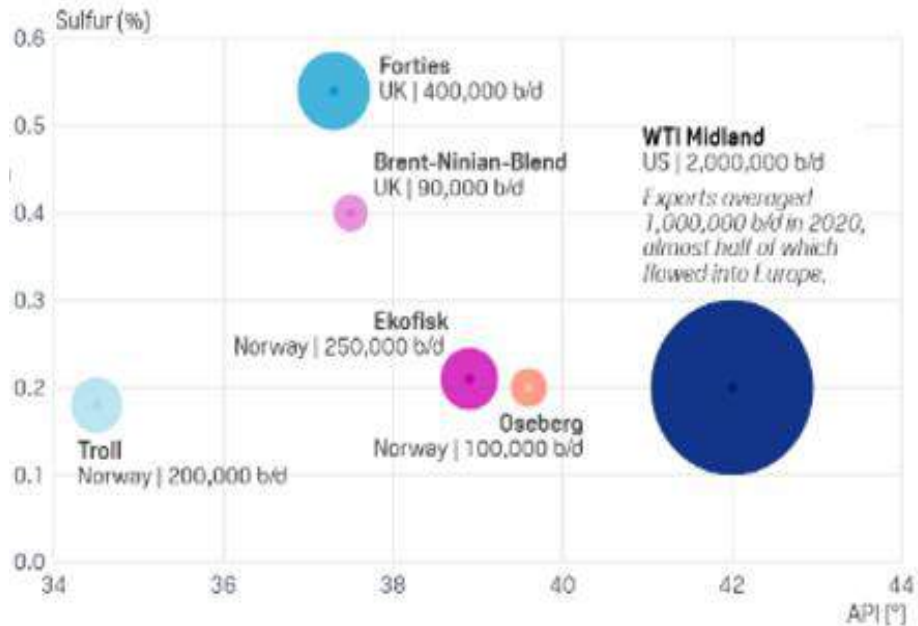
Source: S&P Global

- Russia's seaborne oil exports rises in August as sanctions impact remains muted
- Oil flows top 6 million b/d as product exports find new buyers
- Pace of Russian crude exports to India slows after surge
- Saudi Arabia now EU's second biggest supplier of oil products



WTI Midland a good fit for North Sea basket

Key US crude has similar qualities to Dated Brent complex

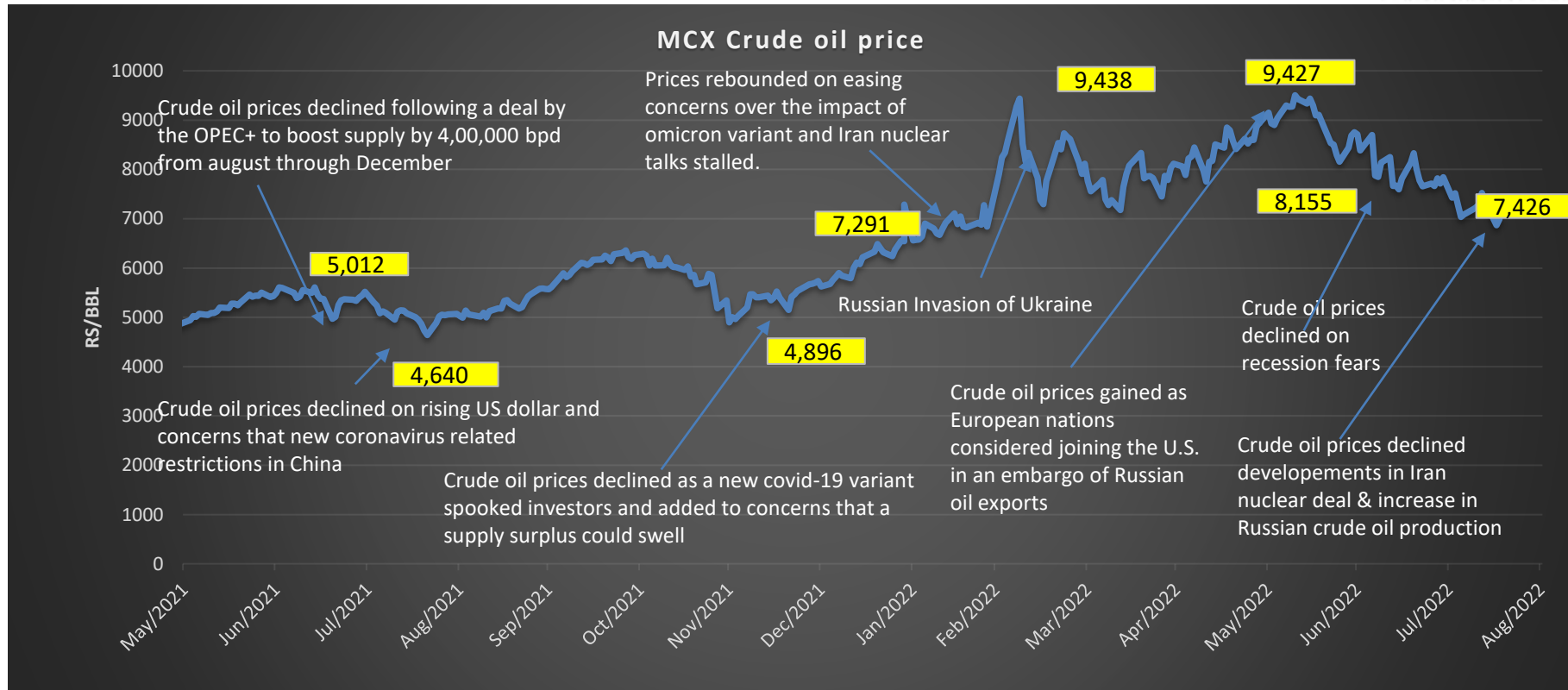


Europe's preference for light sweet crude

Buyers of Dated Brent and WTI Midland



CRUDE OIL MARKET SCENARIO AND TRENDS



Source: Bloomberg & MCX Website

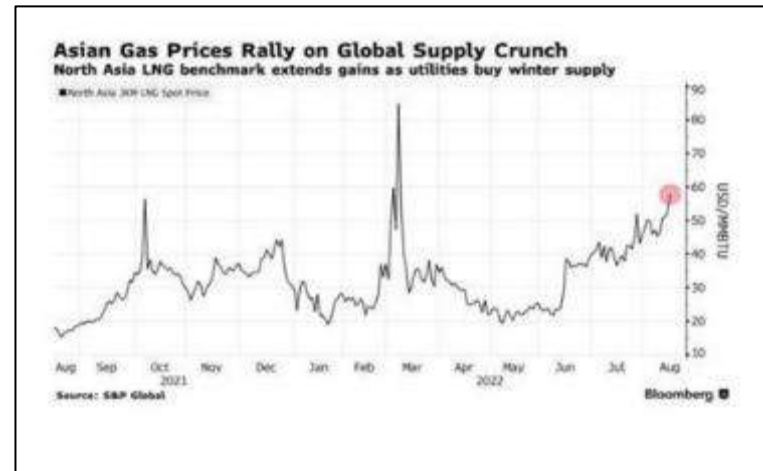
Till 17th Aug 2022



A GLOBAL RUSH TO SECURE SHIPMENTS OF LNG FOR WINTER

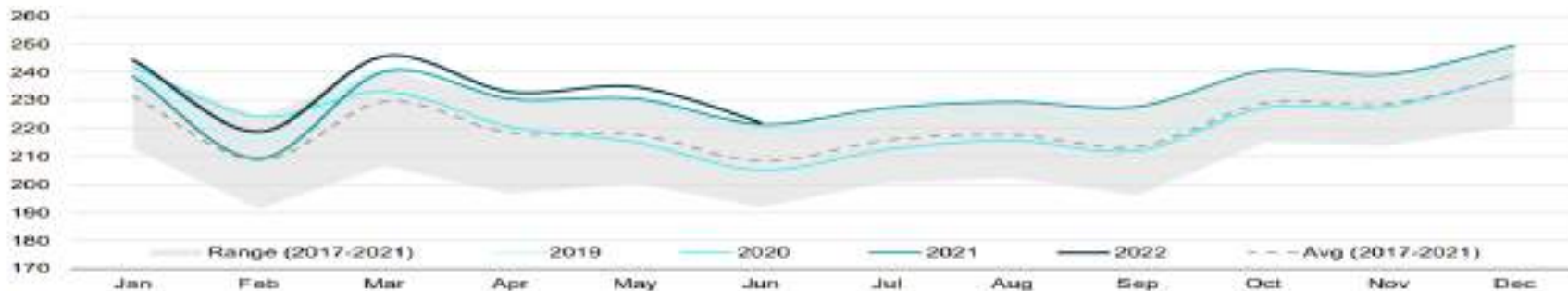


Source: Refinitiv



Asian Spot LNG prices jumped close to \$60/mmbtu during Aug 22

Natural Gas Production (32 Countries)
Billion Cubic Metres

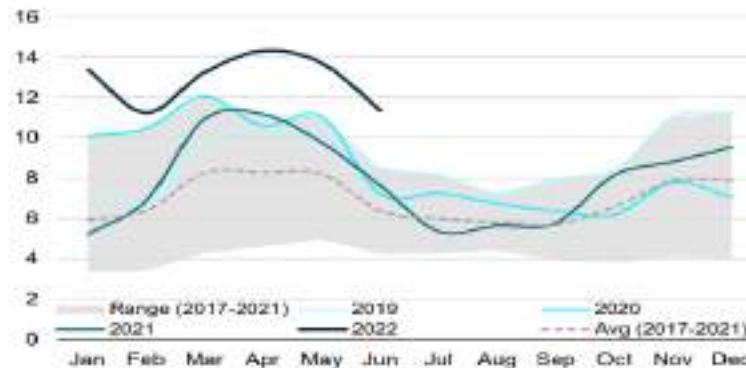


LNG Exports (7 Countries)
Billion Cubic Metres



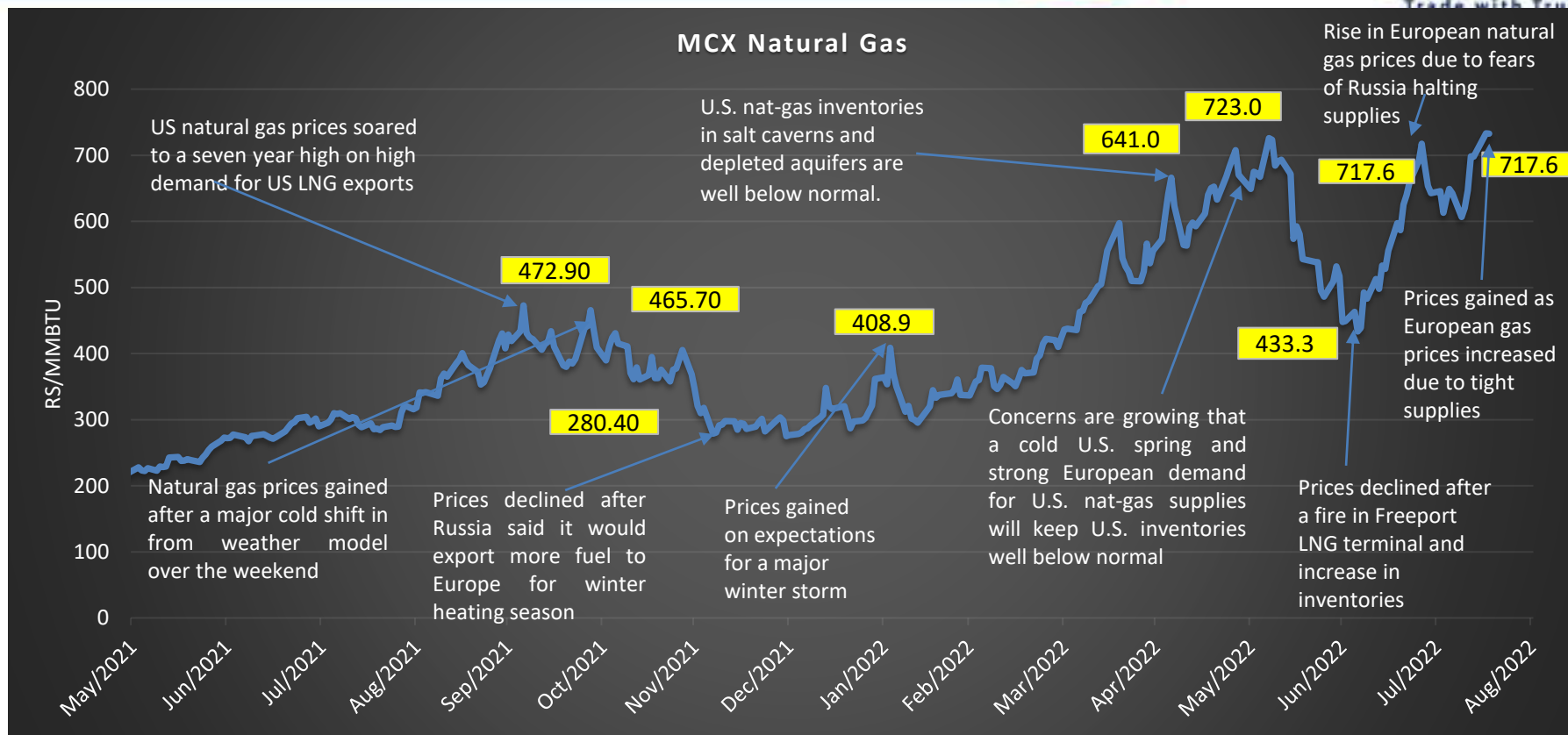
Source: IEF, 2022 Data

EU+UK: LNG Imports
Billion Cubic Metres



Source: IEF, 2022 Data

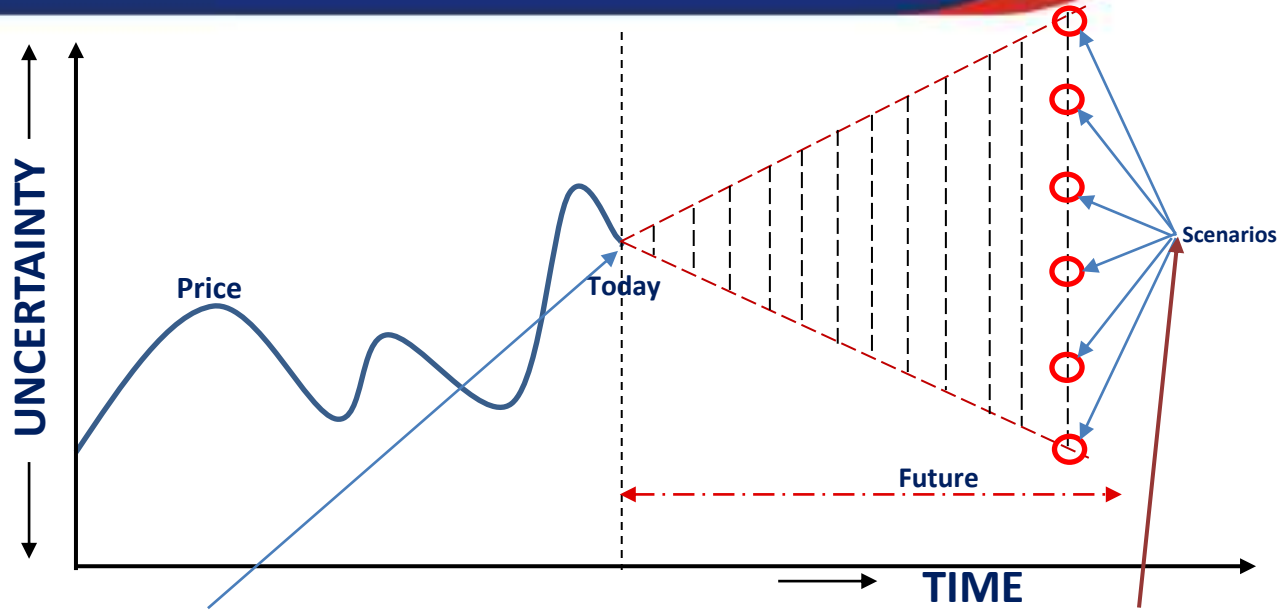
NATURAL GAS MARKET SCENARIO AND TRENDS



Source: Bloomberg & MCX Website

Till 17th Aug 2022

Energy Price Risk Management



Producer / Manufacturer or any value chain partner / commodity stakeholder at “Today” is not aware what might happen in Future.

There could be favourable / unfavourable scenarios in the time unknown (i.e. Future), hence it is imperative to Hedge “Today” and be locked-in at a desired / current price level.

Key Components of the Financial Risk Management Lifecycle



Source: Deloitte.

- Enhanced listing disclosures for listed companies w.r.t commodity price risk and its management
- Listed companies to disclose commodity price risks and commodity hedging activities in AR (Cir. dt. Sep 2, 2015)
- Format prescribed by SEBI (Cir. dt. Nov. 15, 2018)
- All listed entities shall make the disclosures in a prescribed format as part of the Corporate Governance Report in the Annual Report under clause 9(n) of Part C of Schedule V.

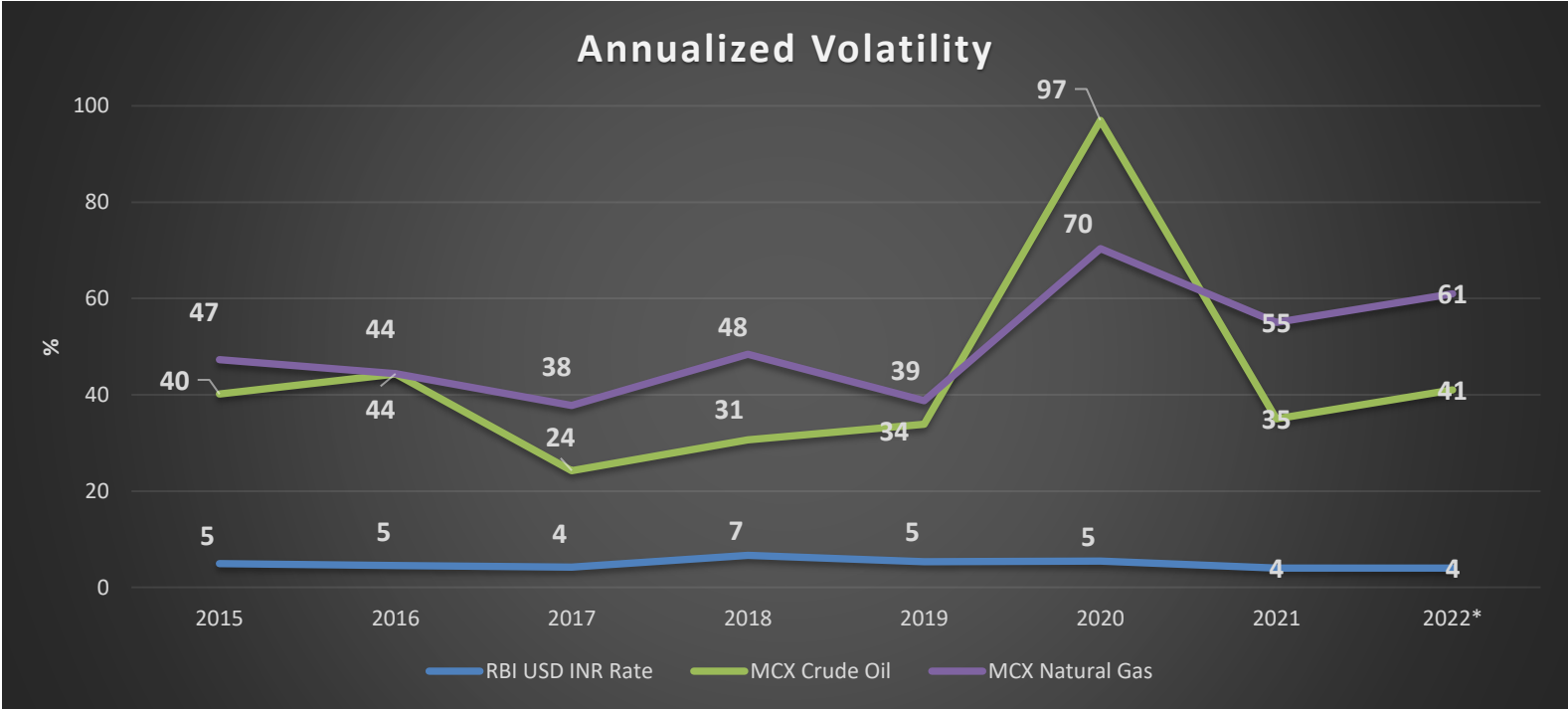
Exposure of the listed entity to commodity and commodity risks faced by the entity throughout the year:

a. Total exposure of the listed entity to commodities in INR

b. Exposure of the listed entity to various commodities:

Commodity Name	Exposure in INR towards the particular commodity	Exposure in Quantity terms towards the particular commodity	% of such exposure hedged through commodity derivatives				Total
			Domestic market		International market		
			OTC	Exchange	OTC	Exchange	

c. Commodity risks faced by the listed entity during the year and how they have been managed.



Source: Bloomberg & MCX Website

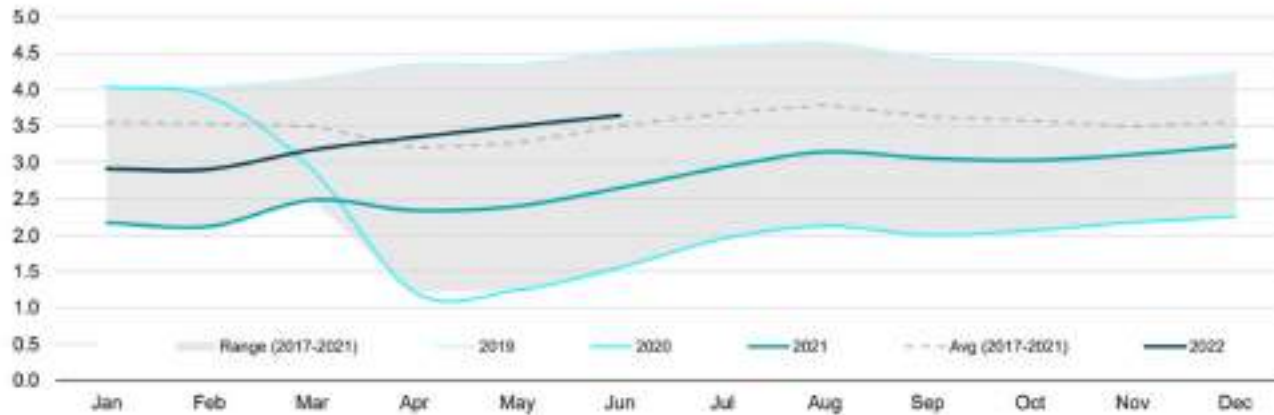
Till 17th Aug 2022

PRODUCTS	INDUSTRIES EXPOSED TO ENERGY PRICE RISK OF PRODUCTS	CORRELATION WITH CRUDE OIL
Furnace oil	Crude Oil Refiners, Glass Manufacturing Companies, Forging /Steel Companies, Textile Manufacturing Companies	94 %
Diesel / Gasoil	Crude oil Refiners , Transportation Companies	96 %
Petrol / Gasoline		94 %
Naphtha	Crude Oil Refiners, Natural gas Producers, Petrochemical Companies	95 %
ATF	Crude Oil Refiners, Airline Companies	96 %
LSHS & LDO	Crude Oil Refiners, Iron and Steel Companies, used in Boilers and Furnaces	97 %
Benzene	Crude Oil Refiners, Petrochemical Companies	78 %

AVIATION TURBINE FUEL PRICE EXPOSURE FOR AIRLINES COMPANIES

Jet Fuel Demand (31 Countries)

Million Barrels Per Day



Source: International energy forum

Aviation Turbine Fuel (ATF) prices have more than 90% correlation with crude oil contracts
Hence crude oil contracts can be used to hedge their price risk

Aviation Turbine Fuel consumption of Airlines and their risk exposure

Company	Aviation Turbine Fuel Consumption (in Rs. Crores) FY 2020-21	Risk Exposure based on Annualized volatility of 90% in Crude oil prices (in Rs. Crores)
Company 1	9,695	8,725
Company 2	2,959	2,663
Company 3	1,528	1,375

Source: Annual Reports of Respective Companies

Natural gas consumption of fertilizer manufacturing companies and their risk exposure

Company	Natural Gas Consumption (in Rs. Crores) FY 2020-21	Risk Exposure based on Annualized volatility of 63% in natural gas (in Rs. Crores)
Company 1	4,511	2,842
Company 2	4,084	2,573
Company 3	568	358
Company 4	370	233

Source: Annual Reports of Respective Companies

Parameter	Company X	Company Y
PAT to Operational Revenue	6%	1%
Growth in PAT (YOY)	32%	2%
Share of material consumed to operational revenue	92%	99%

Company X: Has disclosed of using derivative instruments to manage risk associated with commodity price fluctuations.

Company Y: Has not made any disclosures regarding commodity price risk and its management

HEDGING EXAMPLE OF A PACKAGING COMPANY THROUGH CRUDE OIL CONTRACTS

- ✓ A packaging company Hedging HDPE (High Density Poly Ethylene) price by locking in MCX Crude oil contract

A Packaging Company's monthly consumption of HDPE is 1,00,000 Kg

Company calculated the budgeted cost based on the spot price as on 1st July 2022 , budgeted cost(1,00,000*125)= 1.2 Crores, Anticipating a increase in price , company adopts the following hedging strategy

Date	Spot Market Price(Rs/Kg)	Futures Price(Rs/bbl)	Buy Futures	Sell Futures	Spot Market
1st July 2022	125	7,700	Buys 15 lots MCX Crude oil Futures at Rs 7,700/bbl		
31th July 2022	130	7,800		Sells 15 Lots MCX Crude oil Futures at Rs 7,800/bbl	Buy HDPE from Physical market at Rs 130/kg,
Loss incurred due to rise in spot market price from Rs 125/kg to Rs 130/kg =Rs(5)/Kg, ((5)*,100,000)=Rs (5,00,000)					
Profit from Hedging= (7,800-7,700)=Rs 100/bbl=(1,500*100)=Rs 15,00,000					
Net Position = Rs 10,00,000					

Note: 15 Lots of crude oil futures contract was brought to match the budgeted cost in the physical market
1 Lot= 100 bbls

HEDGING EXAMPLE BY LOCKING IN GAS PRICES THROUGH NATURAL GAS CONTRACTS

- ✓ Hedging Natural gas price by locking in MCX Natural gas contract (Henry Hub linked)

Fertilizer Manufacturing Company's monthly usage of natural gas is 10 lakh MMBTU

Company calculated the budgeted cost based on the spot price as on 1st June , budgeted cost(10 lakh MMBTU*600)= 60 Crore

Date	Spot Market Price(Rs/MMBTU)	Futures Price(Rs/MMBTU)	Buy Futures	Sell Futures	Spot Market
1st June 2022	600	602	Buys MCX Natural Gas Futures at Rs 602/MMBTU,		
31st June 2022	607	608		Sells MCX Natural Gas Futures at Rs 608/MMBTU,	Buy Natural gas from Physical market at Rs 605/MMBTU, Total amount=60.5 Crores
Loss incurred due to rise in spot market price from Rs 600/MMBTU to Rs 607/MMBTU(10 Lakh MMBTU*600)-(10 Lakh MMBTU*607)= (-)0.7 Crores					
Profit from Hedging= (+)0.60 Crores					
Net Position = (-)0.10 Crores					

Exchange Transaction Charges on Futures(per Rs. 1 lakh of turnover)

Average daily turnover *	Transaction fee rates (per Rs. 1 lakh of turnover)
Upto Rs. 350 crore	Rs. 2.60
On incremental turnover above Rs. 350 crore	Rs. 1.75

*Average daily turnover will be calculated at the end of every month by way of dividing the total turnover of the member by the total number of trading days.

Transaction fees on options contracts applicable from 1st October, 2021

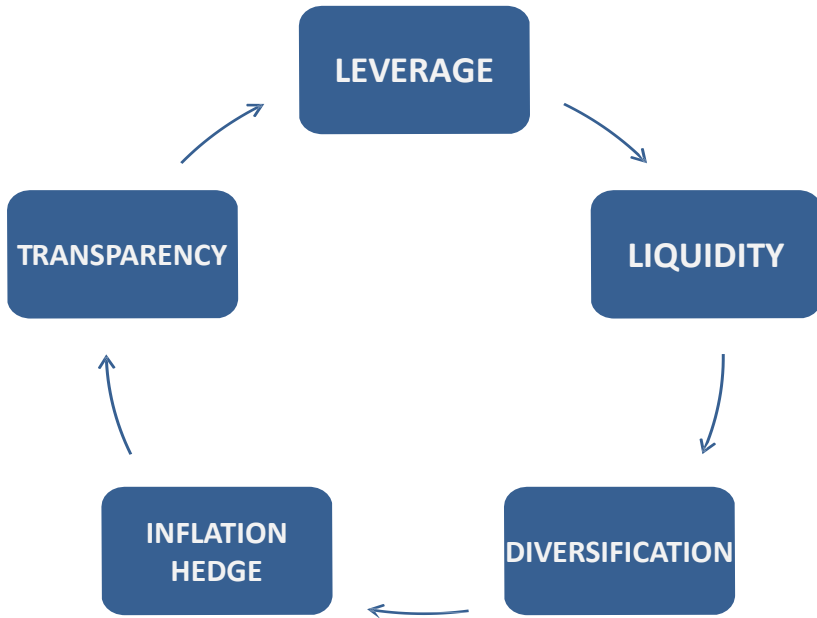
Slab	Average Daily Premium Turnover* (in Rs. Crs)	Transaction charges (Rs per lakh of premium value)
1	Up to Rs 5 crore	Rs 50
2	On incremental premium turnover above Rs 5 crore	Rs 40

Average daily premium turnover will be calculated at the end of every month by way of dividing the total premium turnover of the member by the total number of trading days.

Particulars	Crude oil futures	Natural gas
Lot Size	100 bbls	1,250 MMBtu
Contract Value (in Rs)	8,00,000	6,25,000
Exchange Transaction Fees (Rs.260 per Rs. 1 Crore of turnover)	41.6	32.5
GST(18%)	7.49	5.85
CTT(0.01% on sell side)	80	62.5
SEBI Charges(0.0001% on both sides)	1.6	1.25
Stamp Duty(0.002% on buy side)	16	12.5
Total Cost (Both sides)	146.7	114.6
	0.018%	0.018%

Considered buying and selling of Crude oil futures at Rs 8,000/bbl and natural gas at Rs 500/MMBtu
 Brokerage is not included

Commodity derivatives –An Investment Instrument



SEBI enables all major institutional players to participate in the segment



Expanding Market

FPIs will be allowed only in cash-settled contracts for now

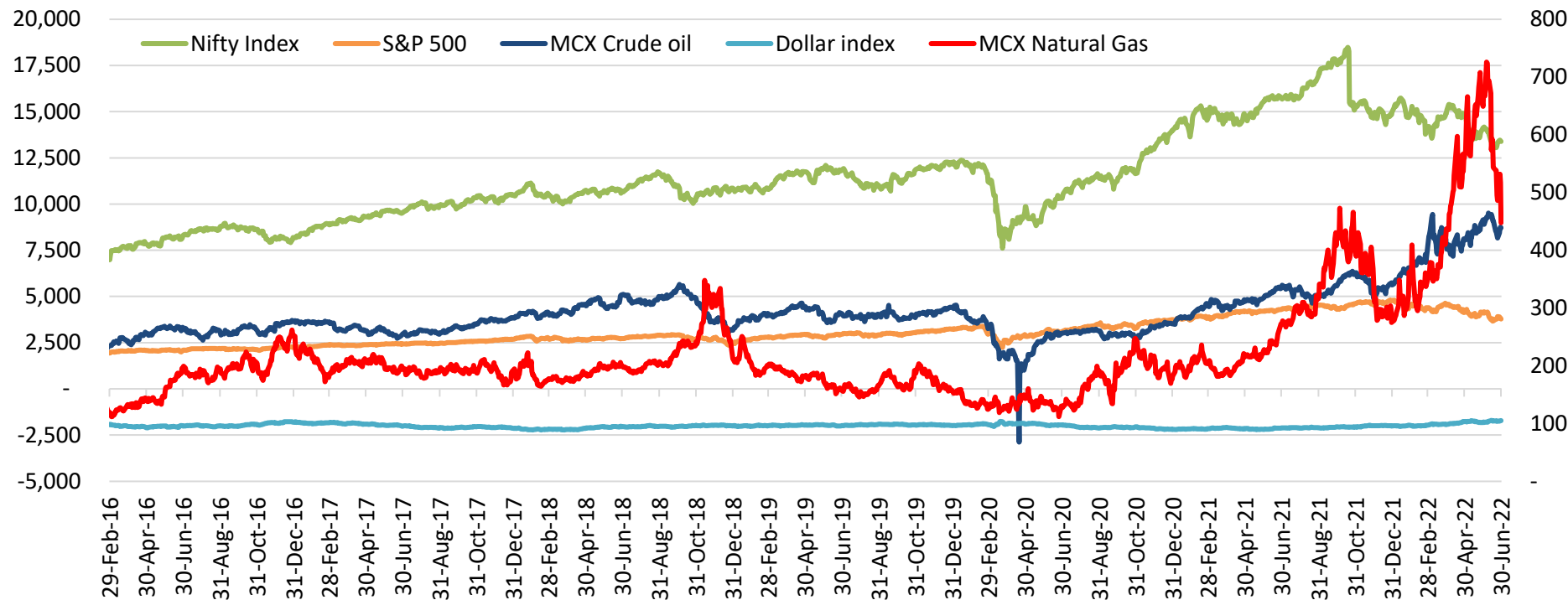
Sebi discontinues existing eligible foreign entity route, which required actual exposure to physical commodities

FPIs allowed exposure of 20% of the client level position limit in a particular commodity contract, similar to currency derivatives

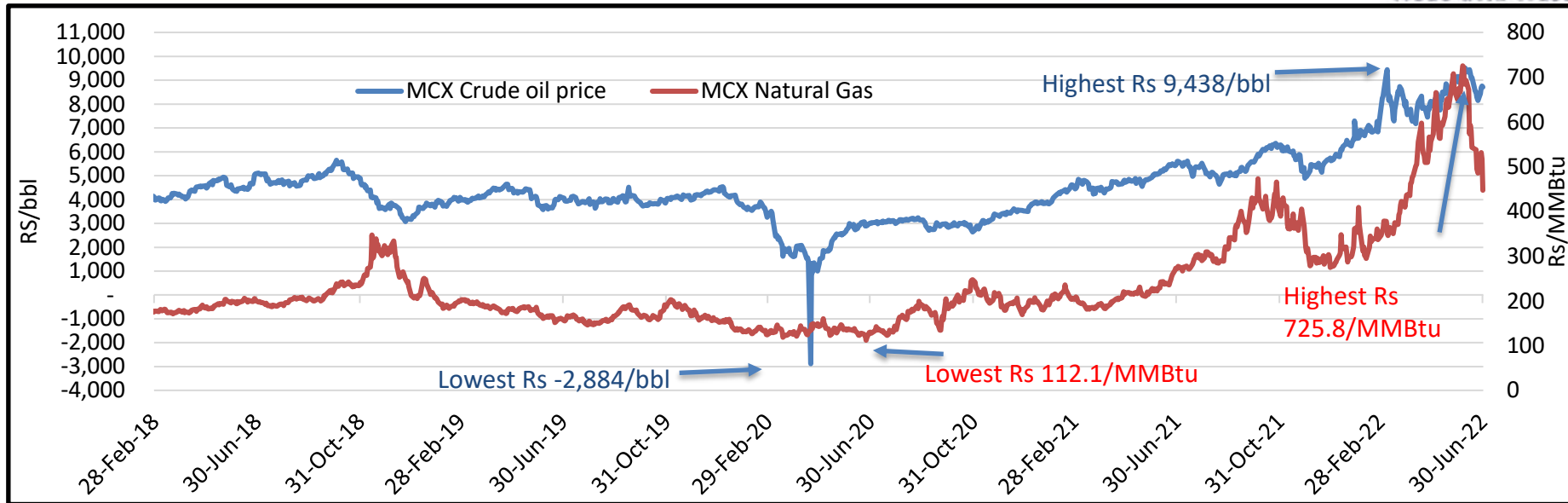
Analysts say the move will reduce pricing gaps and help enhance liquidity in Indian markets

- Allowing FPIs would build on volumes & depth, which may reduce transaction costs by achieving economies of scale
- It will further provide opportunities for arbitrageurs, hedgers, and investors to effectively manage their portfolio

PORTFOLIO DIVERSIFICATION-COMMODITY DERIVATIVES AS INVESTMENTS



	Nifty 50 Index	S&P 500 Index	Dollar Index
MCX Crude oil	0.7	0.7	0.1
MCX Natural gas	0.6	0.6	0.3



Average Daily Volatility (in %)					
	2018	2019	2020	2021	2022*
Crude Oil	2.0	2.2	21.9	2.2	3.2
Natural Gas	3.1	2.5	2.5	3.5	4.9
NIFTY 50 Index	0.8	0.9	1.9	1.0	1.3

Returns (in %)			
	1 year	2 year	3 year
Crude Oil	59	89	113
Natural Gas	64	243	179
NIFTY 50 Index	3	64	44

*Till 30th June 2022

Prospective Energy Contracts @MCX

Electricity Futures

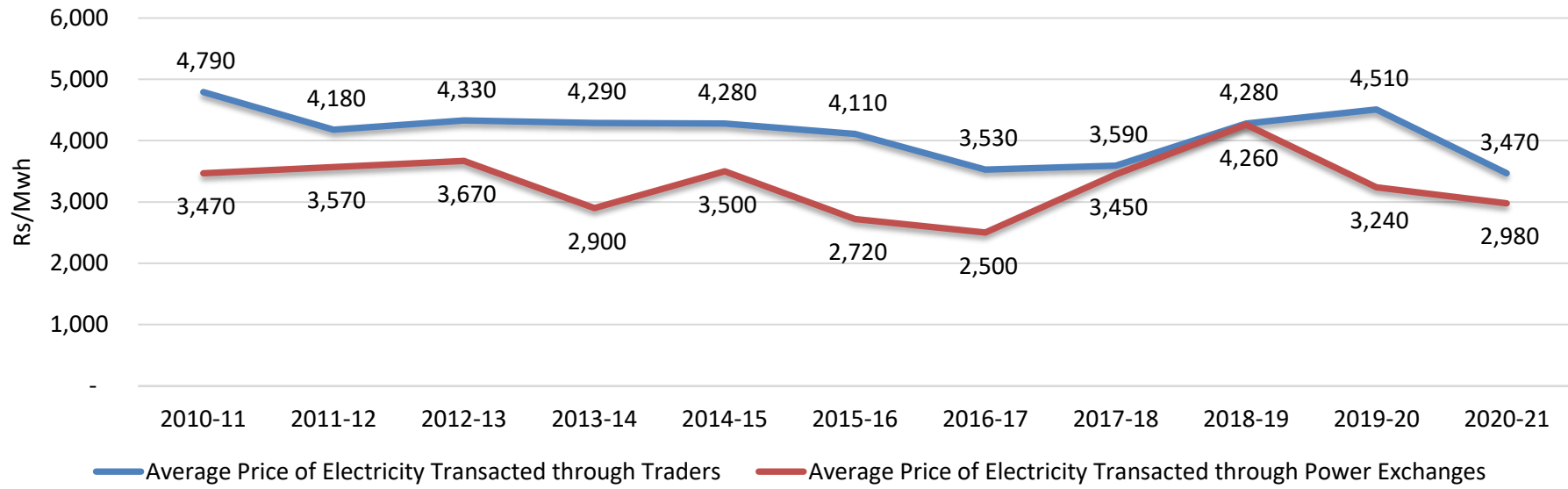
Indian Electricity Market Structure:

- Indian Electricity market is dominated by **long term power purchase agreements (PPAs)** between power producers and discom/consumers.
- Short term market refers to electricity contracts of **duration lesser than one year**
- **Power Exchanges** are gaining importance in the electricity short term market

	2008-09(% share)	2021-22(% share)
Long term PPA for 25 years through long term	93.8	86.4
Total Short term for less than 1 year	6.2	13.6
Exchanges	0.4	7.4
Bilateral Transactions (traders & Direct)	3.7	4.4
Unscheduled Interchange	2.1	1.8

Source: CERC, Short Term Power Market and IEX

PRICES OF ELECTRICITY TRADED THROUGH TRADERS AND EXCHANGES



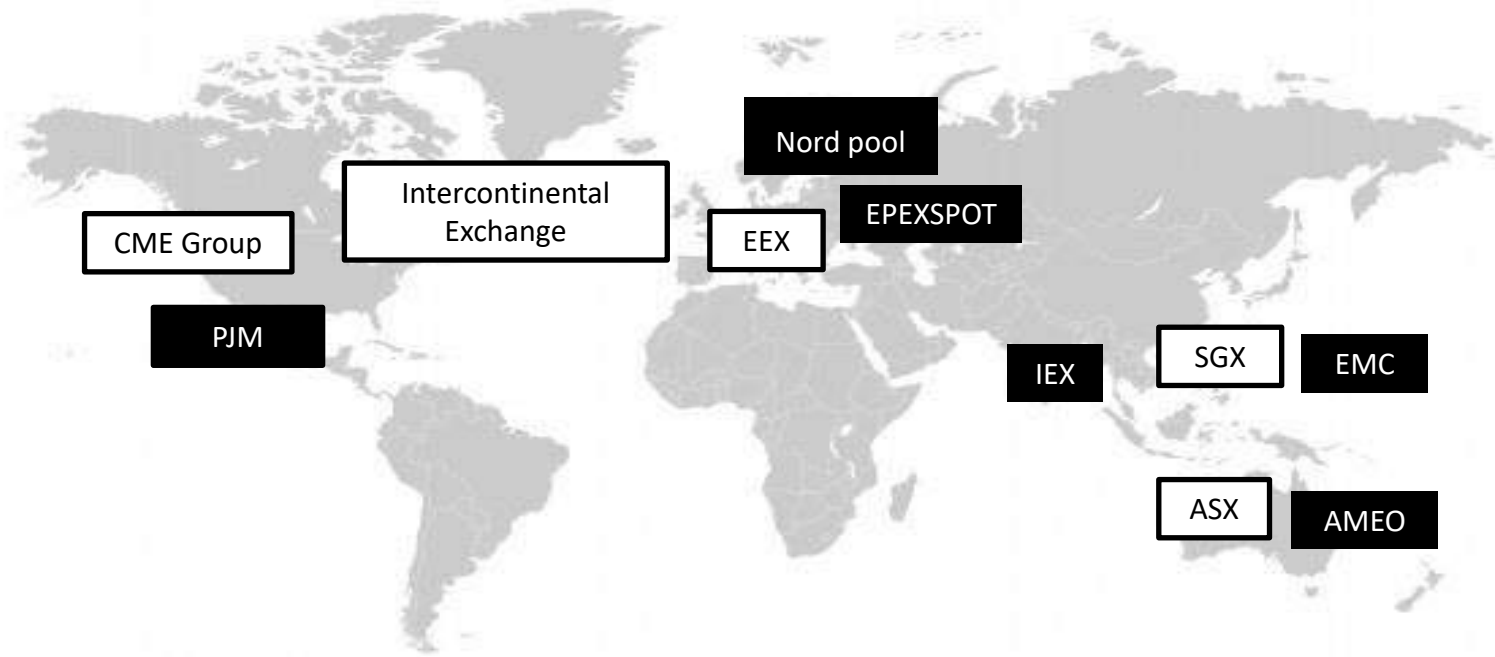
	Electricity Transacted through Traders	Electricity Transacted through Power Exchanges
Max	4,790	4,260
Min	3,470	2,500
Average	4,124	3,296

SPOT MARKET DAM MCP (Rs. /Mwh)

Year	Minimum	Maximum	Average	Average Daily Volatility (%)
2016	1,574	3,444	2,400	8
2017	1,115	5,615	3,020	11
2018	2,490	8,949	3,935	14
2019	1,488	4,382	3,115	10
2020	1,635	3,249	2,619	8
2021	1,786	16,416	3,948	17
2022*	2,631	18,674	6,402	22

Source: IEX
*till July 2022





Futures Exchange

Spot Exchange

Countries	USA	UK/Europe	Singapore	Australia
Spot Exchange/Market	Pennsylvania, Jersey, Maryland Power Pool (PJM), it is a regional transmission organization (RTO)	EPEX SPOT / Nord pool (For Nordic Futures)	Energy Market Company (EMC)	Australian Energy Market Operator (AEMO).
Futures Exchange	NYMEX (CME Group)	The European Energy Exchange (EEX)	Singapore Exchange Limited (SGX)	The Australian Securities Exchange (ASX)
Types Of Contracts	<ul style="list-style-type: none"> – PJM, NYISO Peak and Off peak contracts – Real time and Day Ahead contracts 	<ul style="list-style-type: none"> Baseload and Peak load futures – German – Nordic – Austria 	Uniform Singapore Energy Price (USEP) Quarterly and Monthly Baseload futures	New South Wales, Queensland base and peak load futures contracts
Futures Settlement Mechanism	The arithmetic average of PJM western hub real prices	Spot market index as determined by EPEX Spot	The arithmetic average of all half- hourly Uniform Singapore Energy Price (USEP)	Arithmetic average of the Wholesale Electricity Pool Market base load spot prices on a half hourly basis

EUROPEAN POWER PRICES-(RUSSIA-UKRAINE WAR EFFECT)

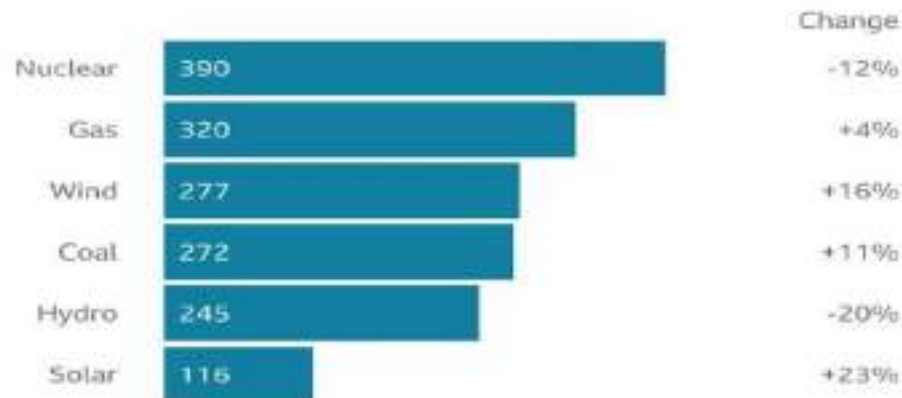
- Europe's benchmark electricity price (German Power Futures) an indicator for costs across the continent traded at €500/MWh

- The generation of electricity from hydropower in Europe has dropped by 20 % as a result of the ongoing heatwave putting strains on energy supplies and nuclear facilities



How Europe generates energy

Amount generated (TWh) by type between January and July 2022, with percentage change since 2021



Source: Rystad Energy

- ✓ **Price Quote** - Rs. per MWh (excluding all taxes and levies)
- ✓ **Trading Unit** – 50 Mwh
- ✓ **Tick size** - Rs. 1 per MWh
- ✓ **Settlement** - Cash Settled
- ✓ **Due Date Rate** – Based on Average of the IEX DAM MCP



- TOCOM's Electricity Futures was launched on September 2019
- The traded volume of electricity futures during 2021 was 3,00,000 Mwh
- The number of participants increased from 13 to 144 by March 2022
- **Hike in JEPX prices urged government to call for effective use of futures contracts**
- **In October 2021, Government of Japan approved electricity futures as a valid risk management tool**

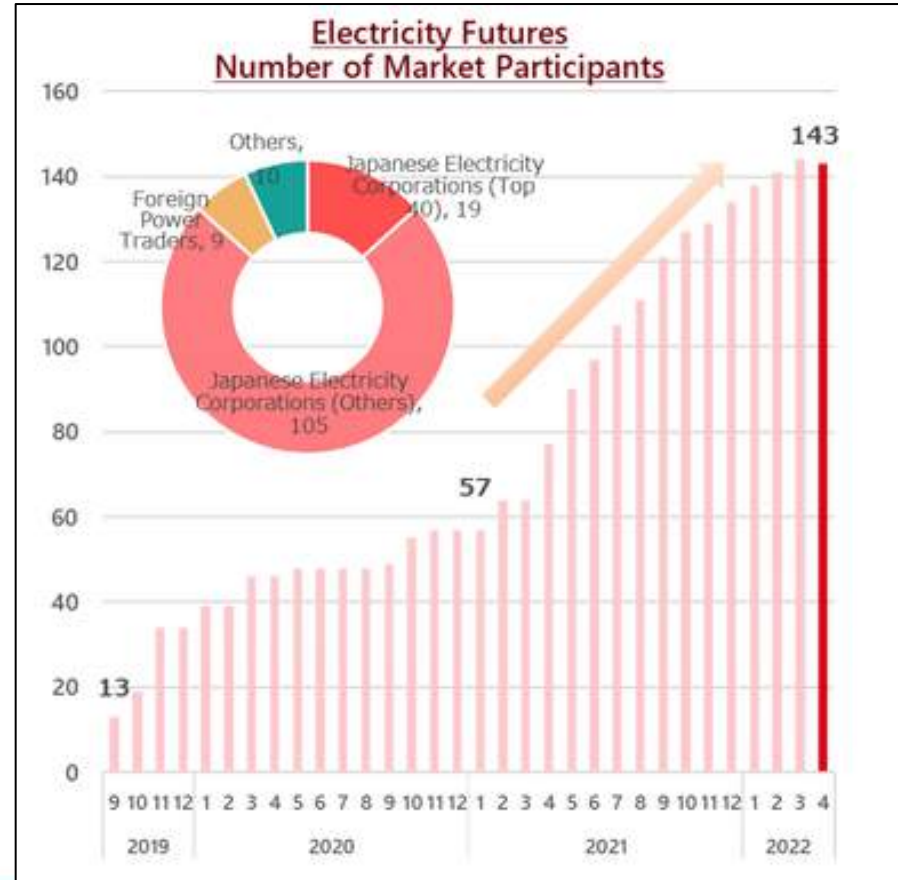


ILLUSTRATION - HEDGING ELECTRICITY PRICES BY CONSUMERS

A commercial building complex has a monthly consumption of 50 Mwh, anticipating a rise in prices the commercial building complex adopts the following hedging procedure :

- On 1st August 2022, the commercial building complex buys electricity futures on the Exchange
- The commercial building complex retains the buy position till 30th August 2022
- On 30th August 2022, the commercial building complex closes out the position by selling or reversing his buy position

Date	Spot Market Price (Rs. /Mwh)	Futures Price (Rs. /Mwh)	Sell Futures	Buy Futures	Spot Market
1st August 2022	4,500	5,000		commercial building complex buys MCX Electricity Futures at rate of Rs. 5,000 per Mwh (Rs 5,000 per Mwh *50 Mwh) = Rs 2,50,000.	
30 th August 2022	6,000	7,000	commercial building complex sells MCX Electricity Futures at Rs. 7,000 per Mwh (Rs 7,000 per Mwh *50 Mwh) = Rs 3,50,000.		commercial building complex buys electricity at spot market rate of Rs 6,000 per Mwh (Rs 6,000 per Mwh *50 Mwh) = Rs 3,00,000.
Loss incurred due to rise in spot market price = (Rs 4,500 / Mwh *50 Mwh) - (Rs 6,000 / Mwh *50 Mwh) = (Rs 75,000)					
Profit in Futures Market = Rs 3,50,000 - Rs 2,50,000 = Rs 1,00,000					
Impact of Hedging Price Risk = -Rs 75,000 +Rs 1,00,000 = Rs. 25,000 (Savings)					

*Thank
You*
for your time

Get in Touch

ruchi.shukla@mcxindia.com

70456 44639

Energy Options Contracts @MCX

Option Series	Exercise Mechanism
In the money (ITM)	Exercised automatically, unless 'contrary instruction' has been given by long position holders In the event contrary instruction are given by ITM option position holders, the positions shall expire worthless.
Out of the money (OTM)	Expire worthless

Note: All devolved futures positions shall be considered to be opened at the strike price of the exercised options.

Note: With reference to the latest SEBI circular on Modification in Exercise Mechanism, there would be no CTM Series for **newly launch option expiries w.e.f February 1 , 2022**

MCX View Terminal Ver 11.7.4.3 (Powered By 63moons-Engines)

File View Market Tools Windows Help



MCXINDEX 4728.35 (+1.88)

FUTCOM ALUMINI 29MAR2019

Market Watch-MCX

Disto...	U/L Assst	Symbol	Series/Ex	SC Price Q	Buy Qty	Buy Price	Sell Price	Sell Qty	LTP	%	Net C.	U/L Prod.	Volume	Value (₹)	OI	High	Low	Open	Close	ATP
FUTCOM	CRUDE OIL	CRUDEOIL	19MAR2019	1 BBL	4100 BBL	3995.00	3995.00	21500 BBL	3995.00	0.2258	9.00	4016.00	1158100 BBL	74257.80	1461300 BBL	4106.00	3998.00	3995.00	3995.00	3995.00
FUTCOM	CRUDE OIL	CRUDEOIL	18APR2019	1 BBL	1100 BBL	4036.00	4040.00	1100 BBL	4037.00	0.1986	8.00	4016.00	13400 BBL	541.19	63900 BBL	4152.00	4032.00	4051.00	4029.00	4038.7
FUTCOM	CRUDE OIL	CRUDEOIL	20MAY2019	1 BBL	100 BBL	4070.00	4088.00	100 BBL		0.0000	0.00	4016.00				800 BBL				4110.00
FUTCOM	NATURAL GAS	NATURAL GAS	29MAR2019	1 mmBtu	40000 mmBtu	203.20	203.30	53750 mmBtu	203.20	0.3457	0.70	202.00	3683750 mmBtu	7477.79	6751250 mmBtu	203.40	202.60	203.10	202.50	202.9
FUTCOM	NATURAL GAS	NATURAL GAS	25APR2019	1 mmBtu	1250 mmBtu	204.60	204.80	1250 mmBtu	204.80	0.3430	0.70	202.00	52500 mmBtu	107.35	688750 mmBtu	204.90	204.10	204.80	204.10	204.4
FUTCOM	NATURAL GAS	NATURAL GAS	20MAY2019	1 mmBtu	2500 mmBtu	207.20	208.30	1250 mmBtu		0.0000	0.00	202.00			27510 mmBtu					210.00

Order Matching - Price-Time priority

Order Types

- Time Based Orders

- Day Order (EOS/Day)
- Immediate or Cancel (IOC)
- Good Till Cancelled (GTC)
- Good Till Date (GTD)

- Price based Orders

- Limit Order
- Market Order
- Stop Loss Order

Market Prices - FUTCOM CRUDEOIL 19MAR2019

Dist. Name	Symbol	Series	Expiry Date	Strike Price	Opt. Type
FUTCOM	CRUDEOIL		19MAR2019		
00	10000	3995.00	3995.00	0000	00
00	10000	3992.00	3995.00	0000	00
01	0000	3991.00	3995.00	10000	00
07	0000	3990.00	3997.00	0000	00
12	0000	3980.00	3990.00	0000	00

440000 BBL LUT : 01:07:47 PM 05/03/2019 505700 BBL LTT : 01:07:13 PM 05/03/2019

LTP : 3995.00 Open : 3995.00
 LTQ : 200 High : 4005.00
 Volume : 1000000 Low : 3980.00
 Value(₹) : 74600.35 Close : 3995.00
 ATP : 3995.43 Life Time High : 5449.00
 % Change : 0.1750 Life Time Low : 3090.00
 OI : 1403200 OPR : 2027.00 - 4145.00

Market Prices - FUTCOM NATURAL GAS 29MAR2019

Dist. Name	Symbol	Series	Expiry Date	Strike Price	Opt. Type
FUTCOM	NATURAL GAS		29MAR2019		
01	47500	203.20	203.00	41200	00
00	65000	203.10	203.40	40200	00
00	100700	203.00	203.50	07000	01
00	00000	202.90	203.00	07000	00
T	15750	202.90	203.70	02000	00

3470000 mmBtu LUT : 01:07:49 PM 05/03/2019 1403700 mmBtu LTT : 01:07:44 PM 05/03/2019

LTP : 203.20 Open : 203.20
 LTQ : 1300 High : 203.40
 Volume : 3725750 Low : 202.60
 Value(₹) : 7388.11 Close : 202.50
 ATP : 203.00 Life Time High : 211.40
 % Change : 0.2061 Life Time Low : 185.30
 OI : 6725000 OPR : 154.40 - 235.00

TRADING TERMINAL SNAPSHOTS- FUTURES (BID &ASK)

0.0000 17810.00

Market Picture - FUTCOM NATURALGAS 26AUG2022

Inst. Name	Symbol	Series	Expiry Date	Strike Price	Opt. Type				
FUTCOM	NATURALGAS		26AUG2022						
1	1250	690.00	681.00	1250	1	LTP :	681.00	Open :	693.00
2	17500	680.60	681.10	5000	4	LTQ :	1250	High :	698.80
2	3750	680.50	681.20	3750	2	Volume :	13927500	Low :	681.00
1	1250	680.40	681.30	5000	4	Value(Becs) :	95245.04	Close :	696.50
1	1250	680.30	681.40	1250	1	ATP :	691.06	Life Time High :	746.20
						% Change :	-2.5054	Life Time Low :	426.50
						OT :	7473750	DPR :	670.60 - 726.40

276250 mmBtu LUT : 05:09:04 PM 12/08/2022 883700 mmBtu
LTT : 05:09:04 PM 12/08/2022

Activate Windows
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MEM/461/2022, dated Aug 02, 2022
ments" refer circular no. MCX/INSP/462/2022, dated Aug 02, 2022

Natural Gas
futures
Market
picture

0.000 17810.00

Market Picture - FUTCOM CRUDEOIL 19AUG2022

Inst. Name	Symbol	Series	Expiry Date	Strike Price	Opt. Type				
FUTCOM	CRUDEOIL		19AUG2022						
4	700	7409.00	7413.00	800	2	LTP :	7411.00	Open :	7484.00
4	800	7408.00	7412.00	200	2	LTQ :	500	High :	7552.00
4	900	7407.00	7411.00	300	3	Volume :	1420500	Low :	7391.00
4	800	7406.00	7410.00	100	1	Value(Becs) :	105127.46	Close :	7526.00
4	400	7405.00	7415.00	100	1	ATP :	7469.03	Life Time High :	9227.00
						% Change :	-1.5280	Life Time Low :	6944.00
						OT :	410800	DPR :	7125.00 - 7827.00

52000 BBL LUT : 05:08:35 PM 12/08/2022 38800 BBL
LTT : 05:08:30 PM 12/08/2022

Activate Windows
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MEM/461/2022, dated Aug 02, 2022
ments" refer circular no. MCX/INSP/462/2022, dated Aug 02, 2022

Crude oil
futures
Market
picture

TRADING TERMINAL SNAPSHOTS- OPTIONS CHAIN

File View Market Tools Windows Help

MCXCOMPDEX 13216.28 (-13.60)

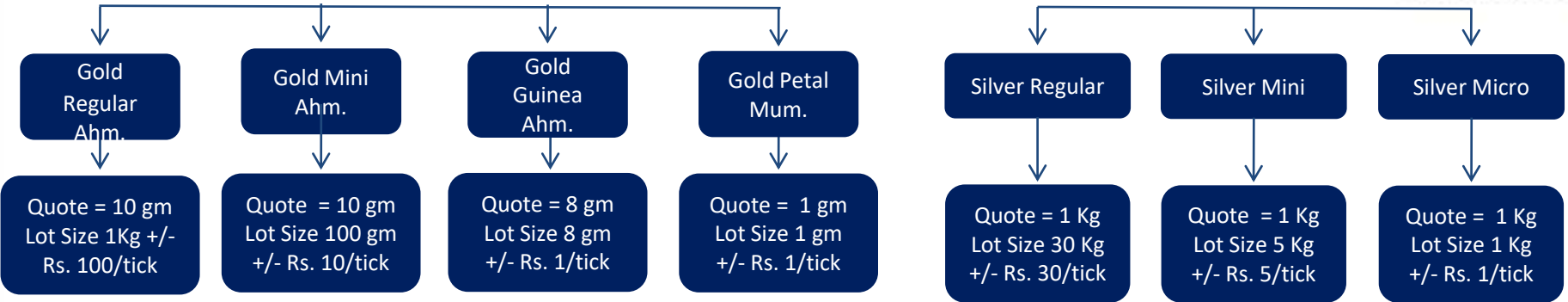
FUTIDX MCXMETLDEX 21SEP2022

Option Chain for Expiry Date

Call												Put											
ID	Volume	IV (%)	IV (Risk)	IV (ASK)	IV (BID)	Buy Qty	Buy Price	Sell Price	Sell Qty	Strike Price	IV (%)	IV (Risk)	IV (ASK)	IV (BID)	Buy Qty	Buy Price	Sell Price	Sell Qty	Strike Price	Volume	Open Int	Flags	
	350.6980									1151.00										0.0100			
	346.1375					100 BBL	1161.30			1200.00					500 BBL	3.80				0.0100			
	341.7580									1256.00										0.0100			
	337.3250					100 BBL	1062.40			1301.00					100 BBL	5.10	35.00	100 BBL		80.1250			2000 BBL
	332.9375									1356.00										40.8000			
	328.5500					100 BBL	966.80			1401.00					100 BBL	9.50	38.00	100 BBL	15.00	71.7000			1900 BBL 2500 BBL
380 BBL	324.2000									1456.00										40.2000			
	319.8200					100 BBL	894.00	1580.00	100 BBL	1501.00					1700 BBL	16.80	44.20	100 BBL	14.00	64.5250			199500... 230000...
	315.5375									1556.00										39.6000			
180 BBL	311.2025					100 BBL	300.10	838.00	100 BBL	1601.00					180 BBL	10.30	38.20	200 BBL	13.00	59.0000			32000... 41000...
	307.0250									1656.00										39.2000			
780 BBL	302.6000					300 BBL	722.20	742.40	300 BBL	1701.00					180 BBL	21.50	32.50	200 BBL	21.50	58.1250			45500... 62100...
	298.4500									1756.00										38.8500			
5080 BBL	294.0250					300 BBL	629.10	649.60	300 BBL	1801.00					300 BBL	27.60	28.00	100 BBL	27.60	55.2750			137000... 134400...
	289.8000									1856.00										36.2000			
3780 BBL 3900 BBL	285.3125					500 BBL	300 BBL	541.50	548.40	100 BBL	1901.00				100 BBL	38.30	38.00	300 BBL	38.90	53.0250			103000... 183100...
	281.0250									1956.00					500 BBL	28.30				37.5750			
6080... 38000... 50... 10000	276.7500					450 BBL	100 BBL	461.00	465.00	100 BBL	2001.00				100 BBL	51.70	52.00	400 BBL	51.70	51.6375			105500... 459100...
	272.4750									2056.00					300 BBL	46.00	88.40	300 BBL	23.30	39.8625			300 BBL 300 BBL
30400... 71000... 40... 2500	268.2500					377.30	400 BBL	377.50	381.70	100 BBL	2101.00				200 BBL	60.80	78.30	200 BBL	78.00	49.0375			649200... 130500...
	264.0000					500 BBL	302.70	305.30	500 BBL	2156.00					500 BBL	59.60				35.5000			
400 BBL	259.7500					200 BBL	200 BBL	302.90	305.70	200 BBL	2201.00				200 BBL	96.70	47.80	500 BBL	96.70	48.8625			138120... 386100...
96700... 115000... 49... 3125	255.5000					307.30	200 BBL	241.30	243.40	300 BBL	2251.00				500 BBL	86.50	140.00	500 BBL	64.40	34.8917			300 BBL 300 BBL
	251.2500					243.90	300 BBL	243.30	243.40	300 BBL	2301.00				000 BBL	126.80	129.90	400 BBL	129.40	47.4917			123570... 250100...
400 BBL	247.0000					191.20	300 BBL	203.20	243.50	500 BBL	2351.00				500 BBL	138.30	162.70	500 BBL		51.6750			500 BBL
182500... 698900... 40... 10000	242.7500					185.20	400 BBL	185.20	187.30	400 BBL	2401.00				400 BBL	171.60	179.60	400 BBL	171.60	46.5250			148100... 291000...
	238.5000					175.80	300 BBL	157.00	178.00	500 BBL	2451.00				500 BBL	182.50	222.30	400 BBL	161.40	36.8250			200 BBL 200 BBL
880 BBL	234.2500					138.30	500 BBL	138.30	138.90	100 BBL	2501.00				500 BBL	223.90	225.40	500 BBL	225.00	46.1862			161000... 151000...
290 BBL	229.7500					142.20	500 BBL	112.30	139.20	500 BBL	2551.00				500 BBL	239.90	270.10	500 BBL		25.0125			
300700... 107600... 40... 7000	225.5000					99.70	400 BBL	99.40	100.30	300 BBL	2601.00				100 BBL	278.80	287.10	100 BBL	202.00	44.2125			294500... 80000...
	221.2500					104.50	500 BBL	80.00	100.80	500 BBL	2651.00				500 BBL	286.70	334.20	500 BBL		0.0000			
180 BBL	217.0000					78.20	400 BBL	70.10	70.50	300 BBL	2701.00				100 BBL	389.60	368.20	500 BBL	356.00	44.7750			45000... 34100...
1340 BBL	212.7500					300 BBL	39.50	40.60	500 BBL	2751.00					500 BBL	366.80	452.70	500 BBL		0.0000			500 BBL
240 BBL	208.5000					40.00	200 BBL	69.60	50.40	200 BBL	2801.00				300 BBL	429.90	442.50	300 BBL	448.10	49.0125			7200 BBL 42700...
180 BBL	204.2500					300 BBL	38.40	40.50	500 BBL	2851.00										0.0000			100 BBL
130 BBL	200.0000					38.70	400 BBL	38.50	39.30	500 BBL	2901.00				400 BBL	514.80	536.20	300 BBL	541.10	53.8125			600 BBL 25900...
380 BBL	195.7500									2956.00										0.0000			
477000... 817000... 50... 4375	191.5000					38.70	300 BBL	38.30	38.70	200 BBL	3001.00				300 BBL	601.30	626.00	300 BBL	603.00	39.4500			3100 BBL 19100...
	187.2500									3056.00										0.0000			
51000... 66000... 52... 4750	183.0000					33.10	200 BBL	33.10	33.70	300 BBL	3101.00				300 BBL	686.50	715.10	300 BBL	643.00	0.0000			100 BBL 4400 BBL
	178.7500									3156.00										0.0000			

Filters: For ORUDEOIL 17AUG2022

Transaction Taxes on Crude oil 100 Barrels Options contract with a notional value of Rs 8 lakh and option premium of Rs 8,000 (@ 1% of notional value)				
Particulars	Call Option		Put Option	
	Buyer	Seller	Buyer	Seller
CTT on premium (@ 0.05% of premium – Seller)	-	4	-	4
CTT on exercise (@ 0.0001% of FSP – Purchaser)	0.8	-	0.8	-
Devolvement of options into futures position at expiry (@ 0.01% on short futures position)	-	80	80	-
Transaction fees on options	4	4	4	4
Total Transaction Taxes (Rs./lot)	4.8	88	84.8	8



OPTIONS ON FUTURES

GOLD 1 KG, GOLD MINI (100 GRAM)

SILVER 30 KG, SILVER MINI 5 KG

MCX launched **Silver Mini Options with Silver Mini(5 KG) Futures** as underlying on **July 19, 2021**.
Then, launched **Gold Mini Options with Gold Mini (100 gram) Futures** as underlying on **April 25, 2022**

PARTICULARS	ALUMINIUM	COPPER	ZINC	NICKEL	LEAD
CONTRACT LISTING	Contracts are available as per the Contract Launch Calendar				
CONTRACT START DAY	1st day of contract launch month. If such day is a holiday then following working day				
LAST TRADING DAY	Last calendar day of the contract expiry month. If such day is holiday then preceding working day				
TRADING UNIT	5 MT	2.5 MT(2500 Kgs)	5 MT	1.5 MT (1500 Kgs)	5 MT
QUOTATION VALUE	1 Kg				
PRICE QUOTE	Ex-Warehouse Raipur district (excludes only GST)	Ex - Warehouse Thane district (excl. only GST)			Ex - Warehouse Chennai district (excl. only GST)
TICK SIZE	5 Paise per kg			10 Paise per kg	5 Paise per kg
DELIVERY UNIT	5 MT +/- 10% tolerance	2.5MT +/- 10% tolerance	5 MT +/- 10% tolerance	1.5 MT +/- 10% tolerance	5 MT +/- 15% tolerance

- **Single Commodity Indices**

- e.g. Gold, Silver, Aluminium, Copper, Lead, Nickel, Zinc, Crude Oil, Natural Gas

- **Sectoral Indices**

- MCX iCOMDEX Bullion (**BULLDEX**)
 - MCX iCOMDEX Metal (**METLDEX**)
 - MCX iCOMDEX Energy (**ENRGDEX**)

- **Composite Index**

- MCX iCOMDEX Composite

Base Year: December 31, 2015 (Base Value = 10,000)

INDEX vs. UNDERLYING

Product	Lot Size	Current Price	~Contract Size	~Margins* %	~Margin (Rs.)
GOLD	1 kg	52585/10 grams	52.6 lakh	9.25	4.86 lakh
SILVER	30 kg	59276/Kg	17.8 lakh	11.25	2.00 lakh
BULLDEX	50	14578/BULLDEX	7.3 lakh	6.00	0.44 lakh
ALUMINIUM	5 MT	212/ kg	10.6 lakh	9.25	0.98 lakh
COPPER	2.5 MT	676/kg	16.9 lakh	9.25	1.56 lakh
LEAD	5 MT	185/Kg	9.2 lakh	9.25	0.85 lakh
NICKEL	1.5 MT	1880/Kg	28.2 lakh	15.98	4.51 lakh
ZINC	5 MT	323/Kg	16.1 lakh	14.07	2.27 lakh
METLDEX	50	17490/METLDEX	8.7 lakh	6.00	0.52 lakh
CRUDEOIL	100 BBL	7331/1 BBL	7.3 lakh	31.25	2.29 lakh
NATURALGAS	1250 mmBtu	698/1 mmBtu	8.7 lakh	31.08	2.71 lakh
ENRGDEX	125	10104/ENRGDEX	12.6 lakh	11.25	1.42 lakh

Sr. No.	Membership Type	Rights	Admission Fees (plus applicable GST) *	Deposit
1.	Trading Member (TM)	Trading –Yes Clearing – No (they have to get affiliated with Clearing Member)	Rs. 7.50 Lakh	ISD – NA BMC:- 10 Lakh/ 50 Lakh (Non Algo/Algo) Base Capital – 5 lakh
2.	Trading-cum-Clearing Member (TCM) (Non Deposit Based) -	Trading –Yes Clearing – Yes (For trades done by Self)	Rs. 25 Lakh	ISD- 50 Lakh BMC:- 10 Lakh/ 50 Lakh (Non Algo/Algo)
3.	Trading-cum-Clearing Member (TCM) (Deposit Based)	Trading –Yes Clearing – Yes (For trades done by Self)	Rs. 10 Lakh	ISD- 65 Lakh BMC:- 10 Lakh/ 50 Lakh (Non Algo/Algo)
4.	Institutional Trading-cum-Clearing Member (ITCM)	Trading – Yes Clearing – Yes (For trades done by Self as well as by type 1, 2 & 3)	Rs. 25 Lakh	ISD- 100 Lakh BMC- 25 Lakh/ 50 Lakh (Non Algo/Algo)
5.	Professional Clearing Member (PCM)	Trading – No Clearing – Yes (For trades done by type 1, 2 & 3)	Rs. 10 Lakh	ISD- 100 Lakh BMC- 25 Lakh/ 50 Lakh (Non Algo/Algo)

EXCHANGE TRANSACTION CHARGES

Exchange Transaction Charges on Futures(per Rs. 1 lakh of turnover)

Average daily turnover *	Transaction fee rates (per Rs. 1 lakh of turnover)
Upto Rs. 350 crore	Rs. 2.60
On incremental turnover above Rs. 350 crore	Rs. 1.75

*Average daily turnover will be calculated at the end of every month by way of dividing the total turnover of the member by the total number of trading days.

Transaction fees on options contracts applicable from 1st October, 2021

Slab	Average Daily Premium Turnover* (in Rs. Crs)	Transaction charges (Rs per lakh of premium value)
1	Up to Rs 5 crore	Rs 50
2	On incremental premium turnover above Rs 5 crore	Rs 40

Average daily premium turnover will be calculated at the end of every month by way of dividing the total premium turnover of the member by the total number of trading days.