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**Four Day Continuing Education Programme on Commodity Derivatives
Conducted By
Finance Department**

Date: 1 st to 4 th .September 2020	Venue: Webinar
Time:3.00 pm to 5.00 pm	Event : CEP
No. of Participant: 254	Event Coordinator: Prof. Dileep & prof. Priya Jain

Objectives

- To understand the Indian and Global Commodity Derivatives
- To Analyze Hedging strategies of Futures and options Contracts for Commodities.
- To know Commodity market Operations and clearing & Settlement procedure followed by commodity market.

**Flow of the Event
Session Details**

Session 1	Introduction to derivatives. Types of derivative contracts. Benefits of commodity derivatives markets. History of commodity derivatives markets. Global and Indian market. Major commodities traded. Regulation of commodity markets in India.
Session 2	Risk Management with Commodity Futures. Trading in futures. Margin system. Market participants. Convergence and Basis Risk. Hedging strategies using futures. Spread Trading. Practical aspects of hedging. Pricing of futures contracts.
Session 3	Commodity options. Types of option contracts. Hedging using options. Pricing of option contracts. Option Greeks. Trading strategies using option contracts. Commodity options in Indian market.
Session 4	Commodity market operations. Trading in commodity futures and options. Exchange risk management tools. Clearing, settlement and delivery in commodity markets. Innovative products in commodity markets.

Outcome Achieved/ Attained:

Dr. Ajoy Kumar, the resource person explained with meaning and types of commodities and discussed the following;

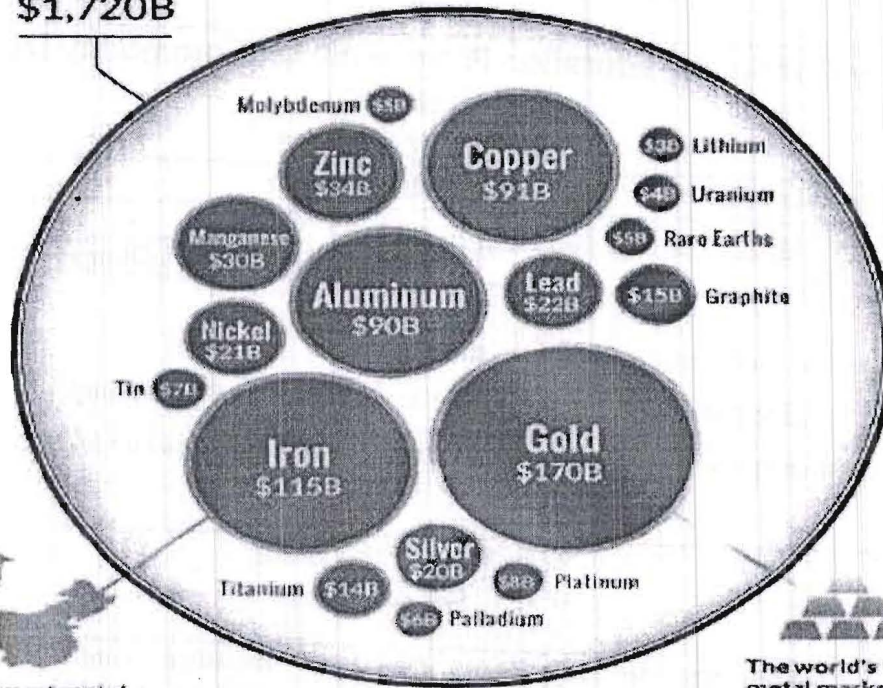
The Commodity trading is as old as human history, Starting with the barter system, today it has become the backbone of global economy. The largest traded commodity in the world is crude oil in terms of value

(\$1.7 Trillion). The largest metal traded is gold in terms of value (\$0.17 Trillion) and iron in terms of volume.

Oil
\$1,720B

The global market for oil was 94 million barrels per day in 2015.

This puts the oil market at \$1.7 trillion per year with today's prices - far more than all raw metals combined!



The largest metal market by tonnage is iron ore. China alone consumes 1 billion tonnes per year mostly to produce steel.



The world's largest metal market by dollar value is gold. The physical market is worth \$170 billion per year at today's spot price.

Functions of Commodity Derivatives Markets: Price Discovery, Risk Transfer, Market Completion

Types of Commodity Derivatives: Forward Contracts, Futures Contracts, Options Contracts, Swap Contracts.

Global Commodity Market

- Commodity derivatives are the oldest form of derivatives, while financial derivatives emerged much later
- Earliest instances of commodity derivatives were found in rice trading in Japan; tulip bulb trading in Amsterdam etc.
- Dojima Rice Exchange in Osaka, Japan established in 17th century, was the world's first commodity exchange. More structured trading started with establishment of Chicago Board of Trade (CBOT) in 1848.



Global Commodity Market

Table 17: Top 10 exchanges by number of commodity options and futures contracts traded in 2019

	Volume		Notional Value		Open interest	
	2019	YoY change	2019	YoY change	2019	YoY change
Shanghai Futures Exchange	1,411,969,733	20%	13,923,058	17%	5,748,273	37%
Dalian Commodity Exchange	1,355,584,225	38%	9,898,796	30%	9,686,951	113%
CME Group	1,133,124,055	-4%	60,597,611	-8%	24,486,658	-13%
Zhengzhou Commodity Exchange	1,092,486,045	34%	363,995	-93%	4,429,311	49%
Moscow Exchange	663,687,221	39%	450,110	47%	3,285,120	105%
ICE Futures Europe	482,608,092	-2%	23,296,908	-18%	13,491,751	2%
Multi Commodity Exchange of India	307,095,652	33%	1,108,564	18%	224,188	-34%
London Metal Exchange	176,260,936	-5%	17,939,963	14%	2,427,423	8%
ICE Futures US	92,613,557	-68%	2,020,422	-4%	3,094,748	5%
Borsa Istanbul	58,571,990	163%	11,751	195%	481,607	76%
Others	52,224,496	33%	706,864	60%	4,311,748	104%
Total	6,826,226,002	15.9%	130,318,041	-6%	71,667,778	15%

Source: WFE's Derivatives Report 2019

After the basics of Commodities the resource person discussed hedging with Futures and Options strategies and discussed the following:

Hedging with Futures Contract

Hedging for a Buyer (Long Hedge)

Case 1: Rising Prices

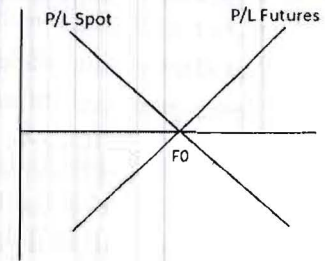
Commodity: Copper

01-09-2020: Buy (Long) October Futures Contracts at Rs.525/kg

30-10-2020: The October Futures and Spot Price are Rs.535/kg

Loss in Spot Market $(525-535) = (10)$

Profit in Futures Market $(535-525) = 10$



Hedging for a Buyer (Long Hedge)

Case 2: Falling Prices

Commodity: Copper

01-09-2020: Buy (Long) October Futures Contracts at Rs.525/kg

30-10-2020: The October Futures and Spot Price are Rs.520/kg

Profit in Spot Market $(525-520) = 5$

Loss in Futures Market $(520-525) = (5)$

Practical Issues

Hedging for a Buyer (Long Hedge)

Commodity: Copper

01-09-2020: Buy (Long) October Futures Contracts at Rs.525/kg

The maturity of the contract is 30-10-2020

Practical Issue 1: The hedger wants to actually buy copper on 10-10-2020

Practical Issue 2: The contract size is 2.5 MT. The hedger wants to buy 3.5 MT

Practical Issue 3: The delivery centre is Thane, but the hedger wants it at Bangalore

Practical Issue 4: The futures are on Grade A Copper Cathodes, but the hedger wants different grade

Practical Issue 1: Date Mismatch

Practical Issue 2: Quantity Mismatch

Practical Issue 3: Location Mismatch

Practical Issue 4: Quality (Asset) Mismatch (Cross Hedging)

Unhedged position is exposed to Price Risk and a hedged position is exposed to Basis Risk

Option Contracts

A contract between two parties, where the buyer of the option contract gets an option to buy or sell the underlying asset on or before a specified future date at a price agreed upon while entering the contract

Buyer/holder of an Option – LONG Position

Seller/writer of an Option – SHORT Position

Buyer of option need not necessarily be the buyer of the underlying asset; this depends on the type of the option

Call Option: Option to buy the underlying asset

Put Option: Option to sell the underlying asset

European Style Option: Exercised only on maturity

American Style Option: Exercise anytime till maturity

Options Trading Strategies

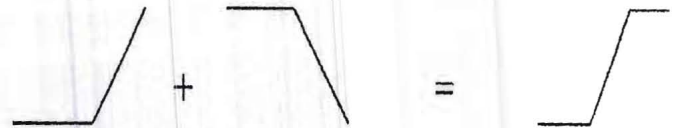
Bull Call Spread

Expectation: Bullish

Strategy:

Buy one ITM Call

Sell one OTM Call



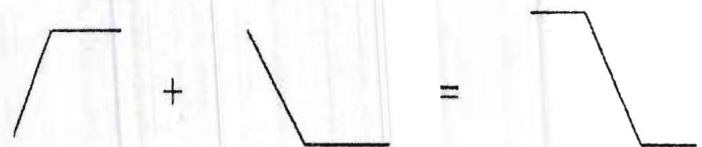
Bear Put Spread

Expectation: Bearish

Strategy:

Buy one ITM Put

Sell one OTM Put



And finally Mr. Shrikant Koundinya discussed about, Trading on Commodity Exchange, Exchange Risk Management Tool, Position limit, Clearing & Settlement and Online MCX Exchange trading.

Trading Platform



- Automated screen-based trading
- National reach
- Trading Session: Agri-Commodities & Others/Daylight saving hours
- Transparent, objective and fair system for automatic order matching
- Identity of the trader undisclosed
- Flexibility for placing orders
- Price Quotation in Rupees
- Square-off facility

MCX Vign Terminal for 11.8.20 (Powered by Directors Engine)

File View Market Tools Windows Help

9:41:00 11.8.20 10841.000

InstID	UPL Asset	Symbol	Series Exp.	SCSI Price Q	TR	Buy Qty	Buy Price	Sell Price	Sell Qty	Last Update Time	Last Traded Time	LTP
FUTCOM	CLAYER	CLAYER	2020	A 1 KG5	INR	2000 KG5	518.50	518.05	15000 KG5	01.21.11 PM 04/09/2020	01.21.08 PM 04/09/2020	518.00
FUTCOM	COPPER	COPPER	2020	A 1 KG5	INR	2500 KG5	514.40	514.45	25000 KG5	01.21.08 PM 04/09/2020	01.21.08 PM 04/09/2020	514.00
FUTCOM	COPPER	COPPER	2020	A 1 KG5	INR					12.51.47 PM 04/09/2020		
FUTCOM	CRUDE OIL	CRUDE OIL	2020	A 1 BAR	INR	10000 BAR	3053.00	3054.00	10000 BAR	01.21.11 PM 04/09/2020	01.21.07 PM 04/09/2020	3053.00
FUTCOM	CRUDE OIL	CRUDE OIL	2020	A 1 BAR	INR	10000 BAR	3051.00	3057.00	10000 BAR	01.21.11 PM 04/09/2020	01.10.30 PM 04/09/2020	3051.00
FUTCOM	CRUDE OIL	CRUDE OIL	2020	A 1 BAR	INR					10.18.21 AM 04/09/2020		
FUTCOM	GOLD	GOLD	2020	A 10 GRMS	INR	2 KG5	5086.00	5097.00	2 KG5	01.21.11 PM 04/09/2020	01.21.10 PM 04/09/2020	5097.00
FUTCOM	GOLD	GOLD	2020	A 10 GRMS	INR	2 KG5	5101.00	5118.00	1 KG5	01.21.10 PM 04/09/2020	01.01.24 PM 04/09/2020	5107.00
FUTCOM	GOLD	GOLD	2020	A 10 GRMS	INR	2 KG5	5128.00	5143.00	1 KG5	01.21.10 PM 04/09/2020		
FUTCOM	COTTON	COTTON	2020	A 25 BALES	INR	25 BALES	17220.00	17340.00	25 BALES	01.16.53 PM 04/09/2020	01.11.25 PM 04/09/2020	17340.00
FUTCOM	COTTON	COTTON	2020	A 25 BALES	INR	25 BALES	17220.00	17610.00	25 BALES	01.15.11 PM 04/09/2020		
FUTCOM	COTTON	COTTON	2020	A 25 BALES	INR	25 BALES	17500.00	17680.00	25 BALES	01.15.23 PM 04/09/2020	01.15.11 PM 04/09/2020	17580.00
FUTCOM	HAZ	HAZ	2020	A 1 KG5	INR	15 MT	152.65	152.75	15 MT	01.21.08 PM 04/09/2020	01.21.02 PM 04/09/2020	152.75

Feedback & Coordinator Comment:

The entire program from Day 1 to Day 4 all the participant actively participated and well received by all the participants and lots of appreciation to resource person and RVIM team from the participants. Many of them requested to conduct such programme in the future.

Event Coordinators

Dileep S

Prof. Priya Jain

Director Prof.