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Mock Trading Cycle for Option Contracts
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In terms of the provisions of the Rules, Bye-Laws and Business Rules of the Exchange, the Members of the Exchange are notified as under:

In order to familiarise members with trading in Option contracts, Exchange will be conducting mock trading cycle from September 19, 2017 over **Internet** as mode of connectivity. A detailed product design is provided in **Annexure 1** and contract specification for mock trading has been provided in **Annexure 2.**

Schedule for Mock Trading from September 19, 2017

Particulars	Date
Mock Trading Time	**From September 19, 2017 to September 28, 2017 12.30 pm to 5.00 pm**
Option Contract	**Gold 27 Sep 2017** (The last trading day for the options contract shall be three business days prior to the first tender day of the underlying futures contract. If this day is a holiday then preceding business day. However, for the purpose of mock trading, the dates of options expiry and futures expiry are not as per the specific logic)
Underlying Futures Contract	**Gold 05 Oct 2017**
Option Devolvement Intimation Start Date	September 25, 2017
Option Devolvement Margin Start Date	September 26, 2017
Option Contract Expiry Date	September 27, 2017
Client Code Modification Time	5.00 pm to 5.15 pm (After every trading day)
Intimation of Settlement Price for the purpose of Devolvement of option contracts	September 27, 2017 by 5.10 pm
Timeline for giving request regarding devolvement of option into futures	September 25 to September 27, 2017 between 12:30 pm to 5.25 pm
First day of Trading after Option Positions Devolving into Futures Positions	September 28, 2017

Option Contract on Gold 05 Dec 2017, Gold 05 Feb 2018 and Gold Mini 05 Oct 2017 underlying future Contracts will also be available for trading. Additionally, there will be other future contracts available in the mock environment.

Note: For mock purpose, there will be trading holiday from September 22, 2017 to September 24, 2017.

Members may note that two user ids have been enabled for each Member through which they can trade in the mock options environment. The list of such user id's have been kept in Members SFTP download folder.

Procedures for downloading files for participating in mock trading are specified in **Annexure 3.**

Members using CTCL facility are requested to actively participate in the mock trading session using CTCL software as per Non-FIX API version 17.1 dated June 30, 2017 and **FIX API version 17.1** dated May 04, 2017.

After the mock trading session, members are requested to take backup and download the mock trading reports from the SFTP (Extranet) Server. Members may use their existing userID and password for downloading the files from SFTP server (**https://drsftp.mcxindia.com**). Members are requested to verify the downloaded reports generated from mock trading with their back office software for the **New file format Version 17.1** as per circular no. MCX/TECH/235/2017 dated July 19, 2017.

Members are requested to take note of the same.

Sandeep Doshi
VP- Technology

Encl: As above

Kindly contact Customer Support on 022 - 6649 4040 or send an email at customersupport@mcxindia.com for further clarification.

Option Contract on Commodity Futures Contract – Product Design for the purpose of Mock Trading.

1. **Option on Commodity Futures**:

   Option on Commodity Futures contract shall have the corresponding Commodity Futures contract as the underlying

2. **Strikes:**

   Each Option expiry shall have minimum thirty one strikes available; viz. fifteen each for In the Money (ITM), Out of the Money (OTM) and one At the Money (ATM).

3. **Trading Parameters and Attributes:**

   The following trading parameters and order attributes are specified for Options trading:

   a. **Order type/Order book/Order attribute**
      - Regular lot order
      - Stop loss order
      - Immediate or cancel
      - Day
      - End of session
      - Good till cancelled
      - Good till date
      - Spread IOC & 2L/3L Order

   b. **Permitted lot size**

      The permitted lot size for the commodity derivatives options contracts shall be as per the respective contract specification.

   c. **Tick size for contracts**

      The tick size in respect of commodity derivatives options contracts shall be as per the respective contract specification.

   d. **Maximum Order Size/ Value**

      The maximum order size/ value shall be as per the existing provisions of the Exchange.

   e. **Turnover Limits**

      By default, the Buy and Sell Turnover Limits for Options shall be set as unlimited by the Exchange. However, the Members can reset these values as per their risk management requirement.

   f. **Base Price & operating ranges applicable to the contracts.**

      Base price of the Options Contracts on introduction of new contracts and illiquid contracts shall be the theoretical value of the options contract arrived at based on

Black76 model of calculation of options premium. For all other days, it shall be the daily settlement price of the contract.

The minimum/ maximum operating price range for options contract will be statistical daily price range computed based on Black76 option pricing model.

The formula for calculation of theoretical base price and statistical operating range as per Black76 model formula is as follows:

The options price for a Call shall be computed as per the following formula:

$$C = Max [e \wedge -rt \{(F*N(d1) - K*N(d2)\}, Tick\ size]$$

and the price for a Put is:

$$P = Max [e \wedge -rt \{(K*N(-d2) - F*N(-d1)\}, Tick\ size]$$

and

$$d1 = [Log\ Normal\ \{U/L\ Price\ (F) / Strike\ (K) \} + \{Volatility\ (V)\wedge2/2 \} * Time\ To\ Expiry\ (T)] / [Volatility\ (V) * sqrt\ \{Time\ to\ Expiry \}]$$

$$d2 = d1 - Volatility * sqrt\ (Time\ to\ Expiry)$$
where:
F = Underlying Price
K = Strike Price
V = Volatility
T = Time to expiry (Days to Expiry / No. of days in Year)
R = Interest rate

4. **Devolvement Style**:

   European Style options, which can be devolved only on the day of Expiry

5. **Devolvement Mechanism**:

   On expiry, following mechanism shall be adopted for devolvement of the options contracts:

   a. Option series having strike price closest to the Daily Settlement Price (DSP) of Futures shall be termed as At the Money (ATM) option series.

   This ATM option series and two option series having strike prices immediately above this ATM strike and two option series having strike prices immediately below this ATM strike shall be referred as 'Close to the money' (CTM) option series.

   In case the DSP is exactly midway between two strike prices, then immediate two option series having strike prices just above DSP and immediate two option series having strike prices just below DSP shall be referred as 'Close to the money' (CTM) option series.

   b. All option contracts belonging to 'CTM' option series shall be devolved only on 'explicit instruction' for devolvement by the long position holders of such contracts failing which they will expire worthless.

c. All In the money (ITM) option contracts, except those belonging to 'CTM' option series, shall be devolved automatically, unless 'contrary instruction' has been given by long position holders of such contracts for not doing so.

d. All Out of the money (OTM) option contracts, except those belonging to 'CTM' option series and devolved by the long position holders, shall expire worthless.

e. All devolved contracts within an option series shall be assigned to short positions in that series on a random basis.

Examples are given below for identification of ITM, CTM, ATM and OTM strikes as per the underlying settlement price:

Strike Interval	100
U/L Settlement Price	30010

For Call	
Strike Available	Strike Type
29700	ITM
29800	CTM
29900	CTM
30000	ATM
30100	CTM
30200	CTM
30300	OTM
30400	OTM

For Put	
Strike Available	Strike Type
29700	OTM
29800	CTM
29900	CTM
30000	ATM
30100	CTM
30200	CTM
30300	ITM
30400	ITM

Strike Interval	100
U/L Settlement Price	30050

For Call	
Strike Available	Strike Type
29700	ITM
29800	ITM
29900	CTM
30000	CTM
30100	CTM
30200	CTM
30300	OTM
30400	OTM

For Put	
Strike Available	Strike Type
29700	OTM
29800	OTM
29900	CTM
30000	CTM
30100	CTM
30200	CTM
30300	ITM
30400	ITM

Strike Interval	100
U/L Settlement Price	30060

For Call	
Strike Available	Strike Type
29700	ITM
29800	ITM
29900	CTM
30000	CTM
30100	ATM
30200	CTM
30300	CTM
30400	OTM

For Put	
Strike Available	Strike Type
29700	OTM
29800	OTM
29900	CTM
30000	CTM
30100	ATM
30200	CTM
30300	CTM
30400	ITM

Strike	Devolvement Procedure	Effect
ITM (Other than CTM)	Positions shall devolve automatically	• Difference between settlement price and strike price shall be cash settled • Positions would get devolved into Futures contract

	ITM long position holder can give contrary instruction	• Expire worthless i.e. There will be no cash settlement • No positions will get devolved in to Futures contract
CTM – ITM / CTM – OTM	No position shall devolve automatically. An 'explicit instruction' shall be placed for exercise of Options.	If the option holder gives the 'explicit instruction' Then • Difference between settlement price and strike price shall be cash settled. In case of CTM- OTM position member have to pay the Difference between settlement price and strike price to the Exchange • Positions would get devolved into Futures contract Else • Expire worthless i.e. There will be no cash settlement • No positions will get devolved in to Futures contract
OTM (Other than CTM)	Positions shall not devolve into Futures	All position will expire worthless i.e. There will be no cash settlement

Submission of request for devolvement of Positions

The Members shall submit request for devolvement of positions request through manual entry or Bulk File Upload feature provided under MAT/ TWS➔ Ex/Dex/DI menu

For exercise/ don't exercise requests placed through bulk upload the acceptance or rejection response file shall be available on below mentioned Application data Path of the respective MAT/TWS terminals:

Application data Path\Logs\ {Member Id} or {User id}\OFFLINEEXDEXDIORDER

Note: The latest request placed for **exercise/ don't exercise requests placed through manual entry or bulk upload feature only shall be considered as the final request.**

6. **Settlement Method**:

   Daily Settlement:

   The Options Premium settlement will be done on T+1 day basis.

   Final Settlement:

   On exercise, Options positions 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 Put position shall devolve into long position in the underlying Futures contract

On Expiry of options contract, all such devolved Futures positions shall be opened at the strike price of the exercised Options.

Members would be able to view the settlement price of the underlying futures contract on options expiry day at market end time. The path for viewing the Market Statistics report (Bhav Copy) is as under:

MAT/TWS ➔ View➔ Market Statistics➔ Cumulative

Additionally, Exchange shall also flash settlement price on terminals by 5:10 pm on expiry of option contract.

Sensitization Report / Devolvement Margin:

Exchange shall provide a sensitization report and / or levy devolvement margin on the long buy positions entering the option tender period.

A. Sensitivity Report
- Sensitivity Report to be provided to the members would be an *End of Day* report.
- The report would be made available to members four days prior to the devolvement date of the options contract.
- The Report would be based on "*What if Scenario*", wherein all In the Money (ITM), including CTM option contracts (which are ITM) in the near month option contract, would be identified based on the respective day's settlement price, and converted into futures positions.
- The "what-if scenario" margins shall be calculated at client portfolio level, and grossed up at member level.
- The "what-if scenario" margins shall be computed using SPAN software.
- Spread charge, as currently applicable would be considered for expected margin computation i.e. benefit on spread positons shall be considered.
- If the member has given "Contrary Instruction" the same will not be considered for computation of expected margin in Sensitivity Report.
- A file shall be provided to members giving the information on existing margins, 'what if' scenario margins and incremental margins requirement.
- Profit element on expected Devolved Call and Put option positions shall be considered and will be reduced in the calculation of margin requirement. If the profit element exceeds the additional margin requirement due to devolvement of positions into futures, then the margin requirement shall be considered as zero for the purposes of Sensitivity Report.

B. Devolvement Margin

- Based on the outcome of the Sensitivity Report, the Exchange shall levy Devolvement margin.

- As stated, Devolvement Margin shall be computed at the end of the day, starting from the end of the second day prior to option devolvement date. Of the total Devolvement Margins arrived at based on the methodology specified for computation of margins in Sensitivity Report, Exchange shall levy one-fourth of the total Devolvement Margin computed on the day prior to the Option Devolvement Date. The said margin shall be made applicable for the entire next day (i.e. from the beginning of the day till the end of the day).
- At the end of the day on the day prior to option Devolvement Date, Devolvement Margin shall be re-computed considering the revised and updated Sensitivity Report and the Settlement price. On this day, one-half of the computed Devolvement Margin shall be made applicable on the next day.
- Devolvement Margin shall be in addition to all other applicable margins. In case of a situation where there is a margin reduction due to devolved position, no benefit would be passed on.
- In case of multiple contracts having different expiry dates but a common devolvement margin period, an average rate of the applicable margins numbers shall be applied, subject to a maximum margin rate of 50%.

7. Position Limits:

Position limits of options would be separate from position limits of futures contracts and numerical value for client level/member level limits shall be twice of corresponding numbers applicable for futures contracts.

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.

The excess position limits would be permitted for only those clients, who had exceeded position limits at the time of devolvement.

8. Margins:

Risk management shall be managed with Standard Portfolio Analysis of Risk (SPAN*). The initial margin shall be imposed at the level of portfolio of individual client comprising of his positions in futures and options contracts on each commodity. Margins shall be adequate to cover 99% VaR (Value at Risk) and Margin Period of Risk (MPOR) shall be two days.

For buyer of the option, buy premium shall be charged as margins and blocked from the collaterals. On completion of settlement, the premium blocked shall be released.

SPAN is registered trade mark of Chicago mercantile Exchange (CME), used herein under licence. CME assumes no liability in connection with the use of SPAN by any person or entity.

Calendar Spread Charge:

The margin on calendar spread shall be calculated on the basis of delta of the portfolio consisting of futures and options contracts in each month. A Calendar spread position will be granted calendar spread treatment till the commencement of tender period of

option contract. The Calendar Spread charge shall be 25% on both the legs of the position.

Net Option Value

Net Option Value is computed as the difference between the long option positions and the short option positions, valued at the last available closing price and shall be updated intraday at the current market value of the relevant option contracts at the time of generation of risk parameters. Thus, mark to market gains and losses shall not be settled in cash for options positions.

Contract Specification

The product design for Options on Commodity Futures shall be as under for the purpose of Mock Trading.

Description	OPTION ON GOLD FUTURES
Instrument Type	OPTFUT
Symbol	GOLD
Option type	CE (Call European) & PE (Put European)
Last Trading Day	Trading ends three business days prior to the first tender day of the underlying futures contract. If this day is a holiday then preceding business day.
Trading	
Trading Unit	1 MCX Gold futures contract
Underlying Quotation/ Base Value	10 grams
Underlying Price Quote	Ex-Ahmedabad (inclusive of all taxes and levies relating to import duty, customs but excluding GST, any other additional tax, cess, octroi or surcharge as may be applicable)
Strike Price	15 In-the-money, 15 Out-of-the-money and 1 At-the-money. (31 CE and 31 PE). The Exchange, at its discretion, may enable additional strikes intraday, if required.
Strike Price Interval	100
Base price	Base price for the next day shall be theoretical price on Black 76 option pricing model: (a) on the first day of the contract and (b) on days when the contract is illiquid on the previous day. For all other days, it shall be the daily settlement price of the contract.
Tick Size (Minimum Price Movement)	Re. 0.50
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
Initial Margin	SPAN based margins
Short Option Minimum Charge	2.5% subject to two days of Margin Period of Risk (MPOR)
Premium	Premium of buyer shall be blocked upfront on real time basis.
Extreme Loss Margin	1% on short option positions
Devolvement Margin	1st day 25% of total devolvement margin 2nd day 50% of total devolvement margin
Additional and/ or Special Margin	At the discretion of the Exchange when deemed necessary

Maximum Allowable Open Position	Client - wise : 10 MT or 5% of the market wide open positions whichever is higher - For all Gold option contracts combined together.
	Member - wise : 100 MT or 20% of the market wide open positions, whichever is higher - For all Gold option contracts combined together.

Settlement	
Settlement of premium/Final Settlement	T+1 day
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 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.
Exercise Mechanism at expiry	All option contracts belonging to 'Close to the money' (CTM)* option series shall be exercised only on 'explicit instruction' for exercise by the long position holders of such contracts.
	All In the money (ITM) option contracts, except those belonging to 'CTM' option series, shall be exercised automatically, unless 'contrary instruction' has been given by long position holders of such contracts for not doing so.
	All Out of the money (OTM) option contracts, except those belonging to 'CTM' option series and devolved by the long position holders, shall expire worthless
	* Option series having strike price closest to the Daily Settlement Price (DSP) of Futures shall be termed as At the Money (ATM) option series. This ATM option series along with two option series each having strike prices immediately above and below ATM shall be referred as 'Close to the money' (CTM) option series.
	In case the DSP is exactly midway between two strike prices, then immediate two option series having strike prices just above DSP and immediate two option series having strike prices just below DSP shall be referred as 'Close to the money' (CTM) option series.
Due Date Rate (Final Settlement Price)	Daily settlement price of underlying futures contract on the expiry day of options contract
Settlement Logic	Devolvement into underlying futures contract

Steps for downloading files for participating in Option Mock Trading

- Download THRU, TWS, Member Admin, THRUFEED Client, Dot Net Framework 4.5.2 and VC++ Redistributable 2008 files, CTCL Contract Master for mock, THRU & THRU Feed User Manual V.1.0 kept in the **Common/Setup/MockSetup11.7.3.x/** folder in the SFTP (Extranet) Server using address **https://drsftp.mcxindia.com** for downloading through Internet to the members system. Files can be downloaded any time through Internet from **Monday, September 18, 2017** after trading hours.

- Install VC++Redistributable 2008 on the system.

- Install Dot Net Framework 4.5.2 on the system.

- For installing and configuring THRU (Version 11.7.3.x), refer to THRU User Manual 1.0

- For details, installing and configuring THRUFEED Client (Version 11.7.3.x), refer to THRU Feed User Manual V1.0

- Double click **MCXTWS11.msi**. It will install MCX TWS TEST for mock Version **11.7.3.x**

- Double click **MCXMADMIN11.msi**. It will install MCX Member Administrator TEST for mock Version **11.7.3.x**

- Market data updates for Internet mode of connectivity for TWS users:

  Internet users are not required to connect using THRU. However, Members may participate in mock trading using following steps.
  Download test setup from following path

    - **https://drsftp.mcxindia.com/Common/Setup/MockSetup11.7.3.x/**

    - Double click **MCXTWS11.msi**. It will install the MCX TWS TEST for mock Version **11.7.3.x**

  For Internet mode of connectivity

  After installation start TWS and follow below mentioned steps:
    - Go to Tools→ System configuration
    - Select Mode of Connectivity as "**Internet**"
    - After selection click on Modify
    - System will set the configuration as selected and TWS will be closed.
    - Start TWS and login to the mock environment of MCX.

- Connectivity to option mock environment will be made available through Internet mode of connectivity only.

- All members are required to connect to SSL VPN link as **https://options.mcxindia.com.** The list of SSL user id's have been kept in Members SFTP download folder. Members can access the same using address **https://drsftp.mcxindia.com**. SSL VPN Default password will be mcx.123

- After connecting to above mentioned SSL VPN link created for mock trading, CTCL and FIX users can connect using below IP address and ports.

Host look up: 192.168.13.11 IP address/ Port: 9511
FIX Gateway 1: 192.168.13.33 IP Address/ Port: 7777
FIX Gateway 2: 192.168.13.44 IP Address/ Port: 7777
FIX Gateway 3: 192.168.13.68 IP Address/ Port: 7777
Multicast Group: 239.255.70.20/ Port: 24113

- For Tick by Tick Trading Market Data (MarketXstream), kindly take note of below details:

  > Recovery IP and Port 192.168.8.112 and 9692

Underlying	Multicast IP	Multicast Port
GOLD	239.255.70.11	24116
GOLDGUINEA	239.255.70.11	24116
GOLDM	239.255.70.11	24116
GOLDPETAL	239.255.70.11	24116
GOLDPTLDEL	239.255.70.11	24116
GOLDGLOBAL	239.255.70.11	24116
ALUMINI	239.255.70.12	24117
ALUMINIUM	239.255.70.12	24117
COPPER	239.255.70.12	24117
COPPERM	239.255.70.12	24117
LEAD	239.255.70.12	24117
LEADMINI	239.255.70.12	24117
NICKEL	239.255.70.12	24117
NICKELM	239.255.70.12	24117
ZINC	239.255.70.12	24117
ZINCMINI	239.255.70.12	24117
BRCRUDEOIL	239.255.70.13	24118

Underlying	Multicast IP	Multicast Port
CRUDEOIL	239.255.70.13	24118
CRUDEOILM	239.255.70.13	24118
NATURALGAS	239.255.70.13	24118
CARDAMOM	239.255.70.14	24119
RBD PALMOLEIN	239.255.70.14	24119
COTTON	239.255.70.14	24119
CPO	239.255.70.14	24119
KAPAS	239.255.70.14	24119
KAPASKHALI	239.255.70.14	24119
MENTHAOIL	239.255.70.14	24119
PEPPER	239.255.70.14	24119
SILVER	239.255.70.15	24120
SILVER1000	239.255.70.15	24120
SILVERM	239.255.70.15	24120
SILVERMIC	239.255.70.15	24120

For any further clarifications, members may contact CTCL / Customer Support team.