

CHAPTER 6

TRADING MECHANISM

LEARNING OBJECTIVES:

After studying this chapter, you should:

- Know the classification of exchange members based on their trading and clearing functions
- Know the trading system in the exchanges dealing in commodity derivatives
- Know the regulatory guidelines for selecting a commodity for derivatives trading on the exchanges
- List various elements of a contract specification and understand these terms
- Be able to compute the impact of one tick change on the value of a derivative contract
- Understand various types of orders (orders with price conditions and time conditions)
- Know various sources to track the prices of commodity derivatives
- Know the type of participants permitted to trade in commodity markets.
- Know about disclosures by exchanges.

6.1 Membership on Exchanges Having Commodity Derivatives Segment

Membership of Exchange is governed by the SEBI Stock Brokers Regulation. The Regulation prescribes the procedures for the grant of recognition of a member, different types of members, net worth criteria, deposits, members' fees and charges for different categories of members.

Clearing Corporation is an entity that is different from an Exchange. Exchanges are governed by SEBI's Stock Exchange and Clearing Corporation Regulations, 2012. The same regulations provide governance norms for Clearing Corporations also. Clearing Corporation's main role is to carry out settlement of the trades executed on the Exchange platform. The entity which guarantees settlement is Clearing Corporation. For trading purpose, Exchange membership is required while for clearing purposes, membership of a clearing corporation is required.

Commodity Exchanges prescribe different eligibility criterion for different classes of membership. While admitting members, the commodity exchanges generally take into account specific factors such as corporate structure, capital adequacy, track record, educational levels and the experience of the promoters, infrastructure set-up, manpower, etc. to ensure that the members are equipped to offer quality broking services so as to build and sustain confidence among investors in the Exchange's operations. An applicant for commodity exchange membership must possess the minimum stipulated networth which varies across commodity exchanges as per their rules, regulations and bye-laws. The membership categories are more or less similar across the exchanges but vary considerably when we consider the membership criteria in terms of deposit/networth requirements, admission fees, and other membership requirements.

The members of the commodity exchanges are classified as below:

- (a) **Trading Member (TM):** A Trading Member can trade either on their own account or on behalf of the clients. This category of membership entitles a member to execute trades on his own account as well as for clients registered with him. The clearing and settlement of the trades done through a trading member is accomplished through a clearing member who is a member of clearing corporation where the security/commodity is being traded.
- (b) **Self Clearing Members (SCM)/Trading cum Clearing Member (TCM):** This category of membership entitles a member to execute trades on his own account as well as for his clients and also to clear and settle trades executed by himself as well as of his clients. Clearing members are members of the clearing corporation. They help the clearing corporations carry out risk management activities effectively and provide for confirmation/inquiry of trades through the trading system.

- (c) **Professional Clearing Member (PCM):** A professional clearing member is entitled to clear and settle trades executed by other members of the commodity exchanges (TMs/TCMs) but does not have the right to execute trades. A professional clearing member is a clearing member and is not a trading member. Typically, banks and custodians become professional clearing members and clear and settle trades done by their trading members or the clients of the trading members. They are not entitled to execute any trades on the exchanges unless it is for the purpose of risk management.

Most of the members of the exchanges operate as Trading cum Clearing Members (TCMs) of more than one exchange. Most of the trades of Institutional participants are done through the trading members and are cleared by the professional clearing member (PCM).

Authorized Persons (APs):

SEBI had earlier allowed spread of sub-brokership as well as Authorized Person's network to expand the brokers' network. However, SEBI Board in its meeting held on June 21, 2018 decided that sub-brokers as an intermediary shall cease to exist with effect from April 01, 2019. All existing sub-brokers would migrate to become Authorized Persons (APs) or Trading Members if the sub-brokers meet the eligibility criteria prescribed under Stock Exchange bye-laws and SEBI Regulations.

An Associated Person is an individual employed by a SEBI-registered intermediary (stockbroker, investment advisor etc.) who interacts with the clients or has access to client information. They are crucial in facilitating securities transactions but cannot act independently. Their responsibilities include, soliciting clients for securities transactions and handling their client accounts and transactions. They are expected to route all monetary transactions of their clients directly through the brokers and not to be handled by themselves. They must be qualified and certified by SEBI to ensure competent and ethical conduct within the securities market.

6.2 Trading System in the Exchanges

6.2-1 Screen Based Trading System

Derivative Exchanges offer a nation-wide online fully automated screen-based trading system (SBTS). In this system, the trading member of the exchange can put

in the orders and the prices at which they would like to transact. The transaction gets executed as soon as a buy order matches with a sell order in terms of price.

The order matching is done on a price-time priority basis. This means that all the orders received are first sorted on ‘best-price’ basis *i.e.*, orders are first ranked according to their prices and similar priced orders are then sorted on a time-priority basis (*i.e.*, the order that comes in early gets priority over the order that came in later). Highest priced buy orders and lowest priced sell orders are matched first for trade, after which next highest buy order or next lowest sell order comes up for trade match. It indirectly means that reducing buy order limit will delay execution while increasing buy order price will increase the probability of the order getting matched and converted into trade. Also, reduction in quantity of the order from the original quantity will not change its price-time priority. SBTS enables market participants to see the prices on a real-time basis and trade with one another simultaneously, irrespective of their geographical location.

In this trading system, an order number or trade number is generated for the orders (that are entered into the system after being accepted) and for the executed trades (as the order gets matched for the price and quantity and becomes trade). A trading system also provides other live market information such as the last traded price, traded quantity, open, high, low, close price, total traded value, total traded quantity, etc. Connectivity to SBTS can be accomplished through laptops, tablet PCs, desktop computers, and mobile phones.

A commodity exchange provides a trading platform or an electronic trading system and lays down well defined trading rules such as:

| Rules for Buy and Sell Side of Futures contracts | Buy Side |
|--|--|
| <ul style="list-style-type: none"> ➤ The seller needs to pay an upfront initial margin as prescribed by the exchanges to take a short position in the commodity futures market. | <ul style="list-style-type: none"> ➤ The buyer needs to pay an upfront initial margin as prescribed by the exchanges to take a long position in commodity futures market. |
| <ul style="list-style-type: none"> ➤ The open short position is exposed to mark to market. | <ul style="list-style-type: none"> ➤ The long position is exposed to mark to market if kept open. |

| Rules for Buy and Sell Side of Futures contracts Sell Side | Buy Side |
|--|---|
| <ul style="list-style-type: none"> ➤ Open short position may result in giving physical delivery or cash settlements on expiry date. Quality certification is a mandatory requirement. | <ul style="list-style-type: none"> ➤ Open long position may result in an obligation to receive physical delivery or cash settlements on expiry date depending on the settlement mode of the derivative contract. |
| <ul style="list-style-type: none"> ➤ The sell position can be squared off during the same day or any time during the life time of the contract. | <ul style="list-style-type: none"> ➤ The buyer if desires can square off his position during the same day or any time during the period of contract. |
| <ul style="list-style-type: none"> ➤ The margins are released if the short position is squared off. | <ul style="list-style-type: none"> ➤ The margins are released if the long position is squared off. |

Other than the SBTs, trading in commodity derivatives can be done using algorithms which measures market movements and pushes orders for the best buy/sell executions given the market conditions.

6.2-2 Algorithmic Trading

Algorithmic trading is introduced and defined as trading in financial instruments where a computer algorithm automatically determines individual parameters of orders such as initiation of order, timing, price or quantity, managing the order post submission without/with limited human intervention.

Any order generated using automated execution logic is known as algorithmic trading. Algorithmic trading permits the use of programs and computers to generate and execute orders in markets with electronic access and does not require human intervention. It employs a defined set of instructions on timing, price, quantity, or any mathematical model for placing orders at a faster pace and with higher frequency.

Algo trading is tailored to perform according to the account type an investor chooses. For example, an investor who prefers a conservative investment profile will have an automatic trading protocol that is programmed to perform in a conservative manner, meaning if a commodity's price movement is too volatile, it may sell that commodity automatically to prevent a potential loss. Another example would be the opposite scenario, where an investor may prefer an aggressive investment strategy. The algorithm on that particular account would be programmed to ride the wave

of volatility, allowing for large market fluctuations without squaring off a trade or cancelling a standing order. Algo trading is permitted in commodity exchanges subject to the broad SEBI guidelines dated 27th September, 2016.

High Frequency Trading (HFT) is part of algorithmic trading that comprises latency-sensitive trading strategies and deploys high speed networks to connect and trade on the trading platform. As per the regulatory norms, Immediate or Cancel and Market orders are not allowed for the algorithmic traders. Members are expected to prevent any unauthorized access to the software and should allow it to be handled by the authorized dealers only. There are provisions of audit. The regulations provide for disincentivizing higher number of orders which are not executed. The exchanges provide penalty provisions at different slabs of Order-to-trade ratio.

The algorithms need to be reviewed by the Exchanges before it is used by brokers. The algorithm which leads to the orders resulting in taking away liquidity from the market, or abnormal or manipulative prices are not approved for use.

If Algo trading is used without due care and diligence, it may throw huge risk to market integrity even with small error. The member should have adequate risk management system and control for the same. They should have separate dealer-wise limit, internal price bands so that ordered price doesn't cross a level and order size limit.

6.2-3 Trading Hours

Trading in the commodity exchanges take place on all days except Saturdays and Sundays and the exchange-notified holidays. The holidays are notified in advance.

| Types of commodities | Trading Days and Time (IST) |
|---|---|
| Domestic Agricultural Commodities | Monday to Friday (9:00 AM – 5:00 PM) |
| Agricultural Commodities including agri processed commodities | Monday to Friday (9:00 AM -9:00 PM) |
| Non-agricultural Commodities | Monday to Friday (9:00 AM – 11:30 PM/11.55 PM*) <i>* After the end of US day light savings (fall season)</i> |

Exchanges have flexibility to fix their own market timings within the above timing provided by SEBI. For non-agricultural commodities, trade timings are allowed up to 11:30/11:55 PM due to specific reasons. In case of market outages that leads to a

delay in the relaunch of the markets within 30 minutes before scheduled closure of the respective market segment, the timing for the same can be extended by another 30 minutes. The intimation regarding the extension of trading hours would have to be sent at least 15 minutes before the scheduled closure of market timings (*i.e.* before 4:45 PM, 8:45 PM and 11:10 PM (only if the scheduled market closure is 11:25 PM)). Most of the non-agricultural commodities' futures markets follow international benchmark prices. For example, prices of Oil, Gold, Silver, Metals are based on internationally decided benchmark prices. Hence, to arrive at fair value of DSP or FSP in Futures trading in India, trading (timings) of these commodities in Indian exchanges would have to be in alignment with the international markets to provide for real time hedging opportunities when the benchmark markets are operational.

6.2-4 Trading parameters across contracts

Base Price

When a new future contract is made available for trading, the exchange decides its base price, which is used to decide Daily Price Limit on first day. This price is determined on the basis of a few minimum number of trades happening during first half an hour of trading or up to an extended period of total one hour. Once the contract is listed on the exchange, the base price keeps changing from the second day of its launch as per the official closing price of that contract on the exchange on the preceding day.

Open, High, Low and Last Traded Prices

All commodity exchanges continuously disseminate open, low, high and last traded prices on a real time basis on their screen during the trading session.

Circuit Filters

Circuit filters, also known as the Daily Price Range (DPR) or Daily Price Limit (DPL), is the maximum price range within which contracts would be permitted to trade during a day. This is used as a risk management tool in highly volatile markets. DPL regulations provides a price limit and a cooling off time and a permanent closure of the market beyond a limit for domestic commodities. Details of separate pre-defined DPR for various agricultural and non-agricultural commodities are discussed in section 7.10 of this workbook.

Settlement Price

In commodities futures, there are two types of settlement price: one is the Daily Settlement Price (DSP), known as closing price, and the other is the final settlement price (FSP), also known as Due Date Rate (DDR). Daily settlement price is used to calculate the daily mark-to-market profit or loss. It helps the clearing corporations to avoid accumulation of losses on the part of participants. Final Settlement Price (FSP) is the price at which the delivery or final cash settlement is done at the expiry of the contract. FSP or DDR is also used for determination of “delivery default penalty” in case of non-delivery of short sell quantity. It is also used to determine delivery and payment obligations arising out of the expiry of Options on Goods or the devolved open positions from an expired Options on Futures contracts. FSP in case of Options on Futures is DSP of the underlying Futures itself while in the case of Options on Goods, it is the same as FSP of Futures expiring on the same day. There are regulatory guidelines to arrive at the Daily Settlement Price (DSP), Final Settlement Price or Due Date Rate and the delivery default penalty and working out compensation to the buyer in such case, using the FSP/DDR.

The procedure for arriving at FSP is generally defined in Contract Specifications which is very much standardized as per the SEBI prescribed guidelines based on the polled spot market prices from a portfolio of spot market ecosystem participants. Exchanges have their internal policies in addition to the regulatory guidance to arrive at FSP in case of non-availability of Spot Markets on the contract expiry day. Last Traded Price at the end of the day or on expiry of contract (LTP) may be different from the DSP/FSP/DDR. This is because DSP or FSP is arrived at by using documented methodology while LTP is actually the price at which the last contract of the day was traded.

Delivery Process

Each futures contract for the specified delivery month is deemed to have entered into the delivery period from such date of its expiry month, as specified by the Exchange in the relevant contract specification. Each commodity has its own pre-specified delivery logic as provided in the respective contract specification. Delivery logic means buyers and sellers’ choice on open positions during the tender/delivery period. Basically, two delivery options are available in the commodity derivative markets:

- Compulsory delivery
- Cash Settlement

In the compulsory delivery option, both buyer and seller having an open position during the tender/delivery period of the contract are obligated to take/give delivery of the commodity.

Other trading parameters that are mostly common across major commodities are as follows:

- Start date of trading and Last date of trading: These are generally common across a few commodities in an Exchange. These dates coincide with the trading cycle adopted by that Exchange. For example, many contracts on MCX ends on 5th of the month while on NCDEX, many contracts start on 1st of the start month and ends on 20th of the expiry month.
- Funds Pay-in Pay-out: All the obligations arising out of Initial Margin, MTM loss, Option purchase price needs to be paid before the next day morning.
- Initial Margin & ELM: These are normally based on Value at Risk (VaR) calculated based on price volatility considering a holding period of 2 days. In normal situation for many contracts, we see Initial Margin to be around 4% while ELM of 1%. However, these are also flexible and vary depending upon volatility of prices, Margin Period of Risk (MPOR), etc. If the holding period or settlement period *i.e.*, MPOR is considered more, then initial margin will also increase as the volatility risk is higher on longer settlement periods.
- Additional/*Ad hoc* or Special and Concentration Margins: Enabling provisions exist in contracts for Exchanges to levy these margins in case their imposition is warranted to maintain market integrity.
- Open Position Limit at the Broker level and Client level: Specified in the contract generally in line with SEBI norms. Member level limits are normally 10 times that of client level limit in numeric terms.
- Instrument Type: A specific code that clearly distinguishes derivative instruments such as Commodity Futures, Options on Futures, Options on Goods, Index Options and Index Futures from each other.
- Trading days and trading time: These are provided in advance and specified for most agricultural commodities and non-agricultural commodities based on SEBI norms.
- Basis Centre and Additional delivery center: Provided as part of the contract specifications to enable a robust process for the discovery of commodity prices.

- **Staggered Delivery Period and Delivery Period Margin:** These are specified for the commodities that are settled through the physical delivery-based final settlement. In a recent change in the regulatory policy the mandatory minimum of 3 days has been prescribed as the minimum number of days for staggered delivery of any given commodity.
- **Devolvement Margins for Options on Futures and Delivery margins for Options on Goods:** These enabling clauses exist so that the exchange can charge margins to cover up the gaps in margin if the opted and eligible Options on Futures devolve on to the underlying Futures Position or to cover up the gaps in payment, if instrument such as Options on Goods ends up in delivery-based settlement of goods upon expiry.

List of a few more typical contract specifications are specified in section 6.4, which are common components of all the contracts.

6.2-5 Introduction of Investor Risk Reduction Access (IRRA) platform in case of disruption of trading services provided by the Trading Member²

Salient features of the SEBI circular are given below. For additional information participant may refer to the SEBI circular.

- A joint platform to provide Investor Risk Reduction Access (IRRA) service has been developed by the exchanges to provide the investors an opportunity to square off/close the open positions and/or cancel pending orders in case of disruption of trading services provided by the Trading Member.
- The IRRA service shall support multiple segments across multiple exchanges.
- TMs, upon facing technical glitches which lead to disruption of trading services, can request for enablement of the IRRA service as per the procedures specified by the stock exchanges from time to time and IRRA shall be enabled on receipt of such requests.
- Once the service is enabled, all the investors of the TM shall be informed by the exchange of the availability of the service through email/SMS and a public notice on exchanges' website. TMs shall also communicate the same by displaying on their website.

²https://www.sebi.gov.in/legal/circulars/dec-2022/introduction-of-investor-risk-reduction-access-irra-platform-in-case-of-disruption-of-trading-services-provided-by-the-trading-member-tm-_66785.html