CIRCULAR

SEBI/HO/CDMRD/DMP/CIR/P/2016/97 **September 27, 2016**

To,

The Managing Directors / Chief Executive Officers
National Commodity Derivatives Exchanges

Dear Sir / Madam,

Sub: Broad Guidelines on Algorithmic Trading for National Commodity Derivatives Exchanges

1. As per Section 131(B) of Finance Act, 2015 all rules, directions, guidelines, instructions, circulars, or any like instruments, made by the erstwhile FMC or the Central Government applicable to recognised associations under the FCRA would continue to remain in force for a period of one year from the date on which FCRA was repealed (September 29, 2015), or till such time as notified by SEBI, whichever is earlier.

2. In the past the erstwhile FMC from time to time had issued norms on Algorithmic Trading in consultation with the Exchanges. This circular is being issued to consolidate such norms in one circular.

3. Any order that is generated using automated execution logic shall be known as algorithmic trading.

4. The commodity exchanges shall have arrangements, procedures and system capability to manage the load on their systems in such a manner so as to achieve consistent response time to all members. The capacity of the trading system of the Exchange should be at least four times the peak order load encountered and the Exchange system should be upgraded on a regular basis. The exchange shall continuously study the performance of its systems and, if necessary, undertake system upgrade, including periodic upgrade of its surveillance system, in order to keep pace with the speed of trade and volume of data that may arise through algorithmic trading.

5. While approving the algorithmic trading, the Exchanges shall ensure that:
    a. There is clear classification of algorithmic orders in terms of CTCL terminal code/ATS User ID approved by the Exchange for algorithmic trading.
    b. The orders of clients are routed through member server only and client orders are not placed directly to the Exchange System.

c. The Exchanges shall not approve algorithms that may not be conducive to efficient price discovery or fair play.
d. The Exchange shall subject the systems of the members to initial conformance tests and ensure that the checks mentioned in these guidelines are in place.
e. Immediate Or Cancel (IOC) orders shall not be allowed to be placed using algorithmic trading.
f. The algorithms which will 'take liquidity' away from the market shall not be approved. While approving algorithmic strategies, Exchanges shall record the reason as to why such strategy is allowed and how it will induct more liquidity in the contract system. Exchanges shall also make half yearly review of effect of the approved strategies on liquidity and would discontinue / disapprove any strategy which fails to induct liquidity.

6. As mini and micro contracts are targeted towards small participants, while allowing algorithmic trading in mini and micro contracts Exchange should exercise caution and permit algorithmic trading only after taking into account liquidity in the contract and ascertaining that it will not put small participants in disadvantage.

7. Co-Location, Co–Hosting or any other facility or arrangement which puts some members in disadvantageous position vis-à-vis other members shall not be allowed. Algorithmic trading shall not be permitted from Exchange hosted CTCL terminals.

8. In order to ensure orderly trading in the market and fair usage of the trading platform by all the members, Exchanges shall put in place the following economic disincentives for daily algorithmic order–to–trade ratio:

Member-wise Daily Order-to-Trade Ratio (X)	**Charges (Per order)**
Up to 50	NIL
50 to less than 250 (on incremental basis)	1 paise
250 to less than 500 (on incremental basis)	5 paise
500 or more than 500 (on incremental basis)	5 paise

- In case the ratio is 500 or more than 500 during a trading day, the concerned member shall not be permitted to place any order for the first 15 minutes on the next trading day (in the continuous trading session) as a cooling off action . However, the trading member shall be permitted to enter transaction in risk reducing mode during such a cooling off period.

- For the purpose of calculation of daily Order-to-trade ratio, all algorithmic orders, i.e. order entry, order modifications and order cancellation shall be considered.

- The algorithmic orders entered and /or modified within 1 % of the last traded price (LTP) of the respective contract shall not be included in the calculation of the Order –to-Trade ratio for the purpose of arriving at the penalty for higher order – to – trade ratio.
- The penalty structure will be applicable for only those members who have placed 10,000 orders or more in a day.
- The exchange shall put in place monitoring systems to identify and initiate measures to impede any possible instances of order flooding by algorithmic trading.

9. The Exchanges shall place a limit on numbers of orders per second from a particular CTCL ID/ATS User–ID not exceeding twenty orders per second. The limit of twenty orders per second from a particular CTCL ID/ATS User–ID shall be measured over a rolling period of five seconds (i.e. hundred orders for 0^{th} -5^{th} second, hundred orders for 1^{st} –6^{th} second, hundred orders for 2^{nd} to 7^{th} second & so on).

   For number of orders exceeding twenty per second the Exchanges shall prescribe economic disincentives and inform the same to the SEBI.

10. The exchanges shall ensure that all algorithmic orders are necessarily routed through members servers located in India and through specified CTCL ID/ATS User–ID approved by exchange for algorithmic trading. The exchanges shall also ensure that these have no interlink with any system or ID located/ linked outside India.

11. The exchange shall have appropriate multi-layer risk control mechanism to address the risk emanating from algorithmic orders and trades. The minimum order –level risk controls shall include the following.

    a. Market orders shall not be allowed to be placed using algorithmic trading, only limit orders shall be allowed.
    b. Daily Price Limit check: The price quoted by the order shall not violate the daily price limit specified for the contract.
    c. Maximum order size check: The quantity quoted in the order shall not violate the maximum order size limit defined in the contract specifications.
    d. Net open position check: The quantity quoted in the order shall not violate the position limits at member level and client level.
    e. Market Price Protection: Within the daily price limit, the exchanges may prescribe any other limit which may be a pre – set percentage of LTP.

12. In the interest of orderly trading and market integrity, the exchanges shall put in place a system to identify dysfunctional algorithms (i.e.

algorithms leading to loop or runaway situation) and take suitable measures , including advising the member, to shut down such algorithms and remove any outstanding orders in the system that have emanated from such dysfunctional algorithms. Further, in exigencies, the exchange should be in a position to shut down the member's terminal.

13. The exchange may seek details of algorithmic strategies to be used by the members for purposes of inquiry, surveillance, investigation etc.

14. Any event leading to slow down or trading halt or any other abnormal development shall be immediately reported to Integrated Surveillance Department of SEBI with full details.

15. The Exchanges shall ensure that the member shall provide the facility of algorithmic trading only upon the prior written permission of the exchange. While considering such approval, the exchanges shall ensure that the controls specified in these guidelines are fully implemented by the member.

16. The other risk management checks already put in place by the exchange shall continue and the exchange may re-evaluate such checks if deemed necessary in view of algorithmic trading.

17. Exchange shall have an effective surveillance mechanism to ensure that only approved algorithmic strategies are used.

18. The Exchanges shall further ensure that their members providing the facility of algorithmic trading comply with the provisions of these guidelines. The exchange shall specifically ensure that.

    a. The members maintain sufficient deposits / funds for margin/ settlement obligations, in respect of the trades effected through algorithmic facility, whether on own account or client's account and that algorithmic trading does not result in shortages in margin deposit or settlement obligation.

    b. The member's trades routed through algorithmic trading are not in the nature of abnormal / manipulative trades.

    c. The annual compliance report as submitted by member to the exchange includes a specific system audit report of the algorithmic trading ensuring that the checks are in place. System Audit of algorithmic trading shall be undertaken by a system auditor empanelled by exchanges who possess any of the following certifications :
        i. CISA (Certified Information System Auditors)from ISACA (Information Systems Audit and Control Association)

ii. DISA (Post Qualification Certification in Information System Audit) from Institute of Chartered Accountants of India (ICAI);
iii. CISM (Certified Information Securities Manager) from ISACA:
iv. CISSP (Certified Information System Security Professional) from International Information Systems Security Certification Consortium , commonly known as (ISC).

d. Further, the exchange shall subject the member systems to more frequent system audits, as required.

e. The members have the capability to set up and apply the necessary risk control checks at the individual order level and client level before each order generated by the algorithmic trading is released to the trading system and implements the following minimum level of checks:
   i. Daily Price Limit: Orders are not released in violation of the daily price limit defined in the contract specification or any other limit which may be prescribed by the Exchange.
   ii. Maximum Order Size: Order are not released in violation of the maximum order size limit defined in the contract specification.
   iii. Position limit: The net position of the client / member are not in violation of the position limits prescribed for the respective commodity.
   iv. An algorithmic trading shall account for all executed, unexecuted and unconfirmed orders, placed by it before releasing further order(s). Further, the algorithmic system shall have pre-defined parameters for an automatic stoppage in the event of algorithmic execution leading to a loop or a runaway situation. The member shall have system to identify dysfunctional algorithms.
   v. All algorithmic orders are tagged with a unique identifier provided by the exchange in order to establish audit trail.

f. The Exchange shall ensure that the member, desirous of placing orders using algorithms, submit to the exchange an undertaking that-
   i. The member has proper procedures, systems and technical capability to carry out trading through the use of algorithms and to safeguard algorithms from misuse or unauthorized access.

ii. The member has real-time monitoring systems to identify algorithms that may not behave as expected. Member shall keep exchange informed of such incidents immediately.
iii. The member shall maintain logs of all trading activities to facilitate audit trail.
iv. The member shall maintain record of control parameters, orders, trades and data points emanating from trades executed through algorithm trading.
v. The member shall obtain prior approval of the exchange on any modification or change to the approved algorithms or systems used for algorithms. The Exchange shall ensure conformance of such modified algorithms or systems also to the requirements specified in these guidelines.

19. The Exchange shall report details regarding algorithmic trading to SEBI in in its Monthly Development Report inter-alia incorporating turnover details of algorithmic trading , algorithmic trading as percentage of total trading, number of members/ clients using algorithmic trading, action taken in respect of dysfunctional algos, status of grievances if any, received and processed, etc.

20. The provisions of this circular shall come into effect from September 29, 2016 and in supersession of all earlier directives issued by erstwhile FMC with regard to matters related to Algorithmic Trading/Co-location/HFT.

21. This circular is issued in exercise of the powers conferred under Section 11(1) of the Securities and Exchange Board of India Act 1992 to protect the interests of investors in securities and to promote the development of, and to regulate the securities market.

22. All the Commodity Derivatives Exchanges are also advised to bring the provisions of this circular to the notice of the members of the Exchange and also to disseminate the same on the website.

23. This circular is available on SEBI website at www.sebi.gov.in under the category “Circulars” and “Info for Commodity Derivatives”.

Yours faithfully,

Vikas Sukhwal
Deputy General Manager
Division of Market Policy
Commodity Derivatives Market Regulation Department
Email: vikass@sebi.gov.in