

CIRCULAR

SEBI/HO/MRD/DMS1/CIR/P/2019/43

March 26, 2019

To,

All Stock Exchanges,

All Depositories,

All Clearing Corporations

Dear Sir/ Madam,

**Guidelines for Business Continuity Plan (BCP) and Disaster Recovery (DR) of
Market Infrastructure Institutions (MIIs)**

1. SEBI vide circular CIR/MRD/DMS/12/2012 dated April 13, 2012 and CIR/MRD/DMS/17/2012 dated June 22, 2012 prescribed framework for Business Continuity Plan (BCP) and Disaster Recovery Site (DRS) for stock exchanges and depositories.
2. With the advancement in technology and improved automation of processes in terms of transitioning time, wherein the operations can be moved from the Primary Data Centre (PDC) to the DRS, it was felt that the extant framework needs to be re-examined.
3. Considering the fact that clearing corporations are systemically important infrastructure institutions, it has been decided that framework on BCP and DR shall also be made applicable to all the clearing corporations.
4. Upon examination and based on the recommendation of Technical Advisory Committee (TAC) of SEBI, the modified framework for BCP and DR shall be as under:
 - a. The stock exchanges, clearing corporations and depositories (collectively referred as Market Infrastructure Institutions – MIIs) should have in place BCP and DRS so as to maintain data and transaction integrity.

- b. Apart from DRS, stock exchanges and clearing corporations should also have a Near Site (NS) to ensure zero data loss whereas, the depositories should also ensure zero data loss by adopting a suitable mechanism.
- c. The DRS should preferably be set up in different seismic zones and in case due to certain reasons such as operational constraints, change of seismic zones, etc., minimum distance of 500 kilometer shall be ensured between PDC and DRS so that both DRS and PDC are not affected by the same disaster.
- d. The manpower deployed at DRS /NS should have same expertise as available at PDC in terms of knowledge/ awareness of various technological and procedural systems and processes relating to all operations such that DRS /NS can function at short notice, independently. MIs should have sufficient number of trained staff at their DRS so as to have the capability of running live operations from DRS without involving staff of the primary site.

5. Configuration of DRS/NS with PDC

- a. Hardware, system software, application environment, network and security devices and associated application environments of DRS / NS and PDC shall have one to one correspondence between them.
- b. MIs should endeavor to develop systems that do not require configuration changes at the end of trading members/ clearing members/ depository participants for switchover from the PDC to DRS. Further, MIs should test such switchover functionality by conducting unannounced 2 day live trading session from its DRS. This would help to gauge the state of readiness of various other processes and procedure relating to business continuity and disaster recovery that may not get tested in a planned exercise.
- c. MIs shall have Recovery Time Objective (RTO) and Recovery Point Objective (RPO) of not more than 4 hours and 30 minutes, respectively.
- d. The time taken to define/ establish/ declare a disaster should not be more than 2 hours and the total RTO including the time taken to declare an incident as disaster should not be more than 4 hours. Further, RTO shall be calculated from the occurrence of disaster and not from the time an incident is declared a disaster.
- e. Solution architecture of PDC and DRS / NS should ensure high availability, fault tolerance, no single point of failure, zero data loss, and data and transaction integrity.

- f. Any updates made at the PDC should be reflected at DRS/ NS immediately (before end of day) with head room flexibility without compromising any of the performance metrics.
- g. Replication architecture, bandwidth and load consideration between the DRS / NS and PDC should be within stipulated RTO and ensure high availability, right sizing, and no single point of failure.
- h. Replication between PDC and NS should be synchronous to ensure zero data loss whereas, the one between PDC and DRS and between NS and DRS may be asynchronous.
- i. Adequate resources (with appropriate training and experience) should be available at all times to handle operations at PDC, NS or DRS, as the case may be, on a regular basis as well as during disasters.

6. DR drills/Testing

- a. DR drills should be conducted on a quarterly basis. In case of exchanges and clearing corporations, these drills should be closer to real life scenario (trading days) with minimal notice to DR staff involved.
- b. During the drills, the staff based at PDC should not be involved in supporting operations in any manner.
- c. The drill should include running all operations from DRS for at least 1 full trading day.
- d. Before DR drills, the timing diagrams clearly identifying resources at both ends (DRS as well as PDC) should be in place.
- e. The results and observations of these drills should be documented and placed before the Governing Board of stock exchanges /clearing corporations/ depositories. Subsequently, the same along with the comments of the Governing Board should be forwarded to SEBI within a month of the DR drill.
- f. The system auditor while covering the BCP – DR as a part of mandated annual system audit should check the preparedness of the MII to shift its operations from PDC to DRS unannounced and also comment on documented results and observations of DR drills.

- g. 'Live' trading sessions from DR site shall be scheduled for at least two consecutive days in every six months. Such live trading sessions from the DRS shall be organized on normal working days (i.e. not on weekends / trading holidays). The stock exchange/ clearing corporation shall ensure that staff members working at DRS have the abilities and skills to run live trading session independent of the PDC staff.
- h. Stock exchanges and clearing corporations shall include a scenario of intraday shifting from PDC to DR during the mock trading sessions in order to demonstrate its preparedness to meet RTO/RPO as stipulated above.
- i. MII should undertake and document Root Cause Analysis (RCA) of their technical/ system related problems in order to identify the causes and to prevent reoccurrence of similar problems.

7. BCP – DR Policy Document

- a. Stock exchanges, clearing corporations and depositories, depending upon their line of business shall decide the definition of 'Disaster' which requires them to move from the PDC to DRS and include the same in the BCP-DR Policy. The above policy shall be approved by the respective Governing Boards of MIIs.
- b. The BCP – DR policy of stock exchanges, clearing corporations and depositories should be well documented covering all areas as mentioned above including disaster escalation hierarchy.
- c. The stock exchanges/ clearing corporations should specifically address their preparedness in terms of proper system and infrastructure in case disaster strikes during business hours.
- d. Depositories should also demonstrate their preparedness to handle any issue which may arise due to trading halts in stock exchanges.
- e. The policy document and subsequent changes / additions / deletions should be approved by Governing Board of the stock exchanges / clearing corporations/ depositories and thereafter communicated to SEBI.
- f. In case a MII desires to lease its premise at the DRS to other entities including to its subsidiaries or entities in which it has stake, the MII should ensure that such arrangements do not compromise confidentiality, integrity, availability,

targeted performance and service levels of the MII's systems at the DRS. The right of first use of all the resources at DRS including network resources should be with the MII. Further, MII should deploy necessary access controls to restrict access (including physical access) of such entities to its critical systems and networks.

8. Considering the above, stock exchanges, clearing corporations and depositories are advised to submit their revised BCP – DR policy to SEBI within 3 months from the date of this circular. Further, they should also ensure that clause 6 (f) mentioned above is also included in the scope of System Audit.
9. This circular is being issued in exercise of 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.
10. This circular is available on SEBI website at www.sebi.gov.in under the categories “Legal Framework” and “Circulars”.
11. This circular shall supersede earlier circulars CIR/MRD/DMS/12/2012 dated April 13, 2012 and CIR/MRD/DMS/17/2012 dated June 22, 2012 issued on BCP-DR Policy.

Yours faithfully,

Susanta Kumar Das
General Manager
+91-22-26449221
susantad@sebi.gov.in