PRINCIPLES OF FINANCIAL MARKET INFRASTRUCTURE

Qualitative Disclosure FY2024-25

AMC Repo

Safe,Secure & Stable

AMC REPO CLEARING LIMITED

Committee on Payments and Market infrastructures

AND

Board of International Organization of Securities Commissions

Responding institution:	AMC Repo Clearing Limited
Jurisdiction(s) in which the FMI operates:	India
Authority(ies) regulating, supervising, or overseeing the FMI:	Reserve Bank of India (RBI) & Securities and Exchange Board of India (SEBI)
The date of this disclosure is:	31-Mar-2025

This disclosure is also made available at https://www.arclindia.com/pfmi

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Executive Summary

This document provides a comprehensive disclosure by the AMC Repo Clearing Limited (ARCL) on its governance arrangements, operational procedures and practices, and risk management frameworks that are applied for providing clearing and settlement services.

ARCL is the Clearing Corporation for the transactions executed on Stock Exchanges for Tri-party Repo in Corporate debt securities. ARCL provides services to its clearing members / participants with the objective of bringing and sustaining confidence in clearing and settlement services, settlement guarantee while ensuring adherence to risk management framework. To achieve these objectives, ARCL has laid down a comprehensive set of rules and regulations that provide the operational level details on key aspects of the clearing and settlement business. The rules, regulations and bye-laws describe in detail the following areas:

- Participation: including membership criteria, ongoing requirements, and types of clearing member / participants.
- Operational details: admission of deals for settlement, clearing and settlement of admitted deals including time of trade settlement, netting of settlement obligations, etc.
- Risk management: including details on eligible collateral, initial margin, haircut etc.
- Default procedures: declaration of default and subsequent actions. Utilization of financial resources in case of default including the default waterfall mechanism.

The risk management framework has been designed to cater to various types of risks.

- **Market Risk** **–** The market risk covers the risk arising due to adverse change in the prices of the underlying collateral.
- **Credit Risk** – The credit risk is the risk of counterparty defaulting to honour its settlement obligations.
- **Liquidity Risk** – It is the risk that ARCL is unable to maintain sufficient financial resources to cover its exposures under normal and stressed conditions.
- **Operational Risk** – It is the risk of loss resulting from inadequate or failed internal processes, systems, and people, or from external events.
- **Information Technology and Cyber Security Risk** – It is the risk that ARCL is unable to maintain technology capabilities or services to support its operations, and is unable to detect, defend against, and respond to cyber security threats and incidents.
- **Legal Risk** – It is the risk of loss that results from a lack of awareness, misunderstanding or unexpected application of the laws and regulations that apply ARCL's business, products, services, and relationships.
- **General Business Risk** – It is the risk of potential impairment to ARCL's financial position resulting from a decline in revenues or an increase in expenses.
- **Investment Risk** - Investment risk refers to the risk of loss faced by the clearing corporation when it invests its own funds and core settlement guarantee fund or its participants' assets.
- **Clearing Bank Risk** **-** ARCL uses the commercial bank model for settlement. Clearing banks act as a pass through for settlement of funds. All settlements are done through these Clearing Banks. Any failure at clearing bank will impact settlement of funds.

Background

With the objective of developing a liquid repo market, RBI has issued Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, and as amended in November 2019, with the objective of developing a liquid repo market. As per the RBI Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, tri-party repo means a repo contract, where a third entity (apart from the borrower and lender), called a Tri-party Agent, acts as an intermediary between the two parties to the repo to facilitate services like collateral selection, payment and settlement, custody, and management during the life of the transaction.

ARCL, is a Limited Purpose Clearing Corporation, recognised by SEBI under the Stock Exchanges and Clearing Corporations (SECC) Regulations, 2018, for providing clearing and settlement services as well as settlement guarantee for tri-party repo in corporate debt securities.

RBI has granted Certificate of Authorization to ARCL under the Payment and Settlement Systems (PSS) Act, 2007, to offer Central Counterparty Services (CCP) services and it has also authorised ARCL to act as a tri-party repo agent for tri-party repo transactions in corporate debt securities.

Purpose

ARCL as a Central Counterparty (CCP), is exposed to different types of risks namely market risk, credit risk, liquidity risk etc. To mitigate these risks, ARCL has prescribed risk management framework. This document dwells in detail the extent of compliance by ARCL to the Core Principles of PFMI in managing the above-mentioned risks and also as continuing its operations in line with these core principles.

Governing Board & Governance

The governing Board and its various Committees oversee the affairs of ARCL and are responsible for the management of business and its performance The governance structure at ARCL includes the Governing Board, various committees of the Governing board, and the Management team and its employees.

Background on PFMI disclosures

ARCL is recognized as a Limited Purpose Central Counterparty (LPCC) and has completed a self-assessment against the 24 Principles for Financial Market Infrastructures (PFMIs) and related guidance, as published by the Committee on Payment and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO). The self-assessment was completed using the recommended assessment methodology published by CPMI and IOSCO.

Self-Assessment Report

Principle No	Principle	Self-Assessment
1	An FMI should have a well-founded clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.	Observed
2	Governance: An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.	Observed
3	An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.	Partly Observed
4	An FMI should effectively measure, monitor, and manage its credit exposure to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.	Observed
5	An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.	Broadly Observed
6	A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed	Observed
7	An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday, and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.	Observed
8	An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.	Observed
9	Money Settlements: An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.	Observed
10	Physical Deliveries: An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.	Not Applicable
11	Central Securities Depositories: A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A	Not Applicable

Principle No	Principle	Self-Assessment
	CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.	
12	Exchange of Value Settlement System: If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.	Observed
13	Participants Default Rules and Procedures: An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.	Observed
14	Segregation and Portability: A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions	Observed
15	General Business Risk: An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.	Observed
16	Custody and Investment Risk: An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.	Observed
17	Operation Risk: An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.	Not Observed
18	Access and Participation Requirements: An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.	Partly Observed
19	Tiered Participation Arrangements: An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements	Observed
20	FMI Links: An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.	Broadly Observed
21	Efficiency and Effectiveness: An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.	Observed
22	Communication Procedures and Standards: An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.	Observed

Principle No	Principle	Self-Assessment
23	Disclosure of Rules, Key Procedures and Data: An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.	Observed
24	A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.	Not Applicable

Self-Assessment Summary

Category	No. of Principles	Principles
Observed	16	1,2,4,6,7,8,9,12,13,14,15,16,19,21,22 and 23
Broadly Observed	2	5 and 20
Partly Observed	2	3 and 18
Not Observed	1	17
Not Applicable	3	10,11 and 24

PRINCIPLE 1: LEGAL BASIS
An FMI should have a well-founded clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Key Consideration 1:
The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.

ARCL has been authorized by Reserve Bank of India (RBI) under Payment and Settlement Systems (PSS) Act, 2007 (PSS Act, 2007) to offer central counterparty services for clearing and settlement of repo transactions in corporate debt securities that are dealt with or traded on recognized stock exchanges. The PSS Act and Regulations provide legal netting, settlement finality etc.

Under Securities Contracts Regulation Act 1956 (SCRA), SEBI is vested with powers to grant recognition to a clearing corporation. Under section 31 of SCRA, SEBI is empowered to make regulations consistent with the provisions of SCRA. Pursuant to the powers, inter alia, vested in SEBI under section 4, 8A and 31, SEBI issued Securities Contracts (Regulation) (Stock Exchanges and Clearing Corporations) Regulations 2018 (SCRA [SE & CC] Regulations 2018) dealing with recognition, net worth, ownership, governance, investment by a clearing corporation, core settlement guarantee fund and general obligations of clearing corporations. Regulation 34 provides that every stock exchange shall use the services of a recognized clearing corporation for clearing and settlement of its trades with effect from the date specified by SEBI in that behalf.

SEBI has granted recognition to ARCL to function as a Limited Purpose Clearing Corporation under Regulation 4 of (SCRA [SE & CC] Regulations 2018).

Netting has been defined under Regulation 2(1) (k) of the SCRA [SE & CC] Regulations 2018. Novation has also been defined in the SCRA [SE & CC] Regulations 2018 under Regulation 2(1) (l) as the act of one or more recognised clearing corporations interposing between the parties of every trade, to be a legal counterparty.

The SCRA [SE & CC] Regulations 2018 provides regulatory protection to the clearing corporation activities by way of Regulation 43 and 44.

Under sub-regulation 3 of Regulation 43, when a settlement has become final and irrevocable, the right of the recognized stock exchange or the recognized clearing corporation, as the case may be, to appropriate any collaterals or deposits or margins contributed by the trading member, clearing member or client (Participants) towards its settlement or other obligations in accordance with the bye-laws of the recognized stock exchange or recognized clearing corporation shall take priority over any other liability of or claim against the said trading member, clearing member or client (Participants), as the case may be.

Under Regulation 44, regulatory protection has been provided for the clearing corporation to deal with the collaterals, deposits, and assets of the clearing members / participants. This Regulation recognizes the rights of the clearing corporation for recovery of dues and priority for such liability to clearing corporation. The Regulation provides that the right of recognized clearing corporation(s) to recover the dues from its clearing members / participants, arising from the discharge of their clearing and settlement functions, from the collaterals, deposits, and assets of the clearing members /

participants, shall have priority over any other liability of or claim against the clearing members / participants.

The Rules and Bye-laws of ARCL are approved by Securities and Exchange Board of India. The Bye-laws are published in the official gazette of Government of India and Government of Maharashtra. ARCL has also published bye-laws, rules, regulations, articles of association and memorandum of association in the official gazette of Government of India and Government of Maharashtra post recognition. ARCL follows the stipulated process of amendments to bye-laws by seeking public comments through a consultative process and prior approval of SEBI.

Key Consideration 2:

An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

The Rules and Bye-laws of ARCL are approved by Securities and Exchange Board of India. The Bye-laws are published in the official gazette of Government of India and Government of Maharashtra. ARCL has published its bye-laws, rules, articles of association and memorandum of association in the official gazette of Government of India and in the official gazette of Government of Maharashtra post recognition by SEBI. Any amendments to bye-laws are done only after seeking public comments through a consultative process. ARCL seeks approval of the Governing Board before seeking approval of the regulator(s).

Key Consideration 3:

An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.

Legal basis for the activities of the clearing corporation is provided for in RBI's PSS Act and PSS Regulations. ARCL has been authorized by RBI under PSS Act, 2007 effective from February 28, 2023. The legal basis is also articulated in the Section 8A of the Securities Contracts (Regulation) Act, 1956 and in the SCRA [SE & CC] Regulations 2018, which requires ARCL to make an application for recognition as a recognized clearing corporation. ARCL has been granted recognition by SEBI under these regulations. Further, the bye-laws of ARCL and any subsequent amendments are approved by SEBI.

Key Consideration 4:

An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.

As already indicated above, the regulatory framework within which ARCL functions provides certainty to its activities and the Rules, Bye-laws, Regulations and Circulars of ARCL and are enforceable in India. Further, it may be noted that Section 8A of the Securities Contracts (Regulation) Act, 1956 read with SCRA [SE & CC] Regulations 2018 require ARCL to make an application for recognition as a recognized clearing corporation. ARCL is recognized as a Limited Purpose Clearing Corporation (LPCC) under these regulations. In terms of Section 7 of PSS Act, 2007, ARCL has been authorized by RBI to offer CCP services for repo transactions in corporate debt securities. RBI has also approved ARCL to act as a Tri-Party Repo Agent for repo transactions in corporate debt securities.

Key Consideration 5:
An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

ARCL does not operate in multiple jurisdictions and therefore the key consideration is not applicable.

PRINCIPLE 2: GOVERNANCE
Governance: An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

Key Consideration 1:
An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.

The objectives of ARCL are clearly defined in the object clause of memorandum of association. The main objective is to *facilitate setup and carry on the business of clearing and settlement of repo and reverse repo transactions in corporate debt securities traded on SEBI recognised stock exchanges.* ARCL provides the highest priority to safety and efficiency which is evident from its rules, regulations and bye-laws framed to govern the business and operations. The rules, regulations and bye-laws stress upon strong financials, strict eligibility criteria and adequate infrastructure.

Key Consideration 2:
An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.

The SCRA [SE&CC] Regulations 2018 and the Procedural norms on Recognitions, Ownership and Governance for Stock Exchanges and Clearing Corporations ("Procedural Norms") issued by SEBI prescribe in detail the governance norms to be followed by Clearing Corporations.

ARCL is a public limited company incorporated under the provisions of Companies Act (2013) and the share capital is contributed by Asset Management Companies in proportion to their debt assets under management based on the FY2020-21.

The shareholders of the Clearing Corporation are fit and proper persons and are not disqualified and the promoters are governed under SEBI (Mutual Funds) Regulations, 1996. As these are continuous requirements, after becoming the shareholder of ARCL, if any shareholder suffers any disqualification, they cannot continue to be a shareholder of Clearing Corporation.

All directors of ARCL are appointed only after the approval of SEBI. SECC Regulations have laid down the eligibility requirements for board of directors. They are required to meet the "fit and proper" criteria and must not be associated with any trading/clearing member. A code of conduct has been specified under the SECC regulation for board members.

The clearing corporation has three categories of directors viz. Managing Director, Shareholder Directors (Nominee Directors), and Public Interest Directors. The public interest directors form at least

2/3rd of the total strength of the Governing Board. Various committees as specified in the procedural norms and are statutorily required, have been constituted to oversee various aspects of the functioning of the clearing corporation.

A compliance officer has been appointed as per the requirements of SECC Regulations to monitor the compliance of relevant acts, rules, and regulations by the clearing corporation. ARCL provides accountability to its owners, participants and other stakeholders through Rules, Regulations, Bye-laws, Member agreements, norms, and shareholder agreements. ARCL has disclosed all the governance arrangements (Rules, Regulations, Bye-laws, Annual reports) on the website.

ARCL organises User groups meetings periodically to get feedback from market participants for the growth of Tri Party Repo product. Further, ARCL ensures adequate and timely disclosure of information to its shareholders.

ARCL has also formulated Vision and Mission along with the Objectives. ARCL strives towards compliance with RBI's Directions for Central Counterparties dated October 28, 2024, for the governance arrangements.

Disclosure of governance arrangements:

The relevant governance arrangements, changes and reviews are communicated to the owners, relevant authorities, users either through the Annual Report or statutory returns which are mandatory under the Companies Act or PSS Act or CCP Directions and through necessary disclosures on the website of the Company. The Companies Act, 2013 had stipulated that the Annual Report prepared by the Companies should be more detailed and extensive in terms of information and disclosures.

The audited Financial Statements are displayed on the website as required under the Payment and Settlement Systems Act 2007. In addition, a separate Code of Conduct for Directors and KMPs has also been put in place by the Company.

The composition of the Governing Board and the Governing Board committees are also made available on the ARCL website. The Governing Board is independent and there is no representation from shareholders on the Governing Board.

Key Consideration 3:

The roles and responsibilities of an FMI's Board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The Board should review both its overall performance and the performance of its individual Board members regularly.

Pursuant to Companies Act, 2013, the roles and responsibilities of the ARCL's Board of Directors are clearly defined in its Articles of Association and the Rules. The SCRA [SE&CC] Regulations 2018, also provides guidance on role and responsibility of each category of directors of the Clearing Corporation. The Governing Board of the Clearing Corporation comprises of Shareholder Directors (Nominee Directors), Public Interest Directors (Independent Directors), and Managing Director. The Managing Director's (MD) performance is assessed by the Governing Board every year and the remuneration including increment is fixed based on MDs performance. His/her term is renewed only if the Governing Board and shareholders are satisfied with their performance. ARCL has procedures in place to review the performance of the Directors of the Board.

The various committees of the Governing Board along with their scope are given below:

Audit Committee

a. The recommendation for appointment, remuneration and terms of appointment of auditors of the company;
b. Review and monitor the auditor's independence and performance, and effectiveness of audit process;
c. Examination of the financial statement and the auditors' report thereon with particular reference to:
    i. matters required to be included in the director's responsibility statement to be included in the board's report;
    ii. changes, if any, in accounting policies and practices and reasons for the same;
    iii. major accounting entries involving estimates based on the exercise of judgment by management;
    iv. significant adjustments made in the financial statements arising out of audit findings;
    v. compliance with listing and other legal requirements relating to financial statements;
    vi. disclosure of any related party transactions;
    vii. modified opinion(s) in the draft audit report;
d. reviewing, with the management, the quarterly financial statements before submission to the board for approval;
e. Approval or any subsequent modification of transactions of the company with related parties;
f. Scrutiny of inter-corporate loans and investments (if any);
g. Valuation of undertakings or assets of the company, wherever it is necessary;
h. Evaluation of internal financial controls, risk management systems and risk-based auditing;
i. reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems;
j. formulation and review of Compliance policy and ensuring adherence with the same;
k. Monitoring the end use of funds raised through public offers, right issue, preferential issue and reviewing the statement of funds utilized for purposes other than those stated in the offer document / prospectus / notice and making appropriate recommendations to the board to take up steps in this matter;
l. Oversight of the financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible;
m. approval of payment to statutory auditors for any other services rendered by the statutory auditors;
n. reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit;
o. discussion with internal auditors of any significant findings and follow up there on;
p. reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the board;
q. discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern;
r. to look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors;
s. to review the functioning of the whistle blower mechanism;
t. approval of appointment of chief financial officer after assessing the qualifications, experience

and background, etc. of the candidate;

Risk Management Committee

a. Formulate a detailed Risk Management Framework (RMF) which shall be approved by the governing board of the clearing corporation to ensure continuity of operation at all points of time.
b. The RMF shall include the following:
    i. The framework for identification of internal and external risks;
    ii. Measures for risk mitigation including systems and processes for internal control and;
    iii. Business continuity plan.
c. Monitor each risk associated with the functioning of the clearing corporation more specifically for functions under vertical 1 and 2.
d. Review the RMF & risk mitigation measures at least once annually taking into account the changing industry dynamics and evolving complexity.
e. Monitor and review enterprise-wide risk management plan and lay down procedures to inform governing board about the risk assessment and mitigation procedures.
f. RMC shall coordinate with other committees. In case of overlap with activities of other committees, RMC may consider views of such committees.
g. Monitor implementation of the RMF and also keep the governing board informed about implementation of the RMF and deviation, if any.
h. Approve the Half-Yearly Risk report to be submitted by the Chief Risk Officer (CRiO) to SEBI and the governing board of the clearing corporation.
i. Comply with the roles and responsibilities as provided under the Companies Act 2013 and the SEBI (Listing Obligation and Disclosure Requirement), Regulations, 2015.

Regulatory Oversight Committee

Oversee the matters related to the following:

a. Compliance:

i. Oversee implementation and compliance with SECC Regulations, 2018 as amended from time to time and other applicable rules and regulations along with SEBI Circulars and other directions issued thereunder.
ii. Review the observations arising from various SEBI inspections, ensuring its advisories and findings are appropriately and timely addressed, and reports to governing board on timely basis.
iii. Monitor and assess the clearing corporation against the PFMIs on an annual basis and submit a report to the governing board of the clearing corporation.

b. Code of Conduct:

i. Lay down procedures for implementation of the code of conduct and prescribe the reporting formats for disclosures required under the code of conduct.
ii. Oversee the compliance of the code of conduct by KMPs and members of statutory committees (except directors).
iii. Review compliance with the provisions on "Code of Conduct & Institutional mechanism for prevention of Fraud or Market Abuse" of Chapter VI of SEBI Master Circular for Stock Exchanges and Clearing Corporations at least once in a financial year and also verify that the adequacy and operational effectiveness of the systems for internal control.

iv. Periodically oversee the dealings in securities by KMPs and IEPs.
v. Periodically oversee the trading conducted by firms or corporate entities in which the directors of the Clearing Corporation hold twenty percent or more beneficial interest or hold a controlling interest.
vi. While monitoring trades by KMPs and members of statutory committees, ROC shall take into consideration sensitive information held by them as per structured digital database maintained by clearing corporation.

c. Ensure the adequacy of resources dedicated to functions under verticals for "Critical operations" and "Regulatory, compliance, risk management and investor grievance".

d. <u>Grievance Redressal mechanism:</u>

i. Define policy and SOP for dealing with complaints by clearing corporation.
ii. Review of complaint resolution process, complaints remaining unresolved over long period of time, etc.
iii. Ensuring that Clearing Corporations take pro-active actions in case of repeated nature of complaints against particular CMs, if any.

e. Supervising the functioning of Investors Services Cell of the clearing corporation.

f. <u>Whistleblower Mechanism:</u>

i. Frame the Whistle Blower Policy to be approved by the governing board.
ii. Communicate the whistle blower policy internally to all persons and display the same on the clearing corporation's website.
iii. Review the whistle blower policy based on feedback received.

g. Review the fees and charges levied by a Clearing Corporation including comments on its appropriateness, on a periodic basis as well as each time there is change.

h. Manage the Core Settlement Guarantee Fund (Core SGF) of the clearing corporation, including its investments as per norms laid down and ensure proper utilization of Core SGF.

<u>Standing Committee on Technology (Technical Committee)</u>

a. Ensure availability of required IT infrastructure for core and critical functions under verticals for "Critical operations" and "Regulatory, compliance, risk management and investor grievances".
b. Ensure existence of adequate Business Continuity Plan (BCP) and Disaster Recovery (DR) plans.
c. Ensuring sound and prudent policies, standards and procedures for managing technology risks and safeguard information assets in the clearing corporation.
d. Review the implementation of technology risk management framework and strategy of clearing corporation.
e. Monitor whether the technology used by the clearing corporation remains up to date and meets the growing demands of the markets.
f. Periodic review of the IT system and network architecture design to identify any weaknesses in the existing design.
g. Review of in-house availability of appropriate IT staff to manage IT systems and related outsourcing arrangement.

h. Monitor the adequacy of system capacity and efficiency.
i. To look into the changes being suggested by the clearing corporation to the existing software or hardware.
j. Oversee investigation into the computerized risk management or clearing & settlement system, such as hanging or slowdown or breakdown etc.
k. Ensure that transparency is maintained in disseminating information regarding slowdown or break down risk in Online Clearing & Settlement System and ensure that the Clearing Corporation issues a press release specifying the reasons for any such breakdown.
l. Approve Root Cause Analysis (RCA) of any stoppage of Clearing and Settlement system and report to the governing board and SEBI.
m. Review the implementation of board approved cyber security and cyber resilience policy and its framework and ensure existence of advanced Cyber Security and Cyber Resilience framework at the clearing corporation.
n. Review the identification and classification process of critical assets based on their sensitivity and criticality for business operations, services and data management.
o. Ensuring that the scope of the system audit, cyber audit and VAPT of the clearing corporation is broad and representative of all critical areas of the clearing corporation.
p. Monitoring the results of periodic cyber security and DR drills conducted by clearing corporations.
q. Review and approve the report regarding overall cyber security posture and technology implementation at the Clearing Corporation and submit to the Governing Board. Upon approval by the governing board, submit the report to SEBI.
r. On the above areas, the Committee shall submit a report to the Governing Board of the clearing corporation for necessary action, if any.
s. Guide in preparation of IT Strategy and ensure that the IT Strategy aligns with the overall strategy of the CCP towards accomplishment of its business objectives;
t. Satisfy itself that the IT Governance and Information Security Governance structure fosters accountability, is effective and efficient, has adequate skilled resources, well defined objectives and unambiguous responsibilities for each level in the organisation;
u. Ensure that the CCP has put in place processes for assessing and managing IT and cybersecurity risks;
v. Such other matters as may be referred by the Governing Board of the Clearing Corporation and/or SEBI.

Conflict of Interest**:** Regulation 26 of SCRA [SE&CC] Regulations 2018, and RBI's Directions for Central Counterparties, 2019, provides for code of conduct for directors and key management personnel for clearing corporations. Every director of ARCL must abide by the Code of Conduct specified under Part – A of Schedule – II of these Regulations. Every director and key management personnel of ARCL must abide by the Code of Ethics specified under Part – B of Schedule – II of these regulations. SEBI, for any failure by the directors to abide by these regulations or the Code of Conduct or Code of Ethics or in case of any conflict of interest, either upon a reference from ARCL or Suo motu, shall take appropriate action including removal or termination of the appointment of any director. The directors must not be associated with any trading/clearing member.

Key Consideration 4:
The Board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive Board member(s).

The Governing Board comprises Public Interest Directors, Shareholder Directors (Nominee Directors), and Managing Director. All the Directors are required to be appointed with prior approval from SEBI and such appointment shall be informed to RBI. Knowledge and experience in the field of Finance, Economics, Law, and Risk Management are the skills sets necessary for ARCL's Board members. As per SCRA [SE&CC] Regulations 2018, and as per RBI's Directions for Central Counterparties (CCPs) dated June 12, 2019, every director and key management personnel of a recognized clearing corporation shall be a fit and proper person. Pursuant to SCRA [SE&CC] Regulations 2018, ARCL does not provide any incentives to the Governing Board members other than the sitting fees. The Managing Director does not get any sitting fees. The information on shareholder directors and public interest directors on ARCL Board are disclosed on ARCL's website.

A. Independent Director Criteria as per Companies Act, 2013.

Within the meaning of Section 149(6) of Companies Act, 2013, read with Regulation 16(b) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 as amended:

a) who, in the opinion of the Governing Board, is a person of integrity and possesses relevant expertise and experience;
b) (i) who is or was not a promoter of the company or its holding, subsidiary or associate company;
   (ii) who is not related to promoters or Directors in the company, its holding, subsidiary or associate company;

c) who has or had no pecuniary relationship, other than remuneration as a director or having transaction not exceeding ten per cent of his total income or such amount as may be prescribed, by the company, its holding, subsidiary or associate company, or their promoters, or Directors, during the two immediately preceding financial years or during the current financial year;
d) none of whose relatives—

(i) is holding any security of or interest in the company, its holding, subsidiary or associate company during the two immediately preceding financial years or during the current financial year:

Provided that the relative may hold security or interest in the company of face value not exceeding fifty lakh rupees or two per cent of the paid-up capital of the company, its holding, subsidiary or associate company or such higher sum as may be prescribed;

(ii) is indebted to the company, its holding, subsidiary or associate company or their promoters, or Directors, in excess of such amount as may be prescribed during the two immediately preceding financial years or during the current financial year;

(iii) has given a guarantee or provided any security in connection with the indebtedness of any third person to the company, its holding, subsidiary or associate company or their promoters, or Directors of such holding company, for such amount as may be prescribed during the two immediately preceding financial years or during the current financial year; or

(iv) has any other pecuniary transaction or relationship with the company, or its subsidiary, or its holding or associate company amounting to two per cent or more of its gross turnover or total income singly or in combination with the transactions referred to in sub-clause (i), (ii) or (iii);

e) who, neither himself nor any of his relatives—

(i) holds or has held the position of a key managerial personnel or is or has been employee of the company or its holding, subsidiary or associate company in any of the three financial years immediately preceding the financial year in which he is proposed to be appointed;

Provided that in case of a relative who is an employee, the restriction under this clause shall not apply for his employment during preceding three financial years.

(ii) is or has been an employee or proprietor or a partner, in any of the three financial years immediately preceding the financial year in which he is proposed to be appointed, of—

(1) a firm of auditors or company secretaries in practice or cost auditors of the company or its holding, subsidiary or associate company; or

(2) any legal or a consulting firm that has or had any transaction with the company, its holding, subsidiary or associate company amounting to ten per cent. or more of the gross turnover of such firm;

(3) holds together with his relatives two per cent. or more of the total voting power of the company; or

(4) is a Chief Executive or director, by whatever name called, of any nonprofit organisation that receives twenty-five per cent. or more of its receipts from the company, any of its promoters, Directors or its holding, subsidiary or associate company or that holds two per cent. or more of the total voting power of the company; or

f) who possesses such other qualifications as may be prescribed.

B.) Independent Director Criteria as per SECC & RBI Directions for Central Counterparties

The Independent Directors shall also adhere to the eligibility criteria for appointment of Independent Directors as stipulated under the Directions for Central Counterparties issued by RBI from time to time including the following Fit and Proper criteria for Directors:

A Director shall be deemed to be a "fit and proper" person if:

(i) such person has a record of fairness and integrity, including but not limited to —
- financial integrity;
- good reputation and character; and
- honesty;

(ii) such person has not incurred any of the following disqualifications —
- convicted by a court for any offence involving moral turpitude or any economic offence or any offence under the laws administered by the RBI;
- declared insolvent and not discharged;
- an order, restraining, prohibiting or debarring the person from accessing / dealing in any financial system, passed by any regulatory authority, and the period specified in the order has not elapsed;
- found to be of unsound mind by a court of competent jurisdiction and the finding is in force; and
- is financially not sound.

(iii) If any question arises as to whether a person is a fit and proper person, the RBI's decision on such question shall be final.

Key Consideration 5:

The roles and responsibilities of management should be clearly specified. An FMI's management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI

The roles and responsibilities of the management are:

(i) To develop and sustain robust clearing and settlement processes which are in accordance with the organizational strategy and statutory regulations.
(ii) To ensure the development, performance, and conduct of employees working in the organization.
(iii) To define clear goals and courses of action to the team members.
(iv) To ensure the well-being and progress of the team members.
(v) To display integrity in all actions of the management.
(vi) To display proper attitude and behaviour, job knowledge, and effective communication to build good working relationships thereby motivating people to accomplish set goals and meet objectives.

Performance review and assessment:

(i) Senior Management personnel would be assessed vis-à-vis the competency framework. It would encompass the assessment of behavioural and functional competencies to perform the role.
(ii) Performance would be assessed in the mid-year as well as at the end of the financial year based on the achievement of goals and competencies displayed through behavioural manifestations. Emphasis would be given both to achievement of goals and rightful behaviour.

Key Consideration 6:

The Board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the Board.

ARCL has adopted and developed the risk management framework. The framework consists of collateral selection, prudential limits, margin & hair-cut prescription, member limits, default handling mechanism, risk monitoring (Back test and Stress test) and Core Settlement Guarantee Fund. Risk Management Committee recommends the risk management policy and is approved by the Governing Board of ARCL. The head of the Risk Management department is responsible for implementation of the Risk Management Policy and reports to the Risk Management Committee and to the Managing Director of the clearing corporation.

Authority and independence of risk management and audit functions

Risk Management Department headed by Chief Risk Officer is entrusted with the responsibility of designing and carrying out risk management processes for the CCP. Chief Risk Officer is directly reporting to the Risk Management Committee with a dotted line reporting to the Managing Director. Audit of risk function is carried out by internal auditor's Overall audit function is carried out by an Independent external audit firm appointed as Internal cum Operations Auditors. The Internal cum Operations Auditors present their reports to the Audit Committee at its quarterly meetings.

The Risk Management Committee reviews the changes to the Risk Management Farmwork and recommends to the Governing Board for their final approval.

Key Consideration 7:

The Board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.

All the major stakeholders are engaged while carrying out any major structural changes. Consultation paper will be issued to members and public wherever required. Changes will be communicated to members/participants by way of issuing circulars and changes, if any, to the Bye-laws will be carried out. ARCL also may seek approval from regulators for the change or may seek to inform the regulators depending on the nature of the change being carried out.

ARCL has formed Credit Committee and Advisory Committee which consist of various market participants. The role of the Credit Committee is to provide advice on various credit risk matters and the role of the Advisory Committee is to provide advice on operational matters related to ARCL and overall development of corporate bond repo market.

PRINCIPLE 3: FRAMEWORK FOR COMPREHENSIVE MANAGEMENT OF RISKS

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

Key Consideration 1:

An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.

ARCL has sound risk management policies to monitor credit, liquidity, and investment risks. Details of the policies and processes in place to manage these risks are discussed in Principles 4, 7, 15, 16 and 17 respectively. ARCL's Risk Management policies are approved by the ARCL Governing Board as recommended by Risk Management Committee.

Credit risk component of underlying collaterals is being managed by a robust and dynamic margining process basis the type of instrument, rating and residual maturity of underlying collaterals. As per SEBI circular on Core SGF (Fund required to cover for shortfall of margins in case of stress scenarios), ARCL

has designed a stress test with various stress scenarios. This stress test is carried out on daily basis to assess the requirement of Core SGF.
The approach followed by ARCL for stress testing entails three parts:

a) Stress Scenario.
b) Simulation of values of trade portfolios (Lenders) and underlying collaterals (Borrowers) of all members / participants using Stress Scenarios.
c) Identification of the top two highest possible loss in the account of a member / participants under stressed conditions.

Risk Monitoring & Operation System

The effectiveness of the policies is assessed by regular review and analysis as well as various tests performed as per the SEBI circular on Core SGF, Default Waterfall and Stress Testing. ARCL is conducting back testing of various margin and stress models to test efficacy and adequacy of margins. ARCL has entered into an outsourcing agreement with NSE Clearing Limited (NCL) (operational) and Indian Clearing Corporation Limited (ICCL) (not yet operational) for leveraging their core IT infrastructure of collateral management, risk, clearing and settlement functions as mandated by SEBI through its Regulations and various circulars issued from time to time.

NCL has built in-house applications for online risk monitoring and management. ARCL has adopted the risk containment measures which includes capital adequacy requirements of members / participants, monitoring of member / participants performance and track record, stringent margin requirements, position (borrowing and lending) limits, online monitoring of member / participants positions, order level risk management etc. These systems calculate & monitored positions, margin requirements etc. at client, trading member / participants and clearing member / participant's level. The systems also generate various reports/alerts etc.

Key Consideration 2:
An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.

ARCL's rules and regulations clearly explain the requirements and responsibilities of the Clearing Members and Participants towards clearing corporation. These include responsibilities specific to risk management. Clearing members/participant compliance to the in-force risk management measures are assessed on a regular basis. ARCL has also put in place disincentives to discourage non-compliance to requirements.

Key Consideration 3:
An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.

ARCL bears material risks arising from clearing members, participants, clearing banks, liquidity providers and issuers of collateral. Clearing Members & Participants are selected based on the eligibility criteria prescribed by the regulators and ARCL. Members & Participants credit worthiness and performance are monitored on periodical basis. Banks that function as clearing banks and liquidity providers are regulated by the Reserve Bank of India. ARCL has put in place stringent eligibility criteria to ensure that only the banks with highest creditworthiness and capability are eligible for these roles. There is also a continuous monitoring of applicable compliance requirements and exposure.

Key Consideration 4:

An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the information needed for purposes of resolution planning.

The scenarios that may prevent ARCL from providing critical operations are proposed to be identified through business continuity management process. ARCL has entered into an outsourcing agreement with NSE Clearing Ltd. (NCL) for utilising its core IT infrastructure in respect of collateral, risk, clearing and settlement functions. NCL is providing FMI services across various asset classes (Equity, Debt, Equity Derivatives, Currency Futures, Interest rate futures etc.), is regulated by SEBI and is designated as a Market Infrastructure Institution (MII). NCL is also designated as a Qualified CCP (QCCP) by SEBI. NCL has a well-established business continuity management process to identify, record and manage the scenarios impacting business continuity. ARCL leverages the BCP plan and infrastructure of NSE (trading through a recognised stock exchange as mandated by SEBI under the Regulations) and NCL for critical operations during contingency.

ARCL is adequately capitalized with a prescribed regulatory paid-up equity capital of Rs. 1500 million as per SEBI mandate pertaining to establishing of a Limited Purpose Clearing Corporation. However, the prescribed capital for a CCP under RBI's Directions for Central Counterparties, 2019, is Rs.3000 million and RBI, in its letter dated October 7, 2022, has advised ARCL to achieve the net worth of Rs.3000 million within a period of 5 years. The winding up procedure is clearly defined in ARCL's Article of Association under the clause no. 181,182 & 183. ARCL has also created a separate chapter in its Bye-laws for orderly winding down of operations and the bye-laws are placed on the website of ARCL. ARCL maintains capital for orderly wind-down of clearing corporation in line with the guidelines issued by SEBI in computation of net worth for clearing corporations.

PRINCIPLE 4: CREDIT RISK

An FMI should effectively measure, monitor, and manage its credit exposure to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two largest participants and their affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions. All other CCPs should maintain, at a minimum, total financial resources sufficient to cover the default of the one participant and its affiliates that would potentially cause the largest aggregate credit exposures to the CCP in extreme but plausible market conditions.

Key Consideration 1:

An FMI should establish a robust framework to manage its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.

ARCL has established a robust risk framework to manage its credit exposures to its members /participants and the counterparty credit risks arising from its payment, clearing and settlement processes. The eligibility of membership is as per RBI Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, and as amended in November 2019.

ARCL sets prudential borrowing and lending limits for members/ participants based on their net worth / AUM/Credit Rating etc. ARCL identifies eligible issuers of bonds based on financial and non-financial criteria. Bonds with credit rating of AAA to AA are considered as eligible collateral. Listed Commercial Papers and Certificate of Deposits issued by Scheduled Commercial Banks and PFIs are also considered as eligible collateral. Additionally, subordinate Tier-I bonds, perpetual bonds, are not considered as eligible collateral. The collateral is valued, and limits are computed after application of security specific haircut. The underlying collateral is mark-to-market (MTM) daily to ensure adequacy of MTM collateral value against the outstanding borrowing of concerned members / participants. Initial margin is collected from lending members / participants. The initial margin and the haircut on the value of collateral address the market risk arising out of potential future exposure.

ARCL has adopted order level risk management. Only those lend orders that satisfy the margin requirement vis-a-vis cash collateral deposited by the Clearing Member / participants will be accepted, subject to it being within the overall lending limit of the specific entity. Only those borrow orders that satisfy collateral requirement will be accepted, subject to it being within the overall borrowing limit of the specific entity. The clearing banks are selected based on certain criteria like capital adequacy, profitability, net NPA etc. to ensure that only financially strong banks are empanelled as clearing banks.

Key Consideration 2:

An FMI should identify sources of credit risk, routinely measure, and monitor credit exposures, and use appropriate risk-management tools to control these risks

ARCL has identified following sources of credit risk arising out of its operation.

a) Counterparty risk - Exposure on Clearing Members/participants while settling transactions.
b) Exposure on Clearing banks and other banks where investment is made.
c) Credit Risk on a/c of Underlying Collateral.

Exposure Management

Clearing Member / Participant Credit Risk

- ARCL fixes member-wise / participants wise exposure limits basis their net worth/AUM/Credit rating etc. depending upon industry they belong to.
- Upfront initial margin is charged to lenders and haircut is applied to underlying collateral while computing borrowing limits to manage potential future exposure.
- EOD MTM is carried out daily to manage current exposure.

- Member-wise issuer and issue limit is implemented to manage concentration risk at member / participant level.

Clearing Bank Credit Risk

- Clearing banks empanelled by ARCL are selected on the basis of various financial criteria as approved by the Governing Board of ARCL.
- Exposure on banks where investments are made is being monitored through single bank exposure limits approved by the Governing Board for such investments.

Investment Bank Credit Risk

- Investment banks selected by ARCL are selected based on the basis of various regulatory guidelines and various financial criteria as approved by the Governing Board of ARCL.
- Exposure on banks where investments are made is being monitored through single bank exposure limits approved by the Governing Board for such investments.

Collateral Risk Management

- ARCL identifies eligible issuers of bonds based on financial and non-financial criteria.
- To address the price risk of collateral in the event of a default by the borrower on its obligation, haircut is applicable on securities.
- ARCL has specified the overall exposure ARCL can take against a single Issuer based on the collateral (corporate bonds) deposited for borrowing in the tri-party repo by all members/participants.
- Member wise/participant wise single issuer/single issue limit.

Key Consideration 3:

A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.

ARCL covers its current and potential future exposure by collecting initial margin, applying security-specific haircut while computing borrowing limits for members/ participants. However, these measures may not be able to capture the rare stress scenarios (market wide stress, external shocks, issuer specific negative credit event/news etc.) which can lead to higher loss on account of repo rates moving higher than expected or larger than expected depreciation in value of underlying collateral. To cover the above stress risk, ARCL computes the stress loss, basis a pre-defined criterion. ARCL computes stress losses on account of borrowers and lenders default. Stress Loss thus computed is adjusted against initial margin / haircuts already charged. The expected stress loss (margin) shortfall is identified for Lender and Borrower default for each member / participant and arranged in descending order. The cumulative stress shortfall on account of top two (stress loss shortfall) members / participants and their associates is the minimum required corpus of the Core Settlement Guarantee Fund.

The approach followed by ARCL for stress testing entails three parts:

a) Stress Scenario.
b) Simulation of values of trade portfolios (Lenders) and underlying collaterals (Borrowers) of all members / participants using Stress Scenarios.
c) Identification of the top two highest possible losses in the account of a member / participants under stressed conditions.

Key Consideration 4:

A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of total financial resources it maintains.

ARCL does not operate in multiple jurisdictions. ARCL covers its current and potential future exposure by collecting initial margin, applying security-specific haircut while computing borrowing limits for Clearing Member/ participants. ARCL has setup a Core Settlement Guarantee Fund (Core SGF) for the business segment as per the methodology prescribed by SEBI in its circular dated August 14, 2014, December 27, 2020, and April 13, 2023 (Participant contribution circular). The minimum required corpus of the Core SGF is determined using the stress test which is designed to cover the worst-case loss in extreme but plausible scenario in respect of top two members / participants and their associates causing highest credit exposure.

The approach followed by ARCL for stress testing entails three parts:

a) Stress Scenario.
b) Simulation of values of trade portfolios (Lenders) and underlying collaterals (Borrowers) of all members / participants using Stress Scenarios.
c) Identification of the top two highest possible losses under stressed conditions.

Additional Financial Resources

ARCL's Core SGF is readily and unconditionally available to meet settlement obligations of clearing corporation in case of clearing member(s) / participants failing to honour settlement obligation.

Core Settlement Guarantee Fund Composition- SEBI Guidelines:

- **Issuer contribution:** Contribution of Issuers of Debt securities to Core SGF shall be equivalent to 0.5 basis points of the issuance value of debt securities per annum based on the maturity of debt securities, to be collected upfront, in the manner specified by the Governing Board.

- **Clearing Member (CM) Primary Contribution**: CMs contribution to Core SGF shall be risk based and equivalent to deficit in MRC post contribution by Issuers. The said contribution by CMs shall be subject to the following conditions: that no exposure shall be available on Core SGF contribution of any CM (exposure-free collateral of CM available with CC can be considered towards Core SGF contribution of CM), and that required contributions of individual CMs shall be pro-rata based on the risk they bring to the system.

  ARCL shall have the flexibility to collect CM primary contribution, including flexibility to either collect the CM primary contribution upfront or staggered over a period. In case LPCC does not seek contribution from CM or seeks staggered contribution, the remaining balance shall be met by ARCL to always ensure adequacy of total Core SGF corpus. Such ARCL contribution shall be available to ARCL for withdrawal as and when further contributions from CMs are collected / received.

- **Participants Primary Contribution**: Contribution by Participants who desire direct participation and not through a clearing member to Core SGF shall be risk based and equivalent to deficit in MRC post contribution by Issuers and Clearing Members. The said contribution by Participants shall be subject to the following conditions:

  - that no exposure shall be available on Core SGF contribution of any Participant (exposure-free collateral of participants available with CC can be considered towards Core SGF contribution of Participants), and
  - that required contributions of individual Participants shall be pro-rata based on the risk they bring to the system.

  ARCL shall have the flexibility to collect Participant primary contribution, including flexibility to either collect the Participant primary contribution upfront or staggered over a period of time. In case ARCL does not seek contribution from Participants or seek staggered contribution, the remaining balance shall be met by ARCL to ensure adequacy of total Core SGF corpus at all times. Such ARCL contribution shall be available to ARCL for withdrawal as and when further contributions from Participants are collected / received.

- **Clearing Corporation contribution:** LPCC shall transfer profit to the Core SGF in terms of Regulation 22E(1) above, within 30 days of adoption of financial statements by the shareholders in the Annual General Meeting. LPCC may make additional contribution to Core SGF from its own funds. LPCC's contribution to core SGF shall be considered as part of its net worth.

Key Consideration 5:

A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection considering current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participant's *increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.*

Stress Testing

ARCL conducts stress testing on daily basis and the resource requirement is assessed basis the stress loss results.

To identify stress loss shortfall, ARCL computes the stress loss basis a predefined criterion and ARCL computes stress losses on account of borrower and lender default. Stress Loss thus computed is adjusted against initial margin / haircuts already charged. The expected stress loss (margin) shortfall is identified for Lender and Borrower default for each member / participant including stress loss of their associates and arranged in descending order. The cumulative stress shortfall arrived as above on account of top two (Stress loss shortfall) members / participants including loss of their associates is the minimum required corpus of the Core SGF.

The approach followed by ARCL for stress testing entails three parts:

Stress Scenario

a) Simulation of values of trade portfolios (Lenders) and underlying collaterals (Borrowers) of all members / participants using Stress Scenarios.
b) Identification of the top two highest possible losses in respect of members/participants and their associates under stressed conditions.

Review and Validation

ARCL conducts stress tests to test the sufficiency of total financial resources as prescribed by SEBI under the guidelines on Core SGF, default waterfall and stress testing. The guidelines also provide for regular review of model parameters. Stress tests are performed on daily basis to arrive at the Minimum Required Corpus (MRC) of Core Settlement Guarantee Fund (Core SGF) and the daily data is used to arrive at the quantum of MRC to be maintained by ARCL. MRC is reviewed every month.

All positions of counter party (members/ participants) are included in credit stress testing. On a monthly basis reverse stress testing is also done. Reverse stress test is designed to identify under which market conditions and under what scenarios the combination of its margins, Core SGF and other financial resources prove insufficient to meet its obligations (e.g. simultaneous default of top N members or N% movement in price of top 2 scrips by turnover or 20% movement in price of top N scrips by turnover etc.

ARCL also conducts daily back testing of margining models and of its sensitivity analysis for the stress test. ARCL proposes to review its risk management model and processes with the assistance of external risk management expert.

Key Consideration 6:

In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as *price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.*

ARCL conducts stress tests as per SEBI guidelines on core SGF, default waterfall and stress testing. The stress testing model of ARCL is based on historical and hypothetical scenarios.

Process For computation of Core SGF

1) Process For computation of Core SGF

Minimum required corpus for the Core SGF = The cumulative stress shortfall arrived on account of top two (Stress loss shortfall) members/participants and their associates.

2) Expected Margin Shortfall on a/c of Borrower Default
   a) Stress Loss shortfall on a/c of borrower default:
   b) The scenario wise expected stress loss shortfall is computed for the top two borrowers.
   c) ARCL has assigned specific probabilities to underlying collateral portfolio being exposed to any of the three stress scenarios – (scenario1, scenario 2 and scenario 3) post default and computed the probability weighted average expected stress loss shortfall.
   d) Expected Margin shortfall on a/c of Borrower default = Stress loss shortfall (a)

3) Stress Loss Shortfall on a/c of Lender Default

   Stress loss shortfall on a/c of lender default is computed for all lenders.

4) **Stress loss shortfall for each member / participant as computed above is arranged in descending order.**

Minimum required corpus for the Core SGF = The cumulative stress shortfall arrived on account of top two (Stress loss shortfall) members / participants.

The approach followed by ARCL for stress testing entails three parts:

Stress Scenario

- Simulation of values of trade portfolios (Lenders) and underlying collaterals (Borrowers) of all members / participants using Stress Scenarios.
- Identification of the top two highest possible loss in respect of members/participants including stress loss of their associates under stressed conditions.

The stress scenarios currently employed by ARCL to which its Lender and Borrower portfolio is subjected are as follows:

Lender Default

Scenario: A MIBOR rate approach is followed to compute the stress loss of a lender default, ARCL identifies the highest % change in overnight MIBOR in last five years and this is scaled up by 50 % to simulate an extreme event.

Borrower Default

ARCL considers three scenarios for a borrower default:

- **Scenario 1: Stress across the collateral portfolio on account of an unexpected macro event**

  This leads to rise in corporate bond yields. Since corporate bond yields are inversely proportional to bond prices, bond prices will fall for the increase in bond yields. Under this scenario, ARCL computes the expected change in bond yields under stress scenario by identifying stress events basis past data.

  ARCL computes the maximum expected change in corporate bond yield for identified stress period vide two approaches.

  Yield Based approach: Increase in the Corporate bond yields over the sample period is identified.

  Credit spread Based approach: Increase in Credit spread over the sample period is used as proxy to maximum expected yield change in stress scenario.

- **Scenario 2: Negative news/event related to a specific issuer.**

  It is a scenario where it impacts the bonds issued by the issuer and ARCL is holding the bonds issued by same issuer as collateral received from the defaulter member / participants. Basis past data, ARCL identifies stress haircut to be applied to the specific issuer in the portfolio.

- **Scenario 3: Scenario 1 and Scenario 2 happen simultaneously.**

  This is an instance where, along with the borrower default, a macro stress event happens and simultaneously an issuer specific negative news/event takes place. In such a case a part of portfolio is exposed to scenario 1 stress while the issuer specific portfolio is exposed to scenario 2 haircut.

Key Consideration 7:

An FMI should establish explicit rules and procedures that address fully any credit losses it may face because of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.

The rules and procedures of ARCL for any credit losses due to default have been specified in accordance with the default waterfall prescribed by SEBI under the guidelines on Core SGF, Default Waterfall and Stress Tests. The mechanism of loss allocation has been provided in detail under the disclosure on Principle 13 on Participant Default Rules and Procedures.

PRINCIPLE 5: COLLATERAL

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

Key Consideration 1:

An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

RBI in its Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, and as amended in November 2019, has specified the list of collateral to be eligible for repo transactions, both capital and money market instruments. Within the eligible list of collateral, ARCL also prescribes certain financial and non-financial criteria for selection of issuers whose debt securities would be accepted as collateral for the tri-party repo transaction. Within eligible issuers also, certain bonds, which are having more risk (for e.g., Tier-I bonds) are excluded from eligible collateral. ARCL accepts cash towards initial margin initially and proposes to accept other forms of cash collateral such as government securities from members/participants towards their initial margin requirement. ARCL does not permit any member/participant to place collateral issued by it or its associates to address the wrong way risk. Conservative haircuts are applied on the accepted collateral based on type of instrument, rating and residual maturity of the underlying.

ARCL is also monitoring the issuer liquidity and collateral it receives from various members/participants on quarterly basis. ARCL also monitors the sufficiency of haircuts on quarterly basis.

Key Consideration 2:

An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and consider stressed market conditions.

ARCL has entered into an arrangement with an external valuation agency for valuation of debt securities. Further, securities like market linked debentures are not part of eligible collateral. The valuation is based on the guidelines laid down by SEBI vide its master circular on mutual funds. The haircut is conservatively applied on individual securities which is more than the minimum haircut rate of 2% as prescribed by RBI Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, and as amended in November 2019, for repo transactions. The haircut for corporate bonds that is charged by ARCL range from 5% to 25% depending on the type of instrument, rating, and the residual maturity of the security. Back-testing is carried out on daily basis to validate the adequacy of initial margin and hair-cut values.

Key Consideration 3:

In order to reduce the need for procyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.

The haircut is conservatively applied on individual securities more than the hair-cut rate of minimum 2% as prescribed by RBI. The hair-cut for corporate bonds, commercial paper & Certificate of Deposits ranges from 5% to 25% depending on the type of instrument, rating, and the residual maturity of the security.

Key Consideration 4:
An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.

In order to address the concentration risk, ARCL has prescribed market-wide exposure limits at issuer level. Additionally, ARCL put in place issuer and issue limits at each member / participant level. Additionally, for lower rated collateral cumulative limits are specified at each member/participant level.

Key Consideration 5:
An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.

Not applicable since cross-border collateral is not accepted as eligible collateral in triparty repo transaction.

Key Consideration 6:
An FMI should use a collateral management system that is well-designed and operationally flexible.

ARCL has entered into an outsourcing agreement with NCL (operational) and ICCL (not yet operational) for utilising their core IT infrastructure in respect of collateral, risk, clearing and settlement functions.

NCL has a robust Collateral Management System which, within the framework of rules defined by ARCL, manages entry, valuation and exit of collateral after ensuring sufficiency to continue meeting collateral requirements. The system is well-designed, flexible and ensures that the norms for collateral acceptance, valuation and release are met. NCL provides members/clients with various data and reports regarding their collateral deposits.

ARCL has developed a system for its members/participant to provide collateral addition and release request through web interface. The web-based interface enables members/participant to have real time view of the collateral holdings.

PRINCIPLE 6: MARGIN
A CCP should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Key Consideration 1:
A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.

ARCL has put in place a comprehensive risk management system. Risk containment measures include member / participants limits, market-wide issuer limit, upfront validation for collateral availability, daily mark to market of collateral and managing wrong way risk. Also, ARCL has put in place member/participant wise - issuer level limit and issue (ISIN) level limit. Haircuts applied on collaterals is uniform and based on type of instrument, rating and residual maturity of securities. The limits as defined by ARCL is maintained in the RMS system i.e. Risk Management System which is integrated with the trading system. The orders are validated against the limits in the Risk Management System before accepting them for matching by the trading system. The orders are validated on a real time basis.

ARCL has prescribed the following types of margins.

- Lender – ARCL collects initial margin from lenders in the ready leg for the value lent. Initially, the initial margin is kept at a flat rate of 0.50% for up to 7 days repo tenure.
- Borrower – ARCL specifies haircut for collaterals placed by the borrower based on type of instrument, rating and residual maturity of the security.
- Mark-to-market Valuation – ARCL carries out mark-to-market (MTM) valuation of collateral daily at the end of the day based on current market prices for traded securities and interpolated prices for non-traded securities. In case of insufficiency in the collateral value, mark-to market margin call is made on members / participants to replenish the shortfall value by depositing additional collateral/margin with clearing corporation.

Key Consideration 2:

A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable

ARCL has entered into an arrangement with NSE Data Analytics (100% subsidiary of NSE), an external valuation agency, recognised by SEBI for valuation of debt securities. The valuation is based on the guidelines laid down by SEBI in its master circular for Mutual Funds. The price details are provided intra-day as well as at the end of the day. The valuation is done as per Security level valuation approach and valuation prices are based on traded data; interpolated prices where trade data is not available.

There is process to compare the change from previous day's rates which allows necessary control. Further, on periodic basis ARCL does ISIN level price validation for few securities along with the bond's prices available in public domain.

Key Consideration 3:

A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the sub portfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should

a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions),
b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and to the extent practicable and prudent, limit the need for destabilising, procyclical changes

The initial margin is a flat percentage fixed based on money market rate volatility for repo tenor up to 7 days. The initial margin found sufficient with 99% confidence level.

Haircuts are conservatively fixed based on type of instrument, rating, and residual maturity of securities. Time required to close-out defaulter's position from the point of trade has been estimated to 6 days based on the nature of the collateral. Confidence interval at 99% has considered adequate as back-testing results are revealed that even in extreme cases, loss in margin is well covered by available resources.

Key Consideration 4:

A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.

ARCL follows mark-to-market (MTM) valuation of collateral daily at the end of the day based on current market prices. Such values after application of haircut should normally be sufficient to cover the outstanding borrowing of members / participants. In case of insufficiency, mark-to market margin call is made on members / participants to replenish collateral. Mark-to-market margin shall be payable by members/clients and shall be paid on the next business day or such other time stipulated by ARCL depending on the event that has led to the deterioration in the value of collateral and value of MTM. Mark to market margin in case of borrowers will be collected in form of eligible securities and in the instances where the borrowers do not have the eligible bonds, then they will have an option to provide cash. This is as per 8.5.3 of Chapter VIII of Bye-laws of ARCL.

Key Consideration 5:

In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems

ARCL clears and settles only one product and hence this key consideration is not applicable. The repo trades in corporate debt securities executed on NSE trading platform are being cleared and settled by ARCL using NSE Clearing Ltd. infrastructure as mandated by SEBI in its regulations and various circulars issued from time to time.

Key Consideration 6:

A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily back testing and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model's coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most- volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.

ARCL conducts back testing on its member / participants portfolios based on its margining models (Initial margin & Haircut) on daily basis. ARCL uses the market prices/rates provided by external valuation agency to verify the sufficiency of haircuts. Variation in MIBOR and call money rates are considered to verify the sufficiency of initial margin. Daily back testing results display adequate coverage.

The cases of margin inadequacies are analysed in detail and adequate actions will be taken in such cases in consultation with risk management committee.

ARCL is also conducting Reverse Stress Test on monthly basis. Reverse stress test is designed to identify under which market conditions and under what scenarios the combination of its margins, Core SGF and other financial resources prove insufficient to meet its obligations (e.g. simultaneous default of top N members or N% movement in price of top 2 scrips by turnover or 20% movement in price of top N scrips by turnover etc.

Key Consideration 7:

A CCP should regularly review and validate its margin system

Back testing of initial margin and hair-cut percentages is carried out on daily basis to ensure adequacy of initial margin and hair-cut percentages. The results of back testing are presented to Risk Management Committee (RMC) and to the Governing Board of ARCL for their review.

PRINCIPLE 7: LIQUIDITY RISK

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday, and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

Key Consideration 1:

An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.

ARCL faces liquidity risk from the failure of clearing members/participants in settlement of their obligations. ARCL will be meeting such settlement shortages from the lines of credit put in place with select banks, from its own funds and Core SGF. ARCL has committed lines of credit and has overdraft facility against deposits from banks.

As regards the line of credit provided by the banks, these funds are kept in a fully segregated account of respective banks. Hence, these arrangements are not subject to liquidity risk.

Liquidity stress test run on daily basis provide good estimate of maximum liquidity exposures and ARCL's ability to handle such exposures.

Key Consideration 2:

An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.

ARCL provide member/participant-wise pay-in and pay-out of transactions, bank wise scheduled settlement flows, bank-wise transaction status, fulfilment of obligations of members / participants in settlement cycles etc. ARCL tracks the inflows and outflows in the settlement obligations of members/participant and initiates inter-bank transfers to meet funds deficit, if any. ARCL can track any event of shortfall within a short time and can take corrective action on immediate basis.

Process is in place whereby; settlements are monitored on a real time basis by tracking transactions in settlement accounts with various settlement banks.

Key Consideration 3:

A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions

ARCL settles only rupee transactions. ARCL will be meeting such settlement shortages from the lines of credit it has put in place with select banks, its own funds and Core SGF. Additional lines of credit are being availed from multiple banks to avoid the risk of depending on a single bank.

Key Consideration 4:

A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities- related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more- complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions.

ARCL carries out settlement only in Indian Rupees and operate only in Indian jurisdiction. ARCL maintains a Core Settlement Guarantee Fund (Core SGF) to meet settlement shortage as per the guidelines issued by SEBI. ARCL liquidity resources include committed lines of credit, overdraft against fixed deposits and core settlement guarantee fund that can be used to raise additional liquidity. ARCL carries out daily liquidity stress tests to ensure adequacy of liquidity resources.

Key Consideration 5:

For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such resources should be available when needed.

ARCL will be meeting settlement shortages from the credit arrangements with its clearing banks and will also meet shortages from its own funds. ARCL maintains Core Settlement Guarantee Fund, which, if required, may also be used to meet settlement shortage in line with SEBI guidelines. ARCL carries out daily liquidity stress tests to ensure adequacy of liquidity resources.

Key Consideration 6:
An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan

ARCL liquidity resources include committed lines of credit, own funds, settlement guarantee fund. ARCL accepts corporate debt securities as collateral which can be liquidated in OTC/exchange markets.

Key Consideration 7:
An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.

The credit line facilities that have been put in place with clearing banks which are financially sound. The clearing banks are regulated entities operating under a banking license from the central bank and are subject to own stringent liquidity planning, stress testing and regulatory oversight by the central bank. Further, clearing banks are selected based on net worth, track records of profitability, Net NPA, Capital adequacy ratio, etc. The clearing banks are large institutions capable of understanding and managing their liquidity risks. The clearing banks also have access to liquidity from the Reserve Bank of India.

Key Consideration 8:
An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.

The key consideration is not applicable. ARCL does not have access to central bank accounts and is currently not eligible to obtain access to accounts, payment services and securities services of central bank.

Key Consideration 9:
An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking

stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains

ARCL conducts liquidity stress tests to verify the sufficiency of liquid resources in extreme but plausible scenarios and to measure the adequacy of its resources to manage its liquidity risks. The test is carried on daily basis assuming settlement default by at least two clearing members/participants and their associates that would generate the largest aggregate liquidity obligation for the CC. The results of such liquidity tests are placed before the RMC and the Governing Board of ARCL for their review on quarterly basis.

Key Consideration 10:

An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.

ARCL maintains sufficient amount of liquidity arrangements to complete the payment obligations to meet the cut-off timings and avoid unwinding, revoking, and delaying obligations. ARCL has arrangement for lines of credit and overdraft facility against fixed deposits with banks to meet any contingent liquidity shortfall. ARCL can also utilise Core SGF meet settlement shortages. ARCL has put in place Shortfall handling process.

PRINCIPLE 8: SETTLEMENT FINALITY

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

Key Consideration 1:

An FMI's rules and procedures should clearly define the point at which settlement is final.

The SCRA [SE & CC] Regulations 2018 issued by SEBI provides point of settlement finality in Explanation to Regulation 43 (3) as follows: "For removal of doubts, it is hereby declared that the settlement, whether gross or net, referred to in this regulation is final and irrevocable as soon as the money, securities or other transactions payable as a result of such settlement is determined, whether or not such money, securities or other transactions is actually paid." Thus, Obligations become final once ARCL generates and provides the final obligation reports to its members / participants. The finality of obligations and the finality of settlement are determined by the CCP, and the settlement is done through Clearing Banks for funds. All the payments and transfer instructions are electronic and subject to the jurisdiction of the place of CCP's registered office. The norms regarding finality of transfer of funds and financial instruments are laid down in Rules, Regulations, Bye-laws, and circulars of ARCL as well as various laws governing transfer of funds, risk management, defaults procedures and various other aspects of the settlement system. The procedural details are covered in ARCL circulars. The information is disclosed to all the market participants & public through its website.

Key Consideration 2:
An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.

ARCL is doing only one net settlement during the day for ready leg as well as forward leg obligations. The settlement of transactions is done at netted level to reduce the settlement risk. Settlement is done through clearing banks empanelled by ARCL.

Key Consideration 3:
An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.

ARCL does not permit revocation of obligation by participants once a trade is admitted. Once the settlement obligation is determined by the clearing corporation, the obligation becomes irrevocable. This is in line with Regulation 43 of SECC Regulations 2018. This is also in line with Section 23(3) of PSS Act 2007 of RBI.

PRINCIPLE 9: MONEY SETTLEMENTS

Money Settlements: An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimise and strictly control the credit and liquidity risk arising from the use of commercial bank money.

Key Consideration 1:
An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

ARCL uses the commercial bank model for settlement. ARCL offers settlement of funds through clearing banks empanelled. ARCL carries out all settlements only in Indian Rupees and operates only in Indian jurisdiction.

Key Consideration 2:
If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk

ARCL offers settlement of funds through clearing banks. Presently, ARCL offers settlement of funds through 3 clearing banks. The Clearing members/Participants are free to choose anyone of the empanelled clearing banks. The Clearing Banks must enter into an Agreement with the Clearing Corporation wherein the obligations of the clearing banks are clearly defined. As part of the settlement process, ARCL ensures completion of pay in of funds before the pay-out. The timelines for pay in and pay out are kept insignificantly minimal so as to reduce any risk of bank failure. The designated clearing banks are subject to the prudential supervision by Reserve Bank of India.

Key Consideration 3:

If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. An FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalisation, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.

ARCL has prescribed following criteria for selection of clearing banks

- It should be a scheduled commercial bank.
- Capital adequacy ratio including capital conservation buffer should be equal to more than minimum regulatory prescription.
- Track record of profitability in two of previous three financial years.
- Bank should have adequacy experience to function as a Clearing/Settlement bank to at least one other central counterparty clearing house
- The bank should be willing to offer value added services to members.
- The bank should be willing to commit operations as a clearing bank including dedicated banks branch facilities, access to account information on real time basis, back up procedure and fall-back mechanism in case of any technical failure.
- To facilitate interbank funds transfer at RBI, RBI debit mandate form to be executed.
- The bank should extend line of credit facility to ARCL and execute appropriate agreement with ARCL for the same.

The criteria of 3 may be relaxed for public sector banks on case-to-case basis.

Above mentioned criteria broadly cover creditworthiness, capitalisation, and access to liquidity, and operational reliability. The clearing banks are supervised and regulated by Reserve Bank of India. Periodic review of position regarding adherence to the eligibility criteria for functioning as clearing banks.

Key Consideration 4:

If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks

ARCL does not conduct money settlements in its own books. ARCL uses commercial banks for the purpose of settlement of funds.

Key Consideration 5:

An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.

ARCL's legal agreement with clearing banks clearly specifies the requirements for transfers to be carried out at banks for the purpose of settlement of transactions in tri-party repo in corporate debt securities.

PRINCIPLE 10: PHYSICAL DELIVERIES

Physical Deliveries: An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

Not Applicable for ARCL. ARCL does not accept physical delivery of securities and collateral and hence this principle is not applicable.

PRINCIPLE 11: CENTRAL SECURITIES DEPOSITORIES

Central Securities Depositories: A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

Not applicable for ARCL

PRINCIPLE 12: EXCHANGE-OF-VALUE SETTLEMENT SYSTEMS

Exchange of Value Settlement System: If an FMI settles transactions that involve the settlement of two linked obligations (for example, securities or foreign exchange transactions), it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

Key Consideration 1:

An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis and when finality occurs.

ARCL carries out only funds settlement, which is on Payment vs Payment (PvP) basis. The sufficiency of collateral value resulting into funds obligations is validated at order level and hence the principal risk is taken care of. Different timings for pay-in and pay-out for settlement ensures that ARCL eliminates all the principal risk associated with settlement processes.

PRINCIPLE 13: PARTICIPANT DEFAULT – RULES AND PROCEDURES

Participants Default Rules and Procedures: An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Key Consideration 1:

An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.

ARCL outlines when a clearing member /participant may be declared a defaulter by relevant authority. ARCL's Bye laws mention default handling procedures and the usage of core settlement guarantee fund in case of a default. In case default occurs, bye-laws give authority to deal with the assets of defaulter available with the CCP. It also allows to promptly close out or to transfer the positions of a defaulting participant and to apply the defaulting participants' collateral or other resources. The default waterfall mechanism to be followed for allocation of losses is as specified by SEBI in its circulars.

Default waterfall mechanism

In case of a default by a borrower, the collateral placed by it will be liquidated through the sale or auction as stated above and any loss from such sale or auction will be met through haircut kept. Similarly, in case a lender defaults the initial margin collected should normally be adequate to meet the shortfall.

In case of any residual loss i.e. the realization of collateral value is less than the outstanding obligation of borrower etc. as stated above, such loss would be absorbed by the Core SGF as per the default waterfall structure defined by SEBI as under:

1) monies of defaulting member/participant (including defaulting member's primary contribution to Core SGF)
2) Insurance, if any.
3) Issuers contribution to Core SGF.
4) ARCL resources (equal to 5% of MRC).
5) Core SGF in the following order:
    a) Penalties.
    b) Previous financial years profit of ARCL transferred to Core SGF.
    c) Remaining Core SGF: ARCL contribution and non-defaulting members'/participant primary contribution to Core SGF on pro-rata basis.
    d) Remaining profit of ARCL transferred to Core SGF.
    e) Remaining ARCL resources (excluding higher of INR 100 Crore or capital requirement towards orderly Winding Down of Critical Operations and Services).*
6) Remaining ARCL resources to the extent as approved by SEBI.
7) Capped additional contribution by non-defaulting members/participant. **
8) Any remaining loss to be covered by way of pro-rata haircut to payouts. ***

* INR higher of INR 100 Crore or capital requirement towards orderly Winding Down of Critical Operations and Services to be excluded only when remaining Clearing Corporation resources are more than INR 100 Crores.
** ARCL shall call for the capped additional contribution only once during a period of thirty calendar days regardless of the number of defaults during the period. The period of thirty calendar days shall commence from the date of notice of default by ARCL to market participants.

(i) ARCL shall have relevant regulations/provisions for non-defaulting members to resign un-conditionally within the abovementioned period of thirty calendar days, subject to member closing out/settling any outstanding positions, paying the capped additional contribution and any outstanding dues to SEBI. No further contribution shall be called from such resigned members.
(ii) The maximum capped additional contribution by non-defaulting members/participants shall be lower of 2 times of their primary contribution to Core SGF or 10% of the Core SGF on the date of default.
(iii) In case of shortfall in recovery of assessed amounts from non-defaulting members/participant, further loss can be allocated to layer 'VII' with approval of SEBI."

*** In case loss allocation is effected through haircut to payouts, any subsequent usage of funds shall be with prior SEBI approval. Further, any exit by ARCL post using this layer shall be as per the terms decided by SEBI in public interest.

In the event of usage of Core SGF during a calendar month, contributors shall, as per usage of their individual contribution, immediately replenish the Core SGF to MRC. However, such contribution towards replenishment of Core SGF by the members/participants would be restricted to only once during a period of 30 calendar days regardless of the number of defaults during the period. The period of 30 calendar days shall commence from the date of notice of default by Clearing Corporation to market participants.

In case there is failure on part of some contributor(s) to replenish its (their) contribution, same shall be immediately met, on a temporary basis during the month, by ARCL.

Key Consideration 2:

An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules

The default handling policy/procedures is in place with roles and responsibilities clearly defined. The aspects relating to default and non-payment of funds are covered under ARCL bye-laws, and Regulations.

Key Consideration 3:

An FMI should publicly disclose key aspects of its default rules and procedures

ARCL's Bye-laws, rules and regulations are publicly available on its website, which describe the default handling procedure covering the following areas:

- The circumstances in which a default can be declared.
- How can default be communicated and who takes the decision
- The scope of the action can be taken including the usage of financial resources of the members/participants in default to cover its obligation towards ARCL.

Key Consideration 4:

An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.

- ARCL will involve market participants and other stakeholders on an on-going basis to discuss the default and compliance procedures.
- The Board of ARCL from time to time will review the default procedures on a need basis in line with the directive issued by the Regulators.
- ARCL will conduct a mock drill for default handling process on annual basis by involving select market participants.

PRINCIPLE 14: SEGREGATION AND PORTABILITY
Segregation and Portability: A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions

Key Consideration 1:
A CCP should, at a minimum, have segregation and portability arrangements that effectively protect participants, customers position and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.

ARCL framed Bye-laws, Rules and Regulations adhering to the key considerations of this principle related to client transactions. In the current model clients are registered as "Participants" with ARCL through members, however, Participants provides the collateral and margin directly to ARCL. ARCL maintains Participants collateral separately from the members own collateral. Hence, the portability of collateral and margin and positions is possible. In the event of default, relevant authority may either decide for portability/immediate return of collateral or close out of the open positions.

Payment and Settlement System provides the legal basis which recognize collateral placed with the CCP is insolvency remote. This supports CCPs arrangements to protect and transfer the position and collateral of a participant's customer.

Key Consideration 2:
A CCP should employ an account structure that enables it readily to identify positions of a participants, customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.

ARCL maintains the records of positions and margins on a fully segregated manner at Participant (client) level.

Key Consideration 3:
A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participants customer will be transferred to one or more other participants.

ARCL maintain records of collateral/margin and positions of participants in segregated manner. Hence, ARCL will be able to transfer the positions and collateral/margin of the participants to other non-defaulting clearing members.

Key Consideration 4:
A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of participants, customers position and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant, customers position and related collateral.

Rules, regulations, bye-laws and circulars of ARCL provide clearing members / participants and the market at large with all the relevant information. There is no scope for ambiguity with respect to the provisions contained therein in regard to segregation and portability of position and collateral.

PRINCIPLE 15: GENERAL BUSINESS RISK

General Business Risk: An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

Key Consideration 1:

An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

Currently, ARCL offers clearing and settlement services for repo transactions which is its primary business.

ARCL considers General Business Risks to include potential impairment to ARCL's Financial position that could result in a loss and consequent capital erosion.

The following business risks identified as follows:

- Risk of unexpected downturn in business volume.
- An increase in the cost of operation.
- ARCL conducts a detailed analysis of its business and puts the same to Governing Board on quarterly basis. ARCL operates based on lower operational costs and hence in case of downturn, ARCL will be able to tide over such periods with assets funded by equity.
- Risk of Competition: ARCL is promoted by Mutual Fund AMC's and they are the major participants on the lending side in money market transactions with government securities as underlying. The Corporate bond repo market provides additional venue for management of short-term funds and hence these mutual funds are expected to be major participants in the repo product offered by ARCL

(i) The Management conducts, on a quarterly basis, detailed analysis of performance of each Business Unit and takes into account changes in the business volumes, revenues, expenses, operating environment, regulatory aspects, systems, technology and other factors affecting the business. The same is presented to the Governing Board/ Committees of the Governing Board for their review and consideration.

(ii) A medium term (3 years period) and short term (Annual) projections of the profits and losses is done based on detailed Business planning and budgeting exercise undertaken periodically. Various Scenarios like Volumes, Yield on investments, likely expenditure are considered and most probable variables/assumptions are applied for preparing annual projections and those variables/assumptions are reviewed and updated on a quarterly basis.

(iii) Analysis of such risk is also done based on probable events affecting revenue/expenditure e.g. loss of large customers, drop in investment income due to falling yields in market, Significant capital expenditure plan etc.

Key Consideration 2:

An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

ARCL has paid-up capital to meet the requirements to manage credit risk, operational risk, and general business risk. Further SEBI vide its circular no. SEBI/HO/MRD/DRMNP/CIR/P/2019/55 dated April 10, 2019, has prescribed Risk based capital and net worth requirements for Clearing Corporations. The capital requirement for general business risk shall be based on a CCP's own estimate as it is dependent on factors specific to each CCP such as execution of business strategy, market environment, response(s)to competition or technological progress etc. The capital requirement for business risk shall be subject to a minimum of 25% of annual gross operational expenses. ARCL shall consider 25% of annual gross operational expense as capital requirement towards general business losses.

As per RBI guidelines, a CCP shall hold liquid net assets funded by equity capital equal to a minimum of six months of current operating expenses. ARCL is monitoring its liquid net assets and its operating expenses. The report is presented to Regulatory Oversight Committee (ROC) on quarterly basis.

Key Consideration 3:

An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resource's principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.

ARCL is sufficiently capitalized to implement orderly wind-down plan. Further, SEBI vide its circular no. SEBI/HO/MRD/DRMNP/CIR/P/2019/55 dated April 10, 2019, has prescribed Risk based capital and net worth requirements for Clearing Corporations. A CCP shall have in place a viable recovery or orderly wind-down plan and hold sufficient liquid net assets funded by equity to implement this plan. These assets are determined by the general business risk profile of the CCP, and the length of time required to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services. While computing the capital requirement for winding down, a CCP shall consider a minimum time span of six months for ensuring an orderly winding down or restructuring of its activities and thus, hold liquid net assets equal to at least six months of gross operational expenses. ARCL shall consider six months of gross operational expenses as capital requirement towards orderly wind-down.

Key Consideration 4:

Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions.

ARCL's liquid assets funded by equity are held in high quality assets with low credit, market, and liquidity risk as per investment policy specified by the market regulator SEBI. ARCL's liquid assets are invested in Fixed deposits with Banks which fulfil following criteria

- Minimum net worth of the bank shall be INR 5,000 Cr.
- Banks with unsupported long-term rating of AA and above or banks issuing unsupported long-term instrument with rating of AA and above (excluding rating of bonds issued by the Bank for the purpose of capital requirements under the Basel III). Banks issuing unsupported long-term instrument with rating below AA, shall not be eligible for this purpose. In case of foreign banks, an equivalent credit rating on the global credit rating scale (equivalent to AA and above rating by domestic Credit Rating Agencies (CRAs)) may be considered by the CCs for assessment of the credit worthiness of the bank;
- In case, credit rating is obtained from multiple CRAs, the most conservative rating shall be considered for this purpose.
- Meet the capital adequacy requirements prescribed by Reserve Bank of India (RBI) from time to time; and
- Banks which are not under Prompt Corrective Action (PCA) Framework of RBI.

To avoid concentration of deposits with a single bank, the Governing Board has approved a single bank exposure policy and accordingly, the exposure of Fixed Deposits in any single approved Bank empanelled with ARCL. ARCL also invests in Central Government Securities and can invest in overnight fund & liquid schemes of debt mutual funds to the extent as permitted by SEBI in its circular made applicable to clearing corporations.

Key Consideration 5:

An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.

SEBI vide its circular no. SEBI/HO/MRD/DRMNP/CIR/P/2019/55 dated April 10, 2019, has prescribed Risk based capital and net worth requirements for Clearing Corporations which states that the CCPs shall be required to maintain, at all times in the form of liquid assets, a net worth of either Rs 100 crores or total risk-based net worth requirement for CCPs computed in accordance with the aforementioned SEBI circular as the aggregate of capital requirements each for counterparty credit risk, business risk, orderly winding down or recovery of operations and legal and operational risks. However, in the event of the capital going below the minimum requirements, it can infuse additional capital from its shareholders. ARCL's Articles of Association (Article 78) details a provision that empowers the Board of Directors at ARCL to raise additional equity capital. The plan to replenish equity capital is reviewed as and when necessary. ARCL Governing Board, in consultation with SEBI, will formulate and approve the plan to raise additional equity capital (on a need basis).

PRINCIPLE 16: CUSTODY AND INVESTMENT RISK

Custody and Investment Risk: An FMI should safeguard its own and its participants' assets and minimise the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

Key Consideration 1:
An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

ARCL has currently empanelled three clearing banks based on financial and non-financial parameters. These criteria include both financial (minimum net worth requirement, track record of profitability, minimum capital adequacy, cap on NPAs etc.) and operational (high level of automation, electronic funds transfer capability, participation in RTGS etc.) parameters.

Initial Margin (Cash): The criteria for empanelment of clearing banks have been approved by the governing board of ARCL. ARCL holds its own assets and also its members / participants cash margins with these empanelled clearing banks. The banks are regulated by Reserve Bank of India (RBI).

Initial Margin (Collaterals): The collaterals in the form of securities given by members / participants are held in the demat account of ARCL with depositories namely NSDL. For this purpose, ARCL has taken limited purpose Depository Participant registration with NSDL. The depositories are established under the depositories Act, 1997 and are regulated by SEBI.

Key Consideration 2:
An FMI should have prompt access to its assets and the assets provided by participants, when required.

The securities are held in the demat account of ARCL with NSDL and hence the same is easily accessible to ARCL The cash margins are also held in the margin account of ARCL with empanelled clearing banks and hence are easily accessible.

Key Consideration 3:
An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

ARCL has not empanelled custodians for holding its own assets and also of its members / participants. Hence, this consideration is not applicable. The clearing banks where the deposits are held are empanelled by ARCL based on the soundness of banks in terms of financial parameters.

Key Consideration 4:
An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.

ARCL's liquid assets funded by equity are held in high quality assets with low credit, market, and liquidity risk as per investment policy specified by the market regulator SEBI. ARCL's liquid assets are invested in Fixed deposits with Banks which fulfil following criteria

- Minimum net worth of the bank shall be INR 5,000 Cr.
- Banks with unsupported long-term rating of AA and above or banks issuing unsupported long-term instrument with rating of AA and above (excluding rating of bonds issued by the Bank for the purpose of capital requirements under the Basel III). Banks issuing unsupported long-term instrument with rating below AA, shall not be eligible for this purpose. In case of foreign

banks, an equivalent credit rating on the global credit rating scale (equivalent to AA and above rating by domestic Credit Rating Agencies (CRAs)) may be considered by the CCs for assessment of the credit worthiness of the bank;

- In case, credit rating is obtained from multiple CRAs, the most conservative rating shall be considered for this purpose.
- Meet the capital adequacy requirements prescribed by Reserve Bank of India (RBI) from time to time; and
- Banks which are not under Prompt Corrective Action (PCA) Framework of RBI.

To avoid concentration of deposits with a single bank, the Governing Board has approved the single bank exposure policy and accordingly the exposure of Fixed Deposits in any single approved Bank, empanelled with ARCL. ARCL has invested in Central Government Securities/Treasury Bills and can also invest in overnight and liquid schemes of debt mutual funds to the extent as permitted by SEBI in its circular to clearing corporations and as per its Governing Board approved investment policy.

PRINCIPLE 17: OPERATIONAL RISK

Operation Risk: An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Key Consideration 1:

An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.

As per SEBI guidelines for LPCC, ARCL has entered into outsourcing agreement with NCL (operational) and ICCL (not yet operational) for their core IT infrastructure of clearing, settlement and related activities for triparty repo transactions in corporate debt securities. NCL has put in place their respective board approved operational risk policies, business continuity plan, information security policies and cyber security policies and controls as per SEBI guidelines.

Currently, ARCL has outsourced its clearing, settlement and risk management activities to NSE Clearing Ltd. (NCL) and NCL adheres to the risk management framework adopted by ARCL. The NSE Clearing Ltd is Market Infrastructure Institution (MIIs) as per SEBI and also has recognition as Qualified Central Counter Party (QCCP). NCL makes available all the procedure related to risk management (operational, IT, Cyber Security, BCP, internal audit of the operation etc.) for ARCL operations also. The details of the same are available in NCL PFMI document. In terms of NCL's PFMI Qualitative Disclosure:

- NSE Clearing has implemented the following procedures to address the identified operational risks: Maker checker to avoid any human error, automation of processes to avoid any human intervention, Process logs / Check lists for control purpose, Standard operating procedures, Process maps giving all the internal & external touch points etc.

- NSE Clearing's risk-management policies address fraud prevention includes restricted internet access, non-usage of mobile phones in sensitive areas of operation, disablement of USB ports, secured access

- NSE Clearing HR policies to hire, train, and retain qualified personnel, and to mitigate the effects of high rates of personnel turnover or key-person risk. The key measures to address people risk include internal job rotation, conducting work surveys to measure employee satisfaction levels.

- NSE Clearing's change-management and project-management policies and processes to ensure that changes and major projects do not affect the smooth functioning of the system. Moreover, dedicated team is in place for NSE Clearing to analyse the impact of any system change, test the new product along with regression testing to ensure smooth functioning.

The operational risk controls include:

- Maker checker to avoid any human error, automation of processes to avoid any human intervention, process logs / checklists for control purpose, standard operating procedures, process maps giving all the internal & external touch points etc.
- To address fraud prevention, restricted internet access, non-usage of mobile phones in sensitive areas of operation, disablement of USB ports, and secured access;
- The key measures to address people risk include internal job rotation, conducting work surveys to measure employee satisfaction levels.
- change-management and project-management policies and processes to ensure that changes and major projects do not affect the smooth functioning of the system. Moreover, dedicated team is in place to analyse the impact of any system change, test the new product along with regression testing to ensure smooth functioning.

Key Consideration2:
An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.

As per SEBI guidelines for LPCC, ARCL has entered into an outsourcing agreement with NCL (operational) and ICCL (not yet operational) for their core IT infrastructure of clearing, settlement and related activities for triparty repo transactions in corporate debt securities.
Currently, ARCL has outsourced its clearing, settlement and risk management activities to NSE Clearing Ltd. (NCL) and NCL adheres to the risk management framework adopted by ARCL. The NSE Clearing Ltd is Market Infrastructure Institution (MIIs) as per SEBI and also has recognition as Qualified Central Counter Party (QCCP). NCL makes available all the procedure related to risk management (operational, IT, Cyber Security, BCP, internal audit of the operation etc.) for ARCL operations also. The details of the same are available in NCL PFMI document.

Operational process and deficiencies are reviewed through the process audit carried out by independent auditor. ARCL has framed Operation Risk Management Policy with 3 Lines of Defence.

Key Consideration 3:

An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

In line with the expectation of ARCL, NCL has defined its operational reliability at 100% and the objectives of operational reliability have been integrated with their respective operational risk policies. The reliability objectives are included in the audit conducted by independent auditors.

In case any failures are encountered, immediate steps are taken to rectify, and exceptions are generated. These exceptions are then reported to the higher management by means of daily reporting.

Key Consideration 4:

An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

ARCL has outsourced its clearing and settlement operations to NSE Clearing Limited. As an MII, NCL needs to ensure that it has enough capacity for its systems and its systems are kept well above the current utilization levels. ARCL will monitor the capacity utilization of systems by obtaining reports from NCL on periodical basis to ensure that the capacity is adequate, scalable and is in line with SEBI guidelines.

Key Consideration 5:

An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

ARCL has well controlled physical security related aspects and ISMS (Information security management systems) controls in place by way of employee access cards, restrictions to only key business websites. External assistance is also taken to assess any vulnerabilities.

Key Consideration 6:

An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.

NSE Clearing Limited (NCL) has secondary site (Disaster recovery and BCP) in terms of hardware, software, applications systems, network devices and is adequate to carry out business operations from BCP/DR Center without major degradation in the performance of the systems. Secondary site set up is located at Chennai which is at a distance of over 1000 kms from Primary Site. Mumbai and Chennai are on opposite coastal directions and therefore probability of both the Centers getting affected simultaneously by same disaster seems remote. In case of unavailability of primary site, operations will continue from DR site.

Given that the activities of clearing and settlement are outsourced to a recognized clearing corporation i.e. NCL, NCL has put in place a BCP policy which is tested regularly. Whenever DR / BCP activities are undertaken by NCL, the same is communicated to all members/participants of ARCL.

NCL conducts its operations from DR (Disaster Recovery) site on periodic basis as per the SEBI guidelines.

Key Consideration 7:

An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.

All processes including settlement and related transactions are monitored on a regular basis. In respect of risk from members/participants, ARCL monitors any adverse development relating to its clearing members / participants.

Through NSE Clearing Limited (NCL), ARCL has adequate back up measures put in place to guard against any disruption in its services.

PRINCIPLE 18: ACCESS AND PARTICIPATION REQUIREMENTS

Access and Participation Requirements: An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Key Consideration 1:

An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements

Repo segment of ARCL is regulated by RBI Repurchase Transactions (Repo) (Reserve Bank) Directions, 2018, and as amended in November 2019. Only eligible entities which are eligible to operate in Repo can seek registration with ARCL. Currently, ARCL offers trading cum self-clearing membership and Direct Client i.e. Participant registration to eligible market participants.

All information regarding eligibility criteria and requirements for members and Participant registration is available publicly on the ARCL website.

The Membership admission process and eligibility criteria are notified in advance and disseminated on ARCL's website. Any person who fulfils the mentioned criteria can seek Membership of ARCL The membership admission process is fair, and the Governing Board constituted Committee assesses the eligibility criteria of the applicant before granting Membership. ARCL Rules lay down the membership eligibility criteria and provide rules for continued membership. Also, the minimum net worth requirements for members are stipulated by the Regulator and being complied with. The Member participation requirements are risk-based and ensure that sufficient resources are available to cover future obligations and achieve a balance between capital necessity and participant access.

Similarly, Participant registration process and eligibility criteria's are notified in advance and disseminated on ARCL's website.
ARCL has entered into agreement with NSE (operational) and BSE (not yet operationalised) for offering trading platforms to the members / participants. ARCL has also outsourced the core clearing and

settlement activities to NSE Clearing. ARCL does not discriminate its services to the members / participants.

Member/Participant borrowing and lending limits are fixed based on category of entity, financial and non-financial parameters, liquidity risk, and the availability of the Core SGF Fund.

Key Consideration 2:

An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.

ARCL ensures that applicants which demonstrate sufficient financial strength and meet participation requirement qualify as a member/participant of ARCL. The participation requirements relating to minimum net worth, base capital and base minimum capital adequacy and various recurring compliance requirements ensure that the risks to ARCL are adequately managed. ARCL's admission criteria and ongoing requirements are risk-based and commensurate with the risks undertaken by clearing members and participants (direct clients). ARCL promotes fair and open access by admitting all market participants who satisfy admission requirements as members/participants. The membership/Participant admission criteria and ongoing requirements allow for fair and open access.

Key Consideration 3:

An FMI should monitor compliance with its participation requirements on an on-going basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

ARCL monitors that the membership criteria's are met on an ongoing basis for all participants. ARCL monitors the ongoing compliance with the criteria through various mechanisms like:

- Member / Participants Inspection audit by ARCL.
- Obtaining half yearly Net worth statement.
- Obtaining Annual Returns including Audited Accounts.
- Members / Participants are required to intimate and wherever necessary seek prior approval for any change in Shareholding /Dominant Promoter Group (DPG) pattern and changes in Designated Directors/Partners.
- Members / Participants are required to intimate ARCL all the changes in members` status i.e. change in address, Compliance officer, changes in non-designated director.

Deterioration in risk profiles of members/participants is monitored on periodical (net worth compliances) or on-going basis (position limits, capital adequacy, MTM monitoring, etc.) as the case may be. Suitable action like blocking of the capital requirements or placing them on square off / disablement mode is taken in case of members/participants who do not comply with the requirements.

Procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements are laid out in the Rules, Bye laws and Regulations of ARCL which are publicly available on the website.

PRINCIPLE 19: TIERED PARTICIPATION ARRANGEMENTS
Tiered Participation Arrangements: An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Key Consideration 1:
An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.

The direct participants of ARCL are identified as Clearing Members and Participant and the indirect participants i.e. "Constituents (not yet operationalised) who access the services of ARCL through its clearing member. ARCL permits direct participation of members for trading, clearing and settlement of triparty repo transactions by taking direct membership with stock exchanges and direct clearing membership with ARCL. ARCL also permits direct client registration for clearing and settlement of tri-party repo transactions by allowing "Participants" to register with ARCL. Also, it is mandatory for each client to get registered with ARCL. ARCL provides Unique Participant Code to each client. Hence, the information of is readily available in respect of its members / participants with ARCL. The trades, positions and settlement values for each member / participant are identified & monitored based on the unique ID issued by ARCL. There is clear segregation of trade positions. Trades are margined separately, and collateral is maintained separately for each client and for each proprietary position of the member / participants.

Key Consideration 2:
An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

Currently, the entire settlement obligation is carried out by the member/participant directly with ARCL, and hence there is no inter-dependency between members and participants.

Key Consideration 3:
An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in order to manage the risks arising from these transactions

Every participant on the exchange is required to be a registered client of ARCL. ARCL provides unique custodian participant code to each client, this CP code needs to be entered at the time of trading. Further, Participant directly provides collateral and margin with ARCL and Participant directly does the settlement with the ARCL. Further, Participants are solely responsible for settlement obligations.

Key Consideration 4:
An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.
The ARCL monitors the exposure for all members, participants and Constituents. ARCL provides order level - client level risk management. The ARCL system ensures that margin/collateral requirement of each client (including proprietary position of the member / participants) does not exceed the margin/collateral that they have provided. Constituents are clients of clearing members where the

clearing member is responsible for fund settlement of such client. However, currently "Constituent" model is not yet operationalised.

PRINCIPLE 20: FMI LINKS

FMI Links: An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

Key Consideration 1:

Before entering into a link arrangement and on an ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report

As per SEBI guidelines for LPCC, ARCL has entered into outsourcing agreement with NCL (operational) and ICCL (not yet operational) for their core IT infrastructure of clearing, settlement and related activities for triparty repo transactions in corporate debt securities. NCL system operates the product independently. Therefore, the key consideration is not applicable.

It is a regulatory mandated that ARCL establishes connectivity to both the depositories viz. NSDL and CDSL. ARCL has entered into legal agreements with NSDL and CDSL defining the contractual arrangements and the legal aspects. ARCL currently does all its operations only through NSDL. ARCL and NSDL have implemented adequate systems with all the required checks to ensure that any risks arising out of the linkage are effectively managed.

Key Consideration 2:

A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.

As per SEBI guidelines for LPCC, ARCL has entered into outsourcing agreement with NCL and ICCL for their core IT infrastructure of clearing, settlement and related activities for triparty repo transactions in corporate debt securities. ARCL has also taken limited purpose Depository Participant registration with NSDL and CDSL for collateral transfers and custody. The arrangements with FMI links are governed by contractual agreements to provide adequate protection to the FMIs involved. The links are in Indian jurisdiction only.

Key Consideration 3:

Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high-quality collateral and be subject to limits.

The key consideration is not applicable to ARCL.

Key Consideration 4:

Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.

The key consideration is not applicable to ARCL.

Key Consideration 5:
An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.

The key consideration is not applicable to ARCL.

Key Consideration 6:
An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.

The key consideration is not applicable to ARCL.

Key Consideration 7:
Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.

The key consideration is not applicable to ARCL.

Key Consideration 8:
Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfil its obligations to its own participants at any time.

The key consideration is not applicable to ARCL.

Key Consideration 9:
A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.

The key consideration is not applicable to ARCL.

PRINCIPLE 21: EFFICIENCY AND EFFECTIVENESS
Efficiency and Effectiveness: An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Key Consideration 1:
An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves. An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.

ARCL has been constituted under SCRA [SE & CC] Regulations 2018 with the regulatory intent of developing the repo market in corporate debt securities which would eventually develop the underlying corporate bond market. ARCL has kept in mind the product characteristics of the most successful repo product "TREPS" with the government securities as underlying. ARCL – Triparty Repo (CB) facilitates additional market for Repo trade apart from traditional product like Triparty Repo (G. Sec). The product features were discussed with the members of internal consultation committee. ARCL has constituted an Internal Consultation Committee (represented by different categories/types of Participants / Members) and has also setup a Credit Committee to advise on the identification of issuers, selection of ISINs, prescription of hair-cut percentages, etc. ARCL conducts regular meetings with market participants to communicate new developments and also take suggestions from these market participants. As per the SEBI guidelines, ARCL has entered into outsourcing agreement with NCL and ICCL for using their IT infrastructure for carrying out the clearing, settlement and related activities within the framework as laid down by ARCL.

ARCL has introduced web-based portal for its member / participant mainly for collateral and margin management.

Key Consideration 2:

An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.

ARCL has entered into agreement with NCL and ICCL for the IT and operational activities. ARCLs primary goal is to provide timely, reliable and effective clearing and settlement for tri-party in corporate bond repo for market participants. The agreement is also spelt out on the service standards for the product and for the members of ARCL. The Risk Management Committee of ARCL sets out robust risk management standards for the product to address credit risk, liquidity risk and market risk. The Governing Board of ARCL specifies the business objectives and priorities which are monitored by the Governing Board periodically.

Key Consideration 3:

An FMI should have established mechanisms for the regular review of its efficiency and effectiveness

The efficiency and effectiveness of ARCL operations are evaluated by independent external auditors on a half yearly basis and the report of such audit is placed before the audit committee and the Governing Board of ARCL. ARCL also review its efficiency and effectiveness through regular discussion with member and participants.

PRINCIPLE 22: COMMUNICATION PROCEDURES AND STANDARDS

Communication Procedures and Standards: An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.

Key Consideration 1:

An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.

ARCL has entered into outsourcing agreement with NCL and ICCL for their core IT infrastructure in respect of collateral, risk, clearing and settlement functions. ARCL has commenced operations through NCL, which has commonly accepted communication procedures to communicate with clearing members / participants and other entities. Below is the communication procedures and systems employed by NCL.

As per the PFMI disclosures made by NSE Clearing Limited (NCL):

- NSE Clearing's systems interact with its customers and participants through an Internet-based platform. This platform provides an online interface as well as a file-based interface. NSE Clearing's system currently uses internationally accepted message formats with the participants for trade confirmation using the ISO 15022 format.

- The system interaction with other parties (banks, depositories, etc.) is achieved by using a combination of binary and text files. Exchange of files is facilitated either by NSE Clearing's file-based interface or through the other party's software interface. For banking transactions, NSE Clearing has defined message formats and communication standards with banks.

PRINCIPLE 23: DISCLOSURES OF RULES, KEY PROCEDURES AND DATA

Disclosure of Rules, Key Procedures and Data: An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Key Consideration 1:

An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.

ARCL has put in place adequate rules and procedures that comprise rules, regulations, bye-laws, and circulars. In order to disclose information about the relevant rules and procedures to the members and the public, the above is made available on the ARCL's website. Any amendment in the bye-laws takes place through a consultative process wherein the proposed amendment is published in the official gazette to seek public feedback. The amendments are finalized after considering any feedback received subject to approval of Securities and Exchange Board of India (SEBI). In order to ensure that the relevant rules and key procedures are clearly articulated, ARCL issues / updates the circulars on a regular basis. ARCL issues circulars well in advance to ensure that clearing members / participants as well as other stakeholders have sufficient time to adapt for the change. Key financial data such as results of stress tests, size of Core SGF, amounts available in each layer of default waterfall for each segment, financial statements of ARCL etc. are publicly disclosed on the website.

Key Consideration 2:

An FMI should disclose clear descriptions of the system's design and operations, as well as the FMI's and participants' rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.

ARCL discloses all its design and operational procedures to the market participants, public and also to the regulator for any new product design / operational / procedural change to the existing process. The disclosures to the market participants are made available through circulars and also on the website. The information about the system's design and operations are contained in the rules, regulations, bye-laws, circulars of ARCL. The rights and obligations of the clearing members/participants are clearly disclosed and are articulated in the bye-laws of ARCL. ARCL provides information to the market participants for them to identify and evaluate accurately the risk and cost associated with its services. All relevant information is available to the members/participants in rules, regulations and bye-laws of ARCL as well as through their various circulars and website.

Key Consideration 3:
An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.

In order to facilitate its members'/participants' understanding of the ARCL's rules, procedures, and the risks associated with participating, ARCL interacts with the eligible members/participants (both current and potential members/participants) to facilitate better understanding of the procedures.

Key Consideration 4:
An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear descriptions of priced services for comparability purposes.

ARCL places on its website the details of fees and charges for the services that it renders to the market.

Key Consideration 5:
An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

ARCL publishes the basic data related to transactions, volumes and trades with net settlement value on daily basis. All aspects to ARCL's financial condition are published on the website. Information related to risk management methodology, settlement statistics along with the timelines are also published on the website. Information pertaining to ARCL; its Shareholding pattern; Board of Directors; all the Business partners; Products and Services etc., is published on the website. As part of the financial information, ARCL also publishes all the schedules pertaining to Balance sheet and Profit & loss statement. ARCL also publishes "Newsletter" on monthly basis which include details of transactions, volumes etc and is available on the ARCL website.

PRINCIPLE 24: DISCLOSURE OF MARKET DATA BY TRADE REPOSITORIES

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

This principle is not applicable to ARCL.